

Part 2:
**DEHYDRATED
CULTURE MEDIA**

2.1. Culture media according to pharmacopoeias

A. PharmaBio® culture media

The PharmaBio® product range includes excellent quality culture media according to the pharmacopoeias. All these items are provided only after strict tests which are conducted according to the pharmacopoeias' requirements. Certificates of analysis contain these test results. See their descriptions in the alphabetical part (2.2.)

B. Culture media for the method of the European Pharmacopoeia

BROTH MEDIUM A (CASEIN SOYA-BEAN DIGEST BROTH)

See: Tryptone Soya Broth, PH EUR - USP

AGAR MEDIUM B (CASEIN SOYA-BEAN DIGEST AGAR)

See: Tryptone Soya Agar, PH EUR - USP

AGAR MEDIUM C

(SABOURAUD GLUCOSE AGAR WITH CHLORAMPHENICOL)

See: Sabouraud Chloramphenicol Agar, PH EUR

BROTH MEDIUM D (LACTOSE BROTH)

See: Lactose Broth, PH EUR

BROTH MEDIUM E (EE BROTH)

See: EE Broth, PH EUR - USP

AGAR MEDIUM F (VIOLET RED BILE GLUCOSE AGAR)

See: Violet Red Bile Glucose (VRBG) Agar, PH EUR

BROTH MEDIUM G (MACCONKEY BROTH)

See: MacConkey Broth, PH EUR - USP

AGAR MEDIUM H (MACCONKEY AGAR)

See: MacConkey Agar, PH EUR - USP

BROTH MEDIUM I (TETRATHIONATE BROTH BASE)

See: Tetrathionate Broth Base, PH EUR

AGAR MEDIUM J (DESOXYCHOLATE CITRATE AGAR)

See: Desoxycholate Citrate Agar, PH EUR

AGAR MEDIUM K (XLD AGAR)

See: XLD Agar, PH EUR - USP

AGAR MEDIUM L (BPLS AGAR)

See: Brilliant Green (BPLS) Agar, PH EUR

AGAR MEDIUM M (TSI AGAR)

See: Triple Sugar Iron (TSI) Agar, PH EUR

AGAR MEDIUM N (CETRIMIDE AGAR BASE)

See: Cetrимide Agar Base, PH EUR - USP

AGAR MEDIUM O (BAIRD-PARKER AGAR BASE)

See: Baird-Parker Agar Base, PH EUR

MEDIUM P (REINFORCED CLOSTRIDIAL MEDIUM)

See: Reinforced Clostridial (RCM-DRCM) Medium Base, PH EUR - USP

AGAR MEDIUM Q (COLUMBIA AGAR)

See: Columbia Agar, PH EUR - USP

BROTH MEDIUM R (LACTOSE SULPHITE BROTH BASE)

See: Lactose Sulphite Broth Base, PH EUR

AGAR MEDIUM S (R2A AGAR)

See: R2A Agar, PH EUR

BUFFERED SODIUM CHLORIDE PEPTONE SOLUTION PH 7.0

See: Peptone Water, Buffered, PH EUR - USP

FLUID THIOGLYCOLLATE MEDIUM FOR STERILITY TESTING

See: Thioglycollate Medium, PH EUR

NEUTRALISING FLUID BASE

See: Neutralising Fluid Base, PH EUR

C. Culture media for the method of the United States Pharmacopoeia

BISMUTH SULPHITE AGAR, USP

See: Bismuth Sulphite Agar, USP

SELENITE-CYSTINE BROTH BASE, USP

See: Selenite-Cystine Broth Base, USP

KING A AGAR, USP

See: King A Agar, USP

TETRATONATE BROTH BASE, USP

See: Tetratone Broth Base, USP

KING B AGAR, USP

See: King B Agar, USP

VOGEL-JOHNSON AGAR, USP

See: Vogel-Johnson Agar, USP

D. Culture media for the harmonised method

BUFFERED SODIUM CHLORIDE-PEPTONE SOLUTION pH 7.0

See: Peptone Water, Buffered PH EUR - USP

MACCONKEY BROTH

See: MacConkey Broth, PH EUR - USP

CASEIN SOYA BEAN DIGEST BROTH

See: Tryptone Soya Broth, PH EUR - USP

MACCONKEY AGAR

See: MacConkey Agar, PH EUR - USP

CASEIN SOYA BEAN DIGEST AGAR

See: Tryptone Soya Agar, PH EUR - USP

RAPPAPORT VASSILIADIS SALMONELLA ENRICHMENT BROTH

See: Rappaport Vassiliadis Broth Base, PH EUR - USP

SABOURAUD-DEXTROSE AGAR

See: Sabouraud Dextrose (4%) Agar, PH EUR - USP

XYLOSE, LYSINE, DEOXYCHOLATE AGAR

See: XLD Agar, PH EUR - USP

POTATO DEXTROSE AGAR

See: Potato Dextrose Agar, PH EUR - USP

CETRIMIDE AGAR

See: Cetrimide Agar Base, PH EUR - USP

SABOURAUD-DEXTROSE BROTH

See: Sabouraud-Dextrose Broth, PH EUR - USP

MANNITOL SALT AGAR

See: Mannitol Salt Agar, PH EUR - USP

ENTEROBACTERIA ENRICHMENT BROTH-MOSSEL

See: EE Broth, PH EUR - USP

REINFORCED MEDIUM FOR CLOSTRIDIA

See: Reinforced Clostridial (RCM-DRCM) Medium Base, PH EUR - USP

VIOLET RED BILE GLUCOSE AGAR

See: Violet Red Bile Glucose Agar, PH EUR - USP

COLUMBIA AGAR

See: Columbia Agar, PH EUR - USP

2.2. Alphabetical list of media

ACETAMIDE BROTH

Synthetic nutrient solution for the enrichment and differentiation of *Pseudomonas aeruginosa*.

Code Number:	ACB20500, ACB25000
Colour:	White
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,8 (approx.) at 20 °C

Direction: Suspend 3,4 g in one litre of distilled water and heat gently to dissolve the medium completely. Dispense into final containers. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Acetamide	2
Sodium chloride	0,2
Magnesium sulphate	0,2
Sodium molybdate	0,005
Ferrous sulphate	0,0005
Buffers	1

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Pseudomonas aeruginosa*

Negative control: *Escherichia coli*

References: ISO 12780: 2002

ACETATE DIFFERENTIAL AGAR

A medium for the differentiation of *Shigella* from *Escherichia coli*.

Code Number:	ADA20500, ADA25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,9 (approx.) at 20 °C

Direction: Suspend 29 g in one litre of distilled water and boil to dissolve the medium completely. Dispense into test tube. Sterilise by autoclaving at 121 °C for 15 minutes. Allow to cool in slanted position.

Formula in g/l

Sodium acetate	2,00
Sodium chloride	5,00
Magnesium sulphate	0,20
Bromothymol blue	0,08
Buffers	2,00
Agar	19,80

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Escherichia coli*

Negative control: *Shigella flexneri*

References: Trabulsi and Ewing (1962) Public Health Lab. 20: 137.

AEROMONAS AGAR BASE

A selective medium for the isolation of aeromonas species.

Code Number:	AEA20500, AEA25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	8,0 (approx.) at 20 °C

Direction: Suspend 30 g in 500 ml of distilled water and heat with frequent agitation until the medium boils. Cool to 50 °C and aseptically add the contents of one vial of Aeromonas Selective Supplement (AES80004) reconstituted with 4 ml of sterile distilled water. Mix gently before pouring.

Warning!

The medium is heat sensitive.

No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	9,00
Bile salt	3,00
L-Lysine	3,50
L-Arginine	2,00
Xylose	3,75
Sorbitol	3,00
Lactose	1,50
Inositol	2,50
Sodium chloride	5,00
Sodium thiosulphate	10,87
Ferric ammonium citrate	0,80
Bromothymol blue	0,04
Thymol Blue	0,04
Agar	15,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Aeromonas hydrophila*

Negative control: *Escherichia coli*

References: Havelaar et al (1987) J. Appl. Bact. 62: 279.

ANTIBIOTIC ASSAY MEDIA

Media for the microbiological assay of antibiotics according to United States Pharmacopoeia XXIV.

Code Number: (A01 – A39)20500, (A01 – A39)25000
 Colour: Yellowish
 Appearance: Homogeneous hygroscopic powder

Direction: Suspend the amount indicated below of dehydrated media in one litre of distilled water. Add the supplement, if necessary and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

MEDIUM 1

Peptone	6,0
Casein peptone	4,0
Yeast extract	3,0
Beef extract	1,5
Glucose	1,0
Agar	15,5
31 g/l	pH = 6,5 – 6,7

MEDIUM 2

Peptone	6,0
Yeast extract	3,0
Beef extract	1,5
Agar	15,5
26 g/l	pH = 6,5 – 6,7

MEDIUM 3

Peptone	5,0
Yeast extract	1,5
Beef extract	1,5
Glucose	1,0
Sodium chloride	3,5
Dipotassium hydrogen phosphate	3,68
Potassium dihydrogen phosphate	1,32
17,5 g/l	pH = 6,9 – 7,1

MEDIUM 5

Peptone	6,0
Yeast extract	3,0
Beef extract	1,5
Agar	15,5
26 g/l	pH = 7,8 – 8,0

MEDIUM 8

Peptone	6,0
Yeast extract	3,0
Beef extract	1,5
Agar	15,5
26 g/l	pH = 5,8 – 6,0

MEDIUM 9

Casein peptone	17,0
Soy peptone	3,0
Glucose	2,5
Sodium chloride	5,0
Dipotassium hydrogen phosphate	2,5
Agar	20,0
50 g/l	pH = 7,1 – 7,3

MEDIUM 10 BASE

Casein peptone	17,0
Soy peptone	3,0
Glucose	2,5
Sodium chloride	5,0
Dipotassium hydrogen phosphate	2,5
Agar	12,0
42 g/l + 10 ml Polysorbate 80	pH = 7,1 – 7,3

MEDIUM 11

Peptone	6,0
Casein peptone	4,0
Yeast extract	3,0
Beef extract	1,5
Glucose	1,0
Agar	15,5
31 g/l	pH = 8,2 – 8,4

MEDIUM 13

Peptone	10
Glucose	20
30 g/l	pH = 5,5 – 5,7

MEDIUM 19

Peptone	9,4
Yeast extract	4,7
Beef extract	2,4
Glucose	10,0
Sodium chloride	10,0
Agar	23,5
60 g/l	pH = 6,0 – 6,2

MEDIUM 32

Peptone	6,0
Casein peptone	4,0
Yeast extract	3,0
Beef extract	1,5
Glucose	1,0
Manganese sulphate	0,3
Agar	15,2
31 g/l	pH = 6,5 – 6,7

MEDIUM 34 BASE

Peptone	10
Beef extract	10
Sodium chloride	3
23 g/l + 10 ml glycerol	pH = 6,9 – 7,1

MEDIUM 35 BASE

Peptone	10
Beef extract	10
Sodium chloride	3
Agar	17
40 g/l + 10 ml glycerol	pH = 6,9 – 7,1

MEDIUM 36

Casein peptone	15
Soy peptone	5
Sodium chloride	5
Agar	15
40 g/l	pH = 7,2 – 7,4

MEDIUM 39

Peptone	5,0
Yeast extract	1,5
Beef extract	1,5
Glucose	1,0
Sodium chloride	3,5
Dipotassium hydrogen phosphate	3,68
Potassium dihydrogen phosphate	1,32
17,5 g/l	pH = 7,8 – 8,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C (plates) or at room temperature (tubes).

References: The United States Pharmacopoeia XXIV, Chapter: "Biological Tests"

ARGININE BROTH

An enrichment broth for the cultivation of *Pseudomonas aeruginosa*.

Code Number:	ARB20500, ARB25000
Colour:	Greenish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 35 g in one litre of distilled water and heat gently to dissolve the medium completely. Distribute into final container and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	19,50000
L-Arginine	10,00000
Glucose	0,50000
Sodium chloride	5,00000
Bromothymol blue	0,00750
Brilliant green	0,00038

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Pseudomonas aeruginosa*

Negative control: *Escherichia coli*

References: Schubert (1989) Zbl. Bakt. Hyg. B 187: 266.

AZIDE DEXTROSE BROTH, ROTH

A selective medium for the detection of enterococci.

Code Number:	ADR20500, ADR25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 36 g in one litre of distilled water for single strength broth or 72 g for double strength broth and heat gently to dissolve the medium completely. Dispense into final containers. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	20,4
Glucose	5,0
Sodium chloride	5,0
Sodium azide	0,2
Buffers	5,4

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Enterococcus faecalis*

Negative control: *Escherichia coli*

References: Greenberg et al (1985) Standard Methods for the Examination of Water and Wastewater, 16th ed. APHA

AZIDE DEXTROSE BROTH

A selective medium for the detection of enterococci.

Code Number:	ADB20500, ADB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 35 g in one litre of distilled water for single strength broth or 70 g for double strength broth and heat gently to dissolve the medium completely. Dispense into final containers. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	19,8
Glucose	7,5
Sodium chloride	7,5
Sodium azide	0,2

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Enterococcus faecalis*

Negative control: *Escherichia coli*

References: Mallmann and Seligmann (1950) Am. J. Public Health 40: 286

BACILLUS CEREUS (PEMBA) AGAR BASE

A selective and diagnostic medium for the isolation and enumeration of *Bacillus cereus*.

Code Number:	BCA20500, BCA25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 40 g in 950 ml of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 50 ml of Sterile Egg Yolk Polymyxin PEMBA Emulsion (EYP81050). Mix well before pouring.

Formula in g/l

Peptones	1,00
Mannitol	10,00
Sodium chloride	2,00
Magnesium sulphate	0,10
Sodium pyruvate	10,00
Bromothymol blue	0,12
Buffers	2,75
Agar	14,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Bacillus cereus*, *Bacillus subtilis*

Negative control: *Escherichia coli*

References: Holbrook and Anderson (1980) Can. J. Microbiol. 26: 753.

BACILLUS CEREUS (PREP) AGAR BASE

A selective and differential medium for the isolation and enumeration of *Bacillus cereus*.

Code Number:	BPR20500, BPR25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 46 g in 900 ml of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 100 ml of Sterile Egg Yolk Polymyxin PREP Emulsion (EYP82100). Mix well before pouring.

Formula in g/l

Peptones	11,000
Mannitol	10,000
Sodium chloride	10,000
Phenol red	0,025
Agar	15,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Bacillus cereus*, *Bacillus subtilis*

Negative control: *Escherichia coli*

References: Mossel et al (1967). Appl. Microbiol. 15: 650

BAIRD-PARKER AGAR BASE, PH EUR

A selective and diagnostic medium for the isolation and enumeration of *Staphylococcus aureus* according to PH EUR (Agar Medium O).

Code Number:	BPA20500, BPA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,8 (approx.) at 20 °C

Direction: Suspend 60 g in 950 ml of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 50 ml of Sterile Egg Yolk Tellurite Emulsion (EYT80050). Mix well before pouring.

Formula in g/l

Pancreatic digest of casein	10
Beef extract	5
Yeast extract	1
Sodium pyruvate	10
Glycine	12
Lithium chloride	5
Agar	17

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C, but better to use it freshly.

Quality Control:

Positive control: *Staphylococcus aureus*

Negative control: *Staphylococcus epidermidis*, *Escherichia coli*

References: European Pharmacopoeia 5.6

BAGG BROTH

A liquid medium for the cultivation of faecal streptococci.

Code Number:	BAG20500, BAG25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,9 (approx.) at 20 °C

Direction: Suspend 41 g in one litre of distilled water and heat gently to dissolve the medium completely. Dispense into final containers. Sterilise by autoclaving at 115 °C for 15 minutes.

Warning!

The medium is heat sensitive.

No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	20,000
Glucose	5,000
Glycerol	5,000
Sodium chloride	5,000
Sodium azide	0,500
Bromocresol purple	0,015
Buffers	5,500

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Streptococcus faecalis*

Negative control: *Escherichia coli*

References: Hajna and Perry (1943) Am. J. Public Health 33: 550.

BAIRD-PARKER BROTH

A selective medium for the isolation and enumeration of *Staphylococcus aureus*.

Code Number:	BBR20500, BBR25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 43 g in one litre of distilled water and heat gently to dissolve the medium completely. Dispense into final containers. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptone	16
Sodium pyruvate	10
Glycine	12
Lithium chloride	5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Staphylococcus aureus*

Negative control: *Escherichia coli*

References: Baird-Parker (1962) J. Appl. Bact. 25: 12.

BAT AGAR

A medium for the detection of *Alicyclobacillus*.

Code Number:	BTA20500, BTA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	5,2 (approx.) at 20 °C

Direction: Suspend 29 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 115 °C for 15 minutes. To adjust the pH $4 \pm 0,2$ cool to 55 °C and add 1n sulphuric acid (approx: 1,7 ml) to the agar.

Warning!

The medium is heat sensitive.

No further sterilisation is necessary or desirable.

Once acidified with sulphuric acid, the medium should not be re-heated.

Formula in g/l

Peptones	2,000
Glucose	5,000
Calcium chloride	0,250
Magnesium sulphate	0,500
Ammonium sulphate	0,200
Minerals mixture	0,001
Buffers	3,000
Agar	18,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Alicyclobacillus acidoterrestris*

Negative control: *Escherichia coli*, *Staphylococcus aureus*

References: First Standard IFU-Method on the Detection of *Alicyclobacillus* in Fruit Juices. April 2003.

BILE ESCULIN AGAR

A differential medium for the isolation and presumptive identification of enterococci/group D streptococci.

Code Number:	BEA20500, BEA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,1 (approx.) at 20 °C

Direction: Suspend 45 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	8,5
Bacteriological bile	20,0
Ferric citrate	0,5
Esculin	1,0
Agar	15,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Enterococcus faecalis*

Negative control: *Streptococcus pyogenes*

References: Swan (1954) J. Clin. Pathol. 7: 160.

BILE ESCULIN AZIDE AGAR

A differential and selective medium for the isolation and presumptive identification of enterococci/group D streptococci.

Code Number:	BES20500, BES25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,1 (approx.) at 20 °C

Direction: Suspend 45 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	25,00
Bacteriological bile	10,00
Sodium chloride	5,00
Ferric citrate	0,50
Esculin	1,00
Sodium azide	0,15
Agar	15,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Enterococcus faecalis*

Negative control: *Streptococcus pyogenes*

References: Swan (1954) J. Clin. Pathol. 7: 160.

BILE ESCULIN AZIDE BROTH

A liquid medium for the differentiation of enterococci/group D streptococci.

Code Number:	BIB20500, BIB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,1 (approx.) at 20 °C

Direction: Suspend 43 g in one litre of distilled water and heat gently to dissolve the medium completely. Dispense into final containers. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	25,25
Bacteriological bile	10,00
Sodium chloride	5,00
Sodium citrate	1,00
Sodium azide	0,25
Ferric citrate	0,50
Esculin	1,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Enterococcus faecalis*

Negative control: *Streptococcus pyogenes*, *Escherichia coli*

References: Isenberg et al (1970) Appl. Microbiol. 20: 433.

BILE ESCULIN BROTH

A liquid medium for the differentiation of enterococci/group D streptococci.

Code Number:	BEB20500, BEB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,1 (approx.) at 20 °C

Direction: Suspend 43 g in one litre of distilled water and heat gently to dissolve the medium completely. Dispense into final containers. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	25,5
Bacteriological bile	10,0
Sodium chloride	5,0
Sodium citrate	1,0
Ferric citrate	0,5
Esculin	1,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Enterococcus faecalis*

Negative control: *Streptococcus pyogenes, Escherichia coli*

References: Isenberg et al (1970) Appl. Microbiol. 20: 433.

BISMUTH SULPHITE AGAR, USP

A strongly selective medium for the isolation of *Salmonella typhi* and other salmonellae according to USP.

Code Number:	BSA20500, BSA25000
Colour:	Greenish
Appearance:	Homogeneous hygroscopic powder
pH (with indicator):	7,3 (approx.) at 20 °C

Direction: Suspend 31 g of base agar in 900 ml of distilled water and boil for one minute to dissolve the medium completely. Cool to 50 °C. Pour the content of one vial of Bismuth Sulphite Indicator (BSI80100) to 100 ml of cold distilled water. Heat with continuous agitation until boiling and add fully to the medium. Mix well to disperse suspension and pour into Petri-dishes immediately. Plated medium should be used within 24 hours.

Formula in g/l

Peptones	10,700
Glucose	5,000
Ferrous sulphate	0,300
Brilliant green	0,016
Agar	15,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C no longer than 24 hours.

Quality Control:

Positive control: *Salmonella typhi, Salmonella enteritidis*

Negative control: *Proteus mirabilis, Escherichia coli*

References: Wilson and Blair (1927) J. Hyg. Camb. 26: 374.
United States Pharmacopoeia XXVIII. (2005)

BLOOD AGAR BASE

A multi-purpose medium for the cultivation of nonfastidious and fastidious organisms.

Code Number:	BAN20500, BAN25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 40 g in 950 ml of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 50 ml of sterile defibrinated blood. Mix well before pouring.

Formula in g/l

Nutrient substrate (peptones, extracts)	22
Sodium chloride	5
Agar	13

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Streptococcus pyogenes, Streptococcus pneumoniae, Enterococcus faecalis*

References: APHA (1972) Comp. of Meth. for the. Micr. Examin. of Foods. 3rd ed.

BLOOD AGAR BASE No.2

A modified blood agar possessing enhanced nutritional properties for the cultivation of fastidious and other micro-organisms.

Code Number:	BAL20500, BAL25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 42 g in 950 ml of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 50 ml of sterile defibrinated blood.

Formula in g/l

Nutrient substrate (peptones, liver and other extracts)	24
Sodium chloride	5
Agar	13

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Streptococcus pyogenes, Streptococcus pneumoniae, Enterococcus faecalis*

References: FDA Bacteriological Analytical Manual (1992) 7th ed.

BLUE AGAR

A non-selective medium for the differentiating of lactose-positive colonies from lactose-negative colonies.

Code Number:	BLU20500, BLU25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 48 g in 1 litre of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes

Formula in g/l

Peptones	20,000
Lactose	10,000
Sodium chloride	5,000
Bromothymol blue	0,045
Agar	13,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Lactose positive control:	<i>Escherichia coli</i>
Lactose negative control:	<i>Proteus mirabilis</i>

BLUE BROTH

A non-selective medium for the differentiating of lactose-positive organisms from lactose-negative ones.

Code Number:	BLB20500, BLB25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 38 g in one litre of distilled water and heat gently to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	10,00
Lactose	20,00
Sodium chloride	4,00
Ammonium-sulphate	1,00
Magnesium-sulphate	0,50
Bromothymol blue	0,04
Buffers	0,50

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Lactose positive control:	<i>Escherichia coli</i>
Lactose negative control:	<i>Proteus mirabilis</i>

BOLTON BROTH BASE

A liquid medium for the selective enrichment of campylobacters.

Code Number:	BOB20500, BOB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 14 g in 470 ml of distilled water and heat gently to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 25 ml of lysed horse blood and the contents of one vial of Campylobacter Selective Supplement, Bolton (CBS80004) reconstituted with 4 ml of sterile distilled water. Mix well and distribute the broth into sterile containers.

Formula in g/l

Peptones	21,00
Sodium chloride	5,00
Sodium metabisulphite	0,50
Sodium pyruvate	0,50
α-ketoglutaric acid	1,00
Haemin	0,01

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control:	<i>Campylobacter jejuni</i>
Negative control:	<i>Escherichia coli</i>

References: FDA Bacteriological Analytical Manual, 8th edition (1988)

BRAIN HEART INFUSION AGAR

A highly nutritious solid medium for the cultivation of fastidious organisms.

Code Number:	BHA20500, BHA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 50 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Nutrient substrate (brain + heart infusion, peptones)	27,5
Glucose	2,0
Sodium chloride	5,0
Buffers	2,5
Agar	13,0 0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control:	<i>Streptococcus pneumoniae</i>
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References: Lenette et al: (1985) Manual of Clinical Microbiology, 4th ed.

BRAIN HEART INFUSION BROTH

A highly nutritious liquid medium for the cultivation of fastidious organisms.

Code Number:	BHI20500, BHI25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 37 g in one litre of distilled water and heat gently to dissolve the medium completely. Dispense into final containers. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Nutrient substrate (brain + heart infusion, peptones)	27,5
Glucose	2,0
Sodium chloride	5,0
Buffers	2,5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Streptococcus pneumoniae*

References: Rosenow (1919) J. Dental Research 205.

BRILLIANT GREEN AGAR BASE, MODIFIED

A selective medium for the isolation of salmonellae other than *S. typhi*.

Code Number:	BGM20500, BGM25000
Colour:	Greenish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,9 (approx.) at 20 °C

Direction: Suspend 29,5 g in 500 ml of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 115 °C for 15 minutes. Cool to 50 °C and aseptically add the contents of one vial of Sulphamandelate Selective Supplement (SUS80004) reconstituted with 4 ml of sterile distilled water. Mix gently before pouring.

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	22,3000
Lactose	10,0000
Sucrose	10,0000
Phenol red	0,0800
Brilliant green	0,0047
Buffers	1,6000
Agar	15,0000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Salmonella enteritidis*

Negative control: *Escherichia coli*, *Proteus mirabilis*

References: Edel and Kampelmacher (1968) Bull. Wld Hlth. Org. 39: 487.

BRILLIANT GREEN (BPLS) AGAR, PH EUR

A selective medium for the isolation of salmonellae (other than *S. typhi*) according to PH EUR (Agar Medium L – Brilliant Green Phenol Red Lactose Sucrose Agar).

Code Number:	BPE20500, BPE25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,9 (approx.) at 20 °C

Direction: Suspend 58 g in one litre of distilled water and heat with frequent agitation until the medium boils. Sterilise by autoclaving at 121 °C for 15 minutes. Mix well and pour plates immediately.

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	10,0000
Yeast extract	3,0000
Lactose monohydrate	10,0000
Sucrose	10,0000
Sodium chloride	5,0000
Phenol red	0,0800
Brilliant green	0,0125
Agar	20,0000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Salmonella enteritidis*

Negative control: *Enterococcus faecalis*

References: European Pharmacopoeia 5.6

BRILLIANT GREEN AGAR, HUMAN

A selective medium for the isolation of salmonellae from clinical specimens.

Code Number:	BGH20500, BGH25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 43 g in one litre of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 115 °C for 15 minutes.

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	16,500
Lactose	10,000
Sucrose	1,000
Glucose	0,500
Acid fuchsin	0,080
Brilliant green	0,004
Agar	15,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Salmonella typhi*, *Proteus mirabilis*

Negative control: *Enterococcus faecalis*

BRILLIANT GREEN BILE (2%) BROTH

A selective medium for the detection of coliform organisms.

Code Number:	BBB20500, BBB25000
Colour:	Greenish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 40 g in 1 litre of distilled water. Mix well and heat gently to dissolve completely. Distribute into final containers fitted with Durham's tubes. Sterilise at 115 °C for 15 minutes. Cool rapidly!

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	10,0000
Bacteriological bile	20,0000
Lactose	10,0000
Brilliant green	0,0133

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Escherichia coli*, *Enterobacter aerogenes*

Negative control: *Staphylococcus aureus*

References: APHA (1986) Standard Methods for the Examination of Water and Wastewater. 15th ed.

BROLAC AGAR

A non-selective medium for the differentiating of lactose-positive colonies from lactose-negative colonies.

Code Number:	BRO20500, BRO25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 40 g in 1 litre of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes

Formula in g/l

Peptones	7,00
Lactose	15,00
Sodium chloride	5,00
Bromothymol blue	0,04
Agar	13,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Lactose positive control: *Escherichia coli*

Lactose negative control: *Proteus mirabilis*

BROMOCRESOL PURPLE AZIDE BROTH

A liquid medium for the confirming the presence of enterococci.

Code Number:	BCB20500, BCB25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 36 g in one litre of distilled water adding 5 ml glycerol, if desired, and heat gently to dissolve the medium completely. Dispense into final containers. Sterilise by autoclaving at 115 °C for 15 minutes.

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	20,000
Glucose	5,000
Sodium chloride	5,000
Sodium azide	0,500
Bromocresol purple	0,032
Buffers	5,500

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Enterococcus faecalis*

Negative control: *Escherichia coli*

References: Hajna and Perry (1943) Am. J. Publ. Health. 3: 550.

BRUCELLA AGAR BASE

A solid medium for the isolation of Brucella species.

Code Number:	BAB20500, BAB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,5 (approx.) at 20 °C

Direction: Suspend 22,5 g in 460 ml of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C. To one vial of Brucella Selective Supplement (BAS80004), aseptically add 4 ml of a 1:1 mixture of methanol and sterile distilled water to form a suspension. Incubate for 15 min at 37 °C. Mix thoroughly and immediately add to the agar base together with 35 ml of sterile inactivated (i.e. serum held at 56 °C for 30 minutes) horse serum. Mix well and pour into Petri-dishes.

Formula in g/l

Peptones	15
Glucose	10
Sodium chloride	5
Agar	15

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Brucella abortus*

References: Farell and Robinson (1972) J. Appl. Bact. 35: 625.

BRUCELLA BROTH

A liquid medium for the cultivation of *Brucella* species.

Code Number:	BRB20500, BRB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 28 g in 1 litre of distilled water. Heat gently to dissolve the medium completely. Dispense into final containers and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	22,0
Glucose	1,0
Sodium chloride	5,0
Sodium sulphite	0,1

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Brucella abortus*

References: Alton and Jones (1968) La brucellose, technique de laboratoire Genève: OMS

BRYANT-BURKEY BROTH

A selective enrichment for the cultivation of lactate fermenting clostridia species.

Code Number:	BBA20500, BBA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	5,9 (approx.) at 20 °C

Direction: Suspend 38 g in one litre of distilled water and heat gently to dissolve the medium completely. Dispense into final containers and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	27,5000
L-Cysteine	0,5000
Sodium acetate	5,0000
Resazurin	0,0025
Calcium lactate	5,0000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Clostridium perfringens*

Negative control: *Staphylococcus aureus*

References: Bryant and Burkey (1953) J. Dairy Science 23: 30.

CAMPYLOBACTER AGAR BASE

A solid medium for the isolation of campylobacters.

Code Number:	CAA20500, CAA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,5 (approx.) at 20 °C

Direction: Suspend 19 g in 470 ml of distilled water. Bring to the boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 25 ml of lysed horse blood, the contents of one vial of Campylobacter Growth Supplement (CGS80004) reconstituted with 4 ml of sterile distilled water and one vial of Campylobacter Selective Supplement, Skirrow (CSS80004) reconstituted with 4 ml of sterile distilled water or one vial of Campylobacter Selective Supplement, Preston (CPS80004) reconstituted with 4 ml of a 1:1 mixture of acetone and sterile distilled water. Mix well before pouring.

Formula in g/l

Peptones	20
Sodium chloride	5
Agar	13

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Campylobacter jejuni*

Negative control: *Escherichia coli*

References: Bolton and Robertson (1982) J. Clin. Pathol. 35: 462.

CAMPYLOBACTER BLOOD-FREE (CCDA) AGAR BASE

A blood-free medium for the isolation of campylobacters.

Code Number:	CCA20500, CCA25000
Colour:	Black
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 24 g in 500 ml of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add the contents of one vial of Campylobacter Selective Supplement, CCDA (CCS80004), reconstituted with 4 ml of sterile distilled water. Mix well before pouring.

Formula in g/l

Peptones	24,50
Sodium chloride	5,00
Sodium deoxycholate	1,00
Charcoal	4,00
Ferrous sulphate	0,25
Sodium pyruvate	0,25
Agar	13,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Campylobacter jejuni*

Negative control: *Escherichia coli*

References: Bolton et al (1984) J. Clin. Microbiol. 19: 169.

CATC AGAR BASE

A selective medium for the detection of enterococci.

Code Number:	CAT20500, CAT25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 57 g in one litre of distilled water. Add 1 ml TWEEN 80 (TWS80500) and boil to dissolve the medium completely. If the medium is not used on the day of preparation, sterilise at 100 °C for 20 minutes. Cool quickly to 50 °C and dispense into Petri-dishes.

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	20,0
Sodium citrate	15,0
Sodium azide	0,4
Tetrazolium chloride	0,1
Buffers	7,0
Agar	14,5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Enterococcus faecalis*
Negative control: *Escherichia coli*

References: Burkwall and Hartman (1964) Appl. Microbiol. 12: 18.

CETRIMIDE (CN) AGAR BASE

A selective agar for isolation and identification of *Pseudomonas aeruginosa*.

Code Number:	CCN20500, CCN25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,1 (approx.) at 20 °C

Direction: Suspend 50 g in one litre of distilled water. Add 10 ml of Glycerol Supplement (GLC80100) and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	25,400
Magnesium chloride	1,400
Potassium sulphate	10,000
Cetrimide	0,200
Nalidixic acid	0,015
Agar	13,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Pseudomonas aeruginosa*
Negative control: *Escherichia coli*

References: Lowbury and Collins (1955) J. Clin. Pathol. 8: 47.

CETRIMIDE AGAR BASE, PH EUR - USP

A selective agar for isolation and identification of *Pseudomonas aeruginosa* according to PH EUR (Agar Medium N - Harmonised).

Code Number:	CAB20500, CAB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 45 g in one litre of distilled water. Add 10 ml of Glycerol Supplement (GLC80100) and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Pancreatic digest of gelatin	20,0
Magnesium chloride	1,4
Potassium sulphate	10,0
Cetrimide	0,3
Agar	13,3

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Pseudomonas aeruginosa*
Negative control: *Escherichia coli*

References: European Pharmacopoeia 5.6

CETRIMIDE (CN) AGAR BASE No2

A selective agar for isolation and identification of *Pseudomonas aeruginosa*.

Code Number:	CCT20500, CCT25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,1 (approx.) at 20 °C

Direction: Suspend 25 g in 500 ml of distilled water. Add 5 ml of Glycerol Supplement (GLC80100) and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add the contents of one vial of CN Selective Supplement (PCN80004) reconstituted with 4 ml of sterile distilled water. Mix gently before pouring.

Formula in g/l

Peptones	25,600
Magnesium chloride	1,400
Potassium sulphate	10,000
Agar	13,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Pseudomonas aeruginosa*
Negative control: *Escherichia coli*

References: Lowbury and Collins (1955) J. Clin. Pathol. 8: 47.

CHARCOAL AGAR BASE

A solid medium for the cultivation and isolation of *Bordetella pertussis* and *Haemophilus influenzae*.

Code Number:	CHA20500, CHA25000
Colour:	Black
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction for Bordetella agar: Suspend 26 g in 450 ml of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 50 ml of sterile defibrinated blood and the content of one vial of Bordetella Selective Supplement (BSS80004) reconstituted with 4 ml of sterile distilled water. Mix gently before pouring.

Direction for Haemophilus agar: Suspend 26 g in 460 ml of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 35 ml sterile defibrinated blood and "chocolate" by heating at 80 °C for 10 min. Cool to 50 °C. Dissolve the content of one vial of Growth Factor Mixture Hydration Fluid with 5 ml of sterile distilled water and aseptically add to the Growth Factor Mixture (GFM80005). Mix well and aseptically add to the medium. Mix well before pouring.

Formula in g/l

Peptones	20,000
Starch soluble	10,000
Sodium chloride	5,000
Charcoal	4,000
Nicotinic acid	0,001
Agar	13,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Selective media:

Positive control: *Bordetella pertussis*

Negative control: *Klebsiella pneumoniae*, *Staphylococcus aureus*

Chocolate media:

Positive control: *Haemophilus influenzae*

References: Proom (1955) J. Gen. Microbiol. 12: 63.

CHINA BLUE LACTOSE AGAR

A non-selective medium for differentiating between lactose-positive and lactose-negative microorganisms and for enumeration of bacteria.

Code Number:	CBA20500, CBA25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 36 g in 1 litre of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes

Formula in g/l

Peptones	8,600
Lactose	10,000
Sodium chloride	5,000
China blue	0,375
Agar	12,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Lactose positive control: *Escherichia coli*

Lactose negative control: *Proteus mirabilis*

References: Brandl and Sobock-Skal (1963) Milchwiss. Ber. 13: 1.

CHLORAMPHENICOL GLUCOSE AGAR

A selective medium for the enumeration of yeast and moulds.

Code Number:	CGA20500, CGA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,6 (approx.) at 20 °C

Direction: Suspend 40 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Yeast extract	5,0
Glucose	20,0
Chloramphenicol	0,2
Agar	14,8

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Candida albicans*

Negative control: *Escherichia coli*

References: ISO standard 7954 (AFNOR NF V 08 022)

CHOCOLATE AGAR BASE

A highly nutritious medium for the isolation and cultivation of fastidious micro-organisms, especially *Neisseria* and *Haemophilus* species.

Code Number:	CHO20500, CHO25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 16,5 g in 460 ml of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 35 ml of defibrinated blood and "chocolate" by heating at 80 °C for 10 min. Cool to 50 °C. Dissolve the contents of one vial of Growth Factor Mixture Hydration Fluid with 5 ml of sterile distilled water and aseptically add to the Growth Factor Mixture (GFM80005). Mix well and aseptically add to the medium. Mix well before pouring.

Formula in g/l

Nutrient substrate (peptones, extracts)	13
Sodium chloride	5
Buffers	1
Agar	14

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Haemophilus influenzae*

References: Carpenter and Morton (1947) Proc. N. Y. State Assoc. Public Health Labs. 27: 58.

ChromoBio® ALOA BASE

A selective chromogenic agar for the cultivation and isolation of *Listeria monocytogenes*.

Code Number:	ALO20500, ALO25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 36 g in 500 ml of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add the contents of one vial of Listeria Differential Supplement (LDS80004) and one vial of Listeria Selective Supplement (LSS80004) reconstituted with 4-4 ml of sterile distilled water. Mix well before pouring.

Formula in g/l

Peptones	34,00
Glucose	2,00
Sodium chloride	5,00
Lithium chloride	10,00
Sodium pyruvate	2,00
Magnesium sulphate	0,50
Chromogenic substrate	0,05
Buffers	3,50
Agar	15,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Listeria monocytogenes*
Negative control: *Listeria innocua, Escherichia coli*

References: Ottaviani et al (1997) Quinper Froid Symposium Proceedings, P6 A.D.R.I.A. Quinper (F) 16-18 June, 1997

ChromoBio® COLIFORM

A selective chromogenic agar for the simultaneous detection of coliforms and *Escherichia coli*.

Code Number:	COF20500, COF25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,8 (approx.) at 20 °C

Direction: Suspend 30 g in one litre of distilled water. Bring to the boil to dissolve completely. Sterilise at 100 °C (in water bath or flowing steam) for 30 minutes.

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	3,50
Tryptophane	1,00
Sorbitol	1,00
Sodium chloride	5,00
Sodium pyruvate	1,00
Tergitol 7	0,15
Chromogenic substrate	0,40
Buffers	4,90
Agar	13,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli, Citrobacter freundii*
Negative control: *Salmonella enteritidis, Enterococcus faecalis*

References: Manafi and Kneifel (1989) Zentralbl. Hyg. 189: 225.

ChromoBio® LISTERIA BASE

A selective chromogenic agar for the cultivation, differentiation and isolation of *Listeria monocytogenes*. *Listeria ivanovii* can also be differentiated from *Listeria monocytogenes* on this medium.

Code Number:	LCA20500, LCA25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 37,5 g in 500 ml of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add the contents of one vial of Listeria Differential Supplement (LDS80004) and one vial of Listeria Selective Supplement (LSS80004) reconstituted with 4-4 ml of sterile distilled water. Mix well before pouring.

Formula in g/l

Peptones	37,00
Glucose	2,00
Sodium chloride	5,00
Lithium chloride	10,00
Sodium pyruvate	2,00
Magnesium sulphate	0,50
Chromogenic substrate	0,05
Bromocresol purple	0,03
Buffers	3,50
Agar	15,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Listeria monocytogenes*
Negative control: *Listeria ivanovii, Listeria innocua, Escherichia coli*

References: Ottaviani et al (1997) Quinper Froid Symposium Proceedings, P6 A.D.R.I.A. Quinper (F) 16-18 June, 1997

ChromoBio® LMX

A selective and differential medium for the detection of coliforms and differentiation of *E. coli* from other coliforms.

Code Number:	LMX20500, LMX25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,8 (approx.) at 20 °C

Direction: Suspend 17 g in 1 litre of distilled water. Mix well and heat gently to dissolve the medium completely. Distribute into final containers. Sterilise by autoclaving at 121 °C for 15 minutes. Cool quickly. Large samples may require double-strength broth to reduce the final volumes.

Formula in g/l

Peptones	5,00
Sorbitol	1,00
Sodium chloride	5,00
Tryptophan	1,00
Sodium lauryl sulphate	0,10
Buffers	4,70
Fluorogen and chromogen substrate	0,23

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Escherichia coli*, *Klebsiella oesene*

Negative control: *Salmonella enteritidis*

References: Manafi et al (1991) Microbiol Rev. 55: 335

ChromoBio® M-CP base

A selective and differential medium for the enumeration of *Clostridium perfringens*.

Code Number:	MCP20500, MCP25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,6 (approx.) at 20 °C

Direction for 100 ml of Agar: Suspend 7,1 g in 100 ml of distilled water and boil to dissolve the medium completely. Cool to 50 °C and aseptically add the contents of one vial of M-CP Chromogenic Supplement (MCC80014) reconstituted with 4 ml of sterile distilled water and one vial of M-CP Selective Supplement (MPS80014) reconstituted with 4 ml of sterile distilled water. Mix well before pouring.

Direction for 500 ml of Agar: Suspend 35,5 g in 500 ml of distilled water and boil to dissolve the medium completely. Cool to 50 °C and aseptically add the contents of one vial of M-CP Chromogenic Supplement (MCC80024) reconstituted with 4 ml of sterile distilled water and one vial of M-CP Selective Supplement (MPS80024) reconstituted with 4 ml of sterile distilled water. Mix well before pouring

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	50,00
Sucrose	5,00
L-Cysteine	1,00
Magnesium sulphate	0,10
Chromogenic substrate	0,06
Bromocresol purple	0,04
Agar	14,90

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C, but better to use it freshly.

Quality Control:

Positive control: *Clostridium perfringens*

Negative control: *Escherichia coli*

References: ISO 6461-1:1986
ISO 6461-2:1986

ChromoBio® TBX

A selective chromogenic agar for the detection and enumeration of *E. coli*.

Code Number:	TBX20500, TBX25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 37 g in one litre of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	20,500
Bile salts	1,500
Chromogenic substrate	0,075
Agar	15,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*

Negative control: *Enterococcus faecalis*, *Proteus mirabilis*

References: Frampton et al (1988) J. Food Protection 51: 402.

ChromoBio® URIN

A selective chromogenic agar for the simultaneous detection of all the main micro-organisms that cause urinary tract infections.

Code Number:	URN20500, URN25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 47 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	26
Chromogenic substrate	6
Agar	15

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Citrobacter freundii*,
Enterobacter aerogenes, *Proteus mirabilis*,
Enterococcus faecalis, *Staphylococcus aureus*

CLAUSEN MEDIUM BASE

A medium for testing the sterility of sterile pharmaceutical preparations. The medium has better growth conditions than thioglycollate and also inactivates a large number of preservatives found in pharmaceutical products.

Code Number:	CLB20500, CLB25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,1 (approx.) at 20 °C

Direction: Suspend 40 g in 1 litre of distilled water. Add 3 ml Tween 80 Supplement (TWS80100) and 5 ml Glycerol Supplement (GLC80100). Mix well and boil to dissolve the medium completely. Dispense into final containers. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	23,700
Glucose	6,000
Sodium chloride	2,500
Sodium citrate	1,000
Sodium thioglycollate	0,500
Sodium dithionite	0,400
L-Cystine	0,500
L-Asparagine	1,250
Lecithin	1,000
Mg(II), Ca(II), Co(II), Cu(II), Fe(III), Zn(II) and Mn(II) salts	0,410
Resazurin	0,001
Buffers	2,000
Agar	0,750

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Staphylococcus aureus*, *Clostridium perfringens*

References: Clausen (1956) Acta path. microbiol. scand. 38: 107.

CLED AGAR

A differentiating medium for the isolation, enumeration and presumptive identification of micro-organisms from urine.

Code Number:	CLA20500, CLA25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 37 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	11,900
Lactose	10,000
L-Cystine	0,128
Bromothymol blue	0,020
Agar	15,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Proteus mirabilis*, *Enterococcus faecalis*

References: Mackey et al (1966) Br. Med. J. 1: 1173.

CLED AGAR WITH ANDRADE INDICATOR

A selective medium for the isolation, enumeration and presumptive identification of microorganisms from urine. The double indicator enhances the differentiation of colony characteristics.

Code Number:	CLD20500, CLD25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 37 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Mix well before pouring.

Formula in g/l

Peptones	11,800
Lactose	10,000
L-Cystine	0,128
Bromothymol blue	0,020
Andrade indicator	0,100
Agar	15,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Proteus mirabilis*, *Enterococcus faecalis*

References: Bevis (1968) J. Med. Lab. Tech. 25: 38.

CLOSTRIDIUM DIFFICILE AGAR BASE

A selective and differential medium for the isolation of *Clostridium difficile*.

Code Number:	CDA20500, CDA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 34,5 g in 460 ml of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 35 ml of defibrinated blood and the contents of one vial of Clostridium Selective Supplement (CDS80004) reconstituted with 4 ml of sterile distilled water. Mix well before pouring. Because of the sensitivity of some *Clostridium difficile* strains, the amount of cycloserine and cefoxitin is reduced. If you want to compensate the reduction in selectivity, treat the specimen with alcohol before inoculation.

Formula in g/l

Peptones	40,0
Fructose	6,0
Sodium chloride	2,0
Magnesium sulphate	0,1
Buffers	5,9
Agar	15,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C, no longer than 5 days.

Quality Control:

Positive control: *Clostridium difficile*

Negative control: *Escherichia coli*, *Staphylococcus aureus*

References: George et al (1976) J. Clin. Microbiol. 9: 214.

CLOSTRIDIUM DIFFICILE (CCFA) AGAR BASE

A selective and differential medium for the isolation of *Clostridium difficile*.

Code Number:	CCF20500, CCF25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 34,5 g in 500 ml of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add the contents of one vial of Clostridium Selective Supplement (CDS80004) reconstituted with 4 ml of sterile distilled water. Mix well before pouring. Because of sensitivity of some strains of *Clostridium difficile*, the amount of cycloserine and cefoxitin is reduced. If you want to compensate the reduction in selectivity, treat the specimen with alcohol before inoculation.

Formula in g/l

Peptones	35,00
Fructose	6,00
Sodium chloride	2,00
Magnesium sulphate	0,20
Buffers	5,80
Neutral red	0,03
Agar	20,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C, no longer than 5 days.

Quality Control:

Positive control: *Clostridium difficile*

Negative control: *Escherichia coli*, *Staphylococcus aureus*

References: George et al (1976) J. Clin. Microbiol. 9: 214.

COLUMBIA BLOOD AGAR BASE

A multi-purpose medium for the cultivation of nonfastidious and fastidious organisms.

Code Number:	COL20500, COL25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 42 g in 950 ml of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 50 ml of sterile defibrinated blood. Mix well before pouring.

Formula in g/l

Nutrient substrate (peptones, extracts)	23
Starch soluble	1
Sodium chloride	5
Agar	13

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Streptococcus pyogenes*, *Streptococcus pneumoniae*, *Enterococcus faecalis*

References: Ellner et al (1966) Am. J. Clin. Pathol. 45: 502.

COLUMBIA AGAR, PH EUR - USP

A multi-purpose medium for the cultivation of nonfastidious and fastidious organisms according to PH EUR (Agar Medium Q - Harmonised).

Code Number:	CLE20500, CLE25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 42 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Pancreatic digest of casein	10
Meat peptic digest	5
Heart pancreatic digest	3
Yeast extract	5
Starch soluble	1
Sodium chloride	5
Agar	13

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Staphylococcus aureus*

References: European Pharmacopoeia 5.6

COLUMBIA CNA AGAR BASE

A selective medium for the isolation and differentiation of gram-positive micro-organisms.

Code Number:	CNA20500, CNA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 42 g in 950 ml of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 115 °C for 15 minutes. Cool to 50 °C and aseptically add 50 ml of sterile defibrinated blood. Mix well before pouring.

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Nutrient substrate (peptones, extracts)	23,00
Starch soluble	1,00
Sodium chloride	5,00
Nalidixic acid	0,01
Colistin	0,01
Agar	13,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Streptococcus pyogenes*, *Streptococcus pneumoniae*, *Streptococcus faecalis*
Negative control: *Proteus mirabilis*

References: Ellner et al (1966) Am. J. Clin. Pathol. 45: 502.

CZAPEK-DOX AGAR

A selective medium for the cultivation of fungi and soil bacteria.

Code Number:	CZA20500, CZA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 48 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. If it is desired to adjust the reaction to pH 3.5, cool to 55 °C and add Lactic Acid Solution (LAS80100) to the agar in the necessary quantity (about 10 ml).

Formula in g/l

Sucrose	30,00
Sodium nitrate	3,00
Magnesium sulphate	0,50
Potassium chloride	0,50
Ferrous sulphate	0,01
Buffers	1,00
Agar	13,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Aspergillus niger*
Negative control: *Escherichia coli*

References: APHA, Standard Methods for the Examination of Water and Wastewater, 18th ed. (1992)

CZAPEK YEAST EXTRACT AGAR

A selective medium for the cultivation of fungi and soil bacteria.

Code Number:	CYA20500, CYA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,3 (approx.) at 20 °C

Direction: Suspend 55 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Yeast extract	5,000
Sucrose	30,000
Sodium nitrate	3,000
Magnesium sulphate	0,500
Potassium chloride	0,500
Ferrous sulphate	0,010
Zinc sulphate	0,010
Copper sulphate	0,005
Buffers	1,500
Agar	14,500

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Aspergillus niger*
Negative control: *Escherichia coli*

References: Warcup (1950) Nature 166: 117

DESOXYCHOLATE CITRATE AGAR, PH EUR

A selective and differential medium for the isolation of gram-negative enteric micro-organisms according to PH EUR (Agar Medium J).

Code Number:	DCE20500, DCE25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 70 g in one litre of distilled water and heat with frequent agitation until the medium boils. Mix well and pour plates immediately.

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Meat peptone	10,00
Beef extract	10,00
Lactose monohydrate	10,00
Sodium citrate	20,00
Sodium desoxycholate	5,00
Ferric citrate	1,00
Neutral red	0,02
Agar	14,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Salmonella enteritidis*, *Shigella sonnei*, *Proteus mirabilis*
Negative control: *Enterococcus faecalis*

References: European Pharmacopoeia 5.6

DESOXYCHOLATE CITRATE AGAR, HYNES, MODIFIED

A selective and differential medium for the isolation of gram-negative enteric micro-organisms. Desoxycholate Citrate Agar, Hynes is more selective than Desoxycholate Citrate Agar, Leifson. The medium supplemented with phenylalanine is suitable to distinguish *Salmonella* spp. from *Proteus* spp.

Code Number:	DCH20500, DCH25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 73 g in one litre of distilled water and heat with frequent agitation until the medium boils. Mix well and pour plates immediately.

Warning!

The medium is heat sensitive.

No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	26,5000
Lactose	10,0000
L-Phenylalanine	1,0000
Sodium citrate	9,0000
Sodium thiosulphate	5,5000
Sodium desoxycholate	5,0000
Ferric citrate	1,0000
Neutral red	0,0200
Agar	15,0000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C, but better the use is for a few days.

Quality Control:

Positive control: *Escherichia coli*, *Salmonella enteritidis*, *Shigella sonnei*, *Proteus mirabilis*

Negative control: *Enterococcus faecalis*

References: Hynes (1942) J. Path. Bact. 54: 193.

DESOXYCHOLATE CITRATE AGAR, LEIFSON, MODIFIED

A selective and differential medium for the isolation of gram-negative enteric micro-organisms. Desoxycholate Citrate Agar, Leifson is less selective than Desoxycholate Citrate Agar, Hynes. The medium supplemented with phenylalanine is suitable to distinguish *Salmonella* spp. from *Proteus* spp.

Code Number:	DCC20500, DCC25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 66 g in one litre of distilled water and heat with frequent agitation until the medium boils. Mix well and pour plates immediately.

Warning!

The medium is heat sensitive.

No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	26,5000
Lactose	10,0000
L-Phenylalanine	1,0000
Sodium citrate	5,0000
Sodium thiosulphate	5,0000
Sodium desoxycholate	2,5000
Ferric citrate	1,0000
Neutral red	0,0200
Agar	15,0000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C, but better the use is for a few days.

Quality Control:

Positive control: *Escherichia coli*, *Salmonella enteritidis*, *Shigella sonnei*, *Proteus mirabilis*

Negative control: *Enterococcus faecalis*

References: Leifson (1935) J. Path. Bact. 40: 581.

DESOXYCHOLATE LACTOSE AGAR

A selective and differential medium for the enumeration and isolation of coliform micro-organisms.

Code Number:	DCL20500, DCL25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 45 g in one litre of distilled water and heat with frequent agitation until the medium boils. Mix well and pour plates immediately.

Warning!

The medium is heat sensitive.

No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	14,5000
Lactose	10,0000
Sodium chloride	5,0000
Sodium citrate	2,0000
Sodium desoxycholate	0,5000
Neutral red	0,0330
Agar	13,0000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C, but better the use is for a few days.

Quality Control:

Positive control: *Escherichia coli*, *Shigella sonnei*, *Proteus mirabilis*

Negative control: *Enterococcus faecalis*

References: APHA: Compendium of Methods for the Microbiological Examinations of Foods. (1992) 3rd ed.

DEXTROSE BROTH

A general purpose enrichment medium is used for the study of dextrose fermentation, too.

Code Number:	DEB20500, DEB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 20 g in one litre of distilled water and heat gently to dissolve the medium completely. Dispense into final containers. Durham tubes may be added to the tubes in order to determine gas production. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	10
Glucose	5
Sodium chloride	5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Escherichia coli*, *Streptococcus pyogenes*

DEXTROSE TRYPTONE BROTH

A differential medium for the detection of thermophilic aerobic organisms.

Code Number:	DTB20500, DTB25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,9 (approx.) at 20 °C

Direction: Suspend 15 g in one litre of distilled water and heat gently to dissolve the medium completely. Distribute into final container. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Tryptone	10,00
Glucose	5,00
Bromocresol purple	0,04

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Bacillus stearothermophilus*.

References: APHA (1976) Compendium of Methods for the Microbiological Examination of Foods.

DEXTROSE TRYPTONE AGAR

A differential medium for the detection and enumeration of mesophilic and thermophilic aerobic organisms.

Code Number:	DTR20500, DTR25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,9 (approx.) at 20 °C

Direction: Suspend 28 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Tryptone	10,00
Glucose	5,00
Bromocresol purple	0,04
Agar	13,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Bacillus stearothermophilus*.

References: APHA (1984) Compendium of Methods for the Microbiological Examination of Foods, 2nd ed.

DG18 AGAR BASE

Selective agar with low water activity for the enumeration yeast and molds, especially enumeration and isolation of xerophilic molds.

Code Number:	D1820500, D1825000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	5,6 (approx.) at 20 °C

Direction: Suspend 32 g in one litre of distilled water and boil to dissolve the medium completely. Add 175 ml glycerol to the medium, mix and sterilise by autoclaving at 121 °C for 15 minutes. Mix well before pouring.

Formula in g/l

Peptones	5,000
Glucose	10,000
Magnesium sulphate	0,500
Chloramphenicol	0,100
Dichloran	0,002
Buffers	1,000
Agar	15,400

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Saccharomyces cerevisiae*

Negative control: *Escherichia coli*

References: Hocking and Pitt (1980) J. Appl. Envir. Micr. 39: 488.

DIAGNOSTIC SENSITIVITY TEST AGAR

A dual purpose medium for the isolation and antimicrobial susceptibility testing of microorganisms.

Code Number:	DST20500, DST25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 41 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	10,00000
Veal heart extract	10,00000
Glucose	2,00000
Sodium chloride	3,00000
Adenine sulphate	0,01000
Guanine hydrochloride	0,01000
Uracil	0,01000
Xanthine	0,01000
Thiamine HCl	0,00003
Buffers	3,00000
Agar	13,00000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Pseudomonas aeruginosa*, *Streptococcus pneumoniae*, *Enterococcus faecalis*

References: Ericsson et al (1971) Acta Path. Microbiol. Scan. B. Suppl. 217

DIASALM MEDIUM BASE

A semi-solid selective diagnostic motility medium for the isolation of *Salmonella* spp.

Code Number:	DIM20500, DIM25000
Colour:	Greenish
Appearance:	Homogeneous hygroscopic powder
Final pH:	5,5 (approx.) at 20 °C

Direction: Fill up the 20 ml of DIASALM-MSRV Magnesium Chloride Solution (DSM80500) to 475 ml with distilled water. Suspend 20 g of dehydrated media and bring to the boil with frequent agitation to dissolve completely. Cool to 50 °C and aseptically add the contents of one vial of Novobiocin Supplement (DSN80005) reconstituted with 4 ml of sterile distilled water. Mix gently before pouring.

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	27,000
Sucrose	7,500
Lactose	0,500
Sodium thiosulphate	0,800
Ferrous ammonium sulphate	0,200
Malachite green	0,037
Bromocresol purple	0,080
Buffers	1,200
Agar	2,700

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C, but better the use is for a few days.

Quality Control:

Positive control: *Salmonella enteritidis*
Negative control: *Pseudomonas aeruginosa*

References: Van der Zee and Van Netten (1992) Proc. Symp. "Salmonella and Salmonellosis". Ploufragan: 69.

DNASE AGAR

A differentiating medium for the detection of deoxyribonuclease activity of microorganisms.

Code Number:	DNA20500, DNA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 40 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Tryptose	20
Deoxyribonucleic acid	2
Sodium chloride	5
Agar	13

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Staphylococcus aureus*
Negative control: *Staphylococcus epidermidis*

References: Jeffries et al. (1957) J. Bact. 73: 590

DNASE AGAR WITH MANNITOL

A differentiating medium for the detection of deoxyribonuclease activity of microorganisms.

Code Number:	DNM20500, DNM25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 50 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Tryptose	20,00
Mannitol	10,00
Deoxyribonucleic acid	2,00
Sodium chloride	5,00
Phenol red	0,02
Agar	13,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Staphylococcus aureus*
Negative control: *Staphylococcus epidermidis*

References: Jeffries et al. (1957) J. Bact. 73: 590

DNASE AGAR WITH METHYL GREEN

A differentiating medium for the detection of deoxyribonuclease activity of microorganisms.

Code Number:	DNG20500, DNG25000
Colour:	Greenish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 40 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Tryptose	20,00
Deoxyribonucleic acid	2,00
Sodium chloride	5,00
Methyl green	0,05
Agar	13,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Staphylococcus aureus*

Negative control: *Staphylococcus epidermidis*

References: Jeffries et al. (1957) J. Bact. 73: 590

DNASE AGAR WITH TOLUIDINE BLUE

A differentiating medium for the detection of deoxyribonuclease activity of microorganisms.

Code Number:	DNT20500, DNT25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 40 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Tryptose	20,0
Deoxyribonucleic acid	2,0
Sodium chloride	5,0
Toluidine blue	0,1
Agar	13,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Staphylococcus aureus*

Negative control: *Staphylococcus epidermidis*

References: Jeffries et al. (1957) J. Bact. 73: 590

DRIGALSKI GLUCOSE AGAR

A glucose containing selective medium for the detection and enumeration of Enterobacteriaceae.

Code Number:	DAC20500, DAC25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 47 g in one litre of distilled water. Boil to dissolve the medium completely. Cool to about 50 °C and pour into Petri-dishes.

Warning!

The medium is heat sensitive.

No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	18,400
Bile salt	1,500
Glucose	10,000
Sodium chloride	2,000
Bromothymol blue	0,150
Crystal violet	0,002
Agar	15,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C, but better the use is for a few days.

Quality Control:

Positive control: *Escherichia coli, Proteus mirabilis*

Negative control: *Staphylococcus aureus*

References: Ewing (1986) Edwards and Ewing's identifications of the enterobac-teriaceae. 4th ed.

DRIGALSKI LACTOSE AGAR

A lactose containing selective medium for the detection and enumeration of coliforms.

Code Number:	DAS20500, DAS25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 66 g in one litre of distilled water. Boil to dissolve the medium completely. Cool to about 50 °C and pour into Petri-dishes.

Warning!

The medium is heat sensitive.

No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	17,400
Bile salt	1,500
Sucrose	17,000
Lactose	13,000
Sodium chloride	2,000
Bromothymol blue	0,150
Crystal violet	0,002
Agar	15,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C, but better the use is for a few days.

Quality Control:

Positive control: *Escherichia coli, Proteus mirabilis*

Negative control: *Staphylococcus aureus*

References: Ewing (1986) Edwards and Ewing's identifications of the enterobac-teriaceae. 4th ed.

DTM AGAR BASE

A highly selective medium for the isolation of dermatophytes.

Code Number:	DTM20500, DTM25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	5,5 (approx.) at 20 °C

Direction: Suspend 20 g in 500 ml of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add the contents of one vial of DTM Selective Supplement (DTS80004), reconstituted with 4 ml of ethanol/sterile distilled water (1:1). Mix well before pouring.

Formula in g/l

Peptones	10,0
Glucose	10,0
Phenol red	0,2
Agar	20,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C (plates) or at room temperature (tubes).

Quality Control:

Positive control: *Trichophyton mentagrophytes*

Negative control: *Aspergillus niger*

References: Taplin at al (1969) Arch. Dermatol. 99: 203.

EE BROTH, PH EUR - USP

An enrichment medium for the cultivation of Enterobacteriaceae according to PH EUR (Broth Medium E - Enterobacteria Enrichment Broth-Mossel - Harmonised).

Code Number:	EEB20500, EEB25000
Colour:	Greenish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 45 g in 1 litre of distilled water. Mix well and heat gently to dissolve completely. Distribute into final containers. Sterilise at 100 °C for 30 minutes. Cool rapidly. Large samples may require double-strength broth to reduce the final volumes.

Warning!

The medium is heat sensitive.

No further sterilisation is necessary or desirable.

Formula in g/l

Pancreatic digest of gelatin	10,000
Dehydrated ox bile	20,000
Glucose monohydrate	5,000
Brilliant green	0,015
Potassium dihydrogen phosphate	2,000
Disodium hydrogen phosphate dihydrate	8,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Yersinia enterocolitica*, *Escherichia coli*

Negative control: *Staphylococcus aureus*

References: European Pharmacopoeia 5.6
Mossel et.al (1963) J. Apple. Bact. 26: 444.

EC BROTH

A liquid medium for the detection of coliform bacteria.

Code Number:	ECB20500, ECB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,8 (approx.) at 20 °C

Direction: Suspend 40 g in 1 litre of distilled water. Mix well and heat gently to dissolve the medium completely. Distribute into final containers fitted with Durham's tubes. Sterilise by autoclaving at 115 °C for 15 minutes. Cool quickly. Large samples may require double-strength broth to reduce the final volumes.

Warning!

The medium is heat sensitive.

No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	23,0
Bile salts	1,5
Lactose	5,0
Sodium chloride	5,0
Buffers	5,5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Enterobacter aerogenes*, *Escherichia coli*

Negative control: *Streptococcus faecalis*

References: Hajna and Perry (1943) Am. J. Public. Health. 33: 550.

EDWARDS AGAR BASE

A selective medium for the isolation and enumeration of streptococci especially *Streptococcus agalactiae*.

Code Number:	EDA20500, EDA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 41 g in 950 ml of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 50 ml of sterile defibrinated blood. Mix well before pouring.

Formula in g/l

Peptones	20,000
Sodium chloride	5,000
Aesculin	1,000
Thalious Acetate	0,300
Crystal violet	0,001
Agar	14,700

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Streptococcus agalactiae*

Negative control: *Escherichia coli*

References: Edwards (1933) J. Comp. Path. Therap. 46: 211.

ENDO AGAR BASE, DEV

A differential and slightly selective medium for the detection of *Escherichia coli* according to DEV.

Code Number:	EDE20500, EDE25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,9 (approx.) at 20 °C

Direction: Suspend 58 g in one litre of distilled water. Add 5 ml of Endo Basic Fuchsin Solution, DEV (FBS80045). Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes. Mix well before pouring.

Formula in g/l

Peptones	20,5
Lactose	10,0
Sodium chloride	5,0
Sodium sulphite	2,5
Agar	20,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Shigella sonnei*

Negative control: *Enterococcus faecalis*

References: DIN 38411

ENDO AGAR BASE

A differential and slightly selective medium for the detection of coliform and other enteric bacteria

Code Number:	END20500, END25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 42 g in one litre of distilled water. Add 5 ml of Endo Basic Fuchsin Solution (FBS80060). Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes. Mix well before pouring.

Formula in g/l

Peptones	12,0
Lactose	10,0
Sodium sulphite	2,5
Buffers	2,5
Agar	15,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Shigella sonnei*

Negative control: *Enterococcus faecalis*

References: APHA (1980) Standard Methods for the Examination of Water and Wastewater. 15th ed.

ENDO LES AGAR BASE

A differential and slightly selective medium for the enumeration of coliforms by membrane filtration.

Code Number:	ELA20500, ELA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 50 g in one litre of distilled water. Add 5 ml of Endo Basic Fuchsin Solution (FBS80060). Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes. Mix well before pouring.

Formula in g/l

Peptones	15,00
Lactose	10,00
Sodium chloride	3,70
Sodium sulphite	1,60
Sodium deoxycholate	0,10
Sodium lauryl sulphate	0,05
Buffers	4,50
Agar	15,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Shigella sonnei*

Negative control: *Enterococcus faecalis*

References: McCarthy et al (1961) Water Sewage Works 108: 238.

ENDO M BROTH BASE

A differential and slightly selective medium for the one-step method for the enumeration of coliforms by membrane filtration.

Code Number:	ENB20500, ENB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 48 g in one litre of distilled water. Add 10 ml of Endo Basic Fuchsin Solution (FBS80060) and heat gently to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes. Mix well before pouring.

Formula in g/l

Peptones	22,50
Lactose	12,50
Sodium chloride	5,00
Sodium sulphite	2,10
Sodium deoxycholate	0,10
Sodium lauryl sulphate	0,05
Buffers	5,75

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature, but better the use is for a few days.

Quality Control:

Positive control: *Escherichia coli*, *Proteus mirabilis*

Negative control: *Enterococcus faecalis*

References: Fifiel and Schaufus (1958) Am. Water Works Assoc. 50: 193.

EOSIN METHYLENE BLUE AGAR, USP

A selective medium for the isolation and differentiation of Gram negative enteric bacteria according to USP.

Code Number:	EMB20500, EMB25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 36 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	10,500
Lactose	10,000
Eosin Y	0,400
Methylene blue	0,065
Buffers	2,000
Agar	13,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Shigella sonnei*, *Proteus mirabilis*

Negative control: *Enterococcus faecalis*

References: Levine (1918) J. Infect. Dis. 23: 43.
United States Pharmacopoeia XXVIII. (2005)

ESCULIN AGAR

A solid medium for the detection of esculin hydrolysis.

Code Number:	ESA20500, ESA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 35 g in one litre of distilled water and boil to dissolve the medium completely. Distribute into test tubes and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	18
Aesculine	1
Ferric citrate	1
Agar	15

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Enterococcus faecalis*

Negative control: *Streptococcus pyogenes*

References: Blazevic and Ederer (1975) Principles of Biochemical Tests in Diag. Microbiol.

ESCULIN BROTH

A liquid medium for the detection of esculin hydrolysis.

Code Number:	ESB20500, ESB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 20 g in one litre of distilled water and heat gently to dissolve the medium completely. Dispense into final containers. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	10
Aesculine	1
Ferric citrate	1

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Enterococcus faecalis*

Negative control: *Streptococcus pyogenes*

References: Blazevic and Ederer (1975) Principles of Biochemical Tests in Diag. Microbiol.

FASTIDIOUS ANAEROBE ISOLATION AGAR BASE

A solid medium for the preparation of blood agar designed to give optimum growth of nutritionally exacting anaerobes.

Code Number:	AIA20500, AIA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 46 g in 950 ml of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 50 ml of sterile defibrinated blood. Mix well before pouring.

Formula in g/l

Nutrient substrate (peptones, extracts)	23,400
Glucose	1,000
Starch soluble	1,000
Sodium chloride	5,000
L-Arginine	0,500
L-Cysteine	0,500
Growth promoters	0,830
Vitamins	0,011
Buffers	0,750
Agar	13,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Bacteroides fragilis*, *Peptostreptococcus anaerobius*

FASTIDIOUS ANAEROBE ISOLATION BROTH

A liquid medium for the general growth of anaerobic organisms.

Code Number:	AIB20500, AIB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 33 g in one litre of distilled water and heat gently to dissolve the medium completely. Dispense into final containers. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Nutrient substrate (peptones, extracts)	23,400
Glucose	1,000
Starch soluble	1,000
Sodium chloride	5,000
L-Arginine	0,500
L-Cysteine	0,500
Growth promoters	0,830
Vitamins	0,011
Buffers	0,760

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Bacteroides fragilis*, *Peptostreptococcus anaerobius*

FluoroBio® CLED

A differentiating medium for the isolation, enumeration and presumptive identification of micro-organisms from urine. Differentiation of *E. coli* colonies is possible by means of fluorescence in the UV.

Code Number:	CLM20500, CLM25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 37 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	11,800
Lactose	10,000
L-Cystine	0,128
MUG	0,100
Bromothymol blue	0,020
Agar	15,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Proteus mirabilis*, *Enterococcus faecalis*

References: Mackey et al (1966) Br. Med. J. 1: 1173.

Kilian and Bulow (1984) Acta Path. Micr. Scand. Sect. B. 84: 245.

FluoroBio® BGLB

A selective medium for the detection of coliform bacteria by a fluorogenic procedure.

Code Number:	BBM20500, BBM25000
Colour:	Greenish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 40 g in 1 litre of distilled water. Mix well and heat gently to dissolve completely. Distribute into final containers fitted with Durham's tubes. Sterilise at 115 °C for 15 minutes. Cool rapidly!

Warning!

The medium is heat sensitive.

No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	10,000
Bacteriological bile	20,000
Lactose	10,000
MUG	0,0500
Brilliant green	0,0133

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Escherichia coli*, *Enterobacter aerogenes*

Negative control: *Staphylococcus aureus*

References: APHA (1986) Standard Methods for the Examination of Water and Wastewater. 15th ed.
Kilian and Bulow (1984) Acta Path. Micr. Scand. Sect. B. 84: 245.

FluoroBio® EC

A liquid medium for the detection of coliform bacteria by a fluorogenic procedure.

Code Number:	ECM20500, ECM25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,8 (approx.) at 20 °C

Direction: Suspend 40 g in 1 litre of distilled water. Mix well and heat gently to dissolve the medium completely. Distribute into final containers fitted with Durham's tubes. Sterilise by autoclaving at 115 °C for 15 minutes. Cool quickly. Large samples may require double-strength broth to reduce the final volumes.

Warning!

The medium is heat sensitive.

No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	23,00
Bile salts	1,50
Lactose	5,00
MUG	0,05
Sodium chloride	5,00
Buffers	5,50

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Enterobacter aerogenes*, *Escherichia coli*

Negative control: *Streptococcus faecalis*

References: Hajna and Perry (1943) Am. J. Public. Health. 33: 550.
Kilian and Bulow (1984) Acta Path. Micr. Scand. Sect. B. 84: 245.

FluoroBio® LSB

A selective enrichment medium for the detection of coliform bacteria by a fluorogenic procedure.

Code Number:	LSM20500, LSM25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,8 (approx.) at 20 °C

Direction: Suspend 35 g in 1 litre of distilled water. Distribute into final containers fitted with Durham's tubes. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Tryptose	20,00
Lactose	5,00
Sodium chloride	5,00
Sodium lauryl sulphate	0,10
MUG	0,10
Buffers	4,90

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Escherichia coli*, *Salmonella enteritidis*

Negative control: *Enterococcus faecalis*

References: APHA (1976) Compendium of Methods for the Microbiological Examination of Foods.

Kilian and Bulow (1984) Acta Path. Micr. Scand. Sect. B. 84: 245.

FluoroBio® LSB No2

A selective enrichment medium for the detection of coliform bacteria by a fluorogenic procedure.

Code Number:	LMT20500, LMT25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,8 (approx.) at 20 °C

Direction: Suspend 37 g in 1 litre of distilled water. Distribute into final containers fitted with Durham's tubes. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Tryptose	20,00
Tryptophan	1,00
Lactose	5,00
Sodium chloride	5,00
Sodium lauryl sulphate	0,10
MUG	0,10
Buffers	5,80

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Escherichia coli*, *Enterobacter aerogenes*

Negative control: *Staphylococcus aureus*

References: APHA (1976) Compendium of Methods for the Microbiological Examination of Foods.

Kilian and Bulow (1984) Acta Path. Micr. Scand. Sect. B. 84: 245.

FluoroBio® MACCONKEY AGAR

A selective and differential medium for the detection of enteric pathogens and coliform bacteria by a fluorogenic procedure.

Code Number:	MCM20500, MCM25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 56 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	20,900
Bile salts	5,000
Lactose	10,000
Sodium chloride	5,000
MUG	0,100
Neutral red	0,050
Crystal violet	0,001
Agar	15,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Shigella sonnei*, *Proteus mirabilis*

Negative control: *Enterococcus faecalis*

References: MacConkey (1900) The Lancet

Kilian and Bulow (1984) Acta Path. Micr. Scand. Sect. B. 84: 245.

FluoroBio® MACCONKEY BROTH

A differential medium containing neutral red for the detection of coliform bacteria by a fluorogenic procedure.

Code Number:	MNM20500, MNM25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 38 g in one litre of distilled water and heat gently to dissolve the medium completely. Mix well and distribute into final containers fitted with Durham tube. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	18,000
Bile salts	5,000
Lactose	10,000
Sodium chloride	5,000
MUG	0,050
Neutral red	0,050

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Escherichia coli*

Negative control: *Enterococcus faecalis*

References: WHO (1963) Int. Stand. for Drinking Water

Kilian and Bulow (1984) Acta Path. Micr. Scand. Sect. B. 84: 245.

FluoroBio® MACCONKEY BROTH, PURPLE

A differential medium containing bromocresol purple for the detection of coliform bacteria by a fluorogenic procedure.

Code Number:	MPM20500, MPM25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 38 g in one litre of distilled water and heat gently to dissolve the medium completely. Mix well and distribute into final containers fitted with Durham tube. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	18,000
Bile salts	5,000
Lactose	10,000
Sodium chloride	5,000
MUG	0,050
Bromocresol purple	0,010

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Escherichia coli*

Negative control: *Enterococcus faecalis*

References: WHO (1963) Int. Stand. for Drinking Water
Kilian and Bulow (1984) Acta Path. Micr. Scand. Sect. B. 84: 245.

FluoroBio® VRBL

A lactose containing selective medium for the detection and enumeration of coliform bacteria by a fluorogenic procedure.

Code Number:	VBM20500, VBM25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 45 g in one litre of distilled water. Boil to dissolve the medium completely. Cool to about 50 °C and pour into Petri-dishes.

Warning!

The medium is heat sensitive.

No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	13,400
Bile salt	1,500
Lactose	10,000
Sodium chloride	5,000
MUG	0,100
Neutral red	0,030
Crystal violet	0,002
Agar	15,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Proteus mirabilis*

Negative control: *Staphylococcus aureus*

References: APHA (1978) Standard Method for the Examination of Dairy Product. 14th Edn.
Kilian and Bulow (1984) Acta Path. Micr. Scand. Sect. B. 84: 245.

GBS AGAR BASE

A differential medium for the isolation and detection of Group B streptococci.

Code Number:	GBS20500, GBS25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,5 (approx.) at 20 °C

Direction: Suspend 47 g in 950 ml of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 50 ml of steril inactivated Horse Serum (i.e. serum held at 56 °C for 30 minutes). Mix well before pouring.

Formula in g/l

Peptones	23
Soluble starch	5
Buffers	7
Agar	12

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Streptococcus agalactiae*

Negative control: *Enterococcus faecalis*

References: Islam (1977) The Lancet: 256

GC AGAR BASE

A highly nutritious medium for the isolation and cultivation of fastidious organisms especially *Neisseria* and *Haemophilus* species.

Code Number:	GCA20500, GCA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction for Thayer Martin Agar: Suspend 19,5 g in 460 ml of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 35 ml of defibrinated blood and "chocolate" by heating at 80 °C for 10 min. Cool to 50 °C. Dissolve the contents of one vial of Growth Factor Mixture Hydration Fluid with 5 ml of sterile distilled water and aseptically add to the Growth Factor Mixture (GFM80005). Mix well and aseptically add to the medium. Mix well before pouring.

Direction for Selective Thayer Martin Agar: Dissolve the contents of one vial of GC Agar Selective Supplement, VCN (VCN80004) or GC Agar Selective Supplement, VCNT (VCT80004) with 4 ml of sterile distilled water and aseptically add to the above at 50 °C.

Formula in g/l

Nutrient substrate (peptones, extracts)	15
Sodium chloride	5
Starch soluble	1
Buffers	5
Agar	13

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Neisseria gonorrhoeae*, *Neisseria meningitidis*

Negative control (selective media): *Proteus mirabilis*, *Staphylococcus aureus*

References: Thayer and Martin (1966) Public Health Rep. 81: 559.

GIOLITTI-CANTONI BROTH BASE

An enrichment medium for the selective cultivation of *Staphylococcus aureus*.

Code Number:	GCB20500, GCB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 54 g in one litre of distilled water. Heat gently to dissolve completely. Dispense into final containers and sterilise by autoclaving at 121 °C for 15 minutes. Cool rapidly and add one drop (50 µl) Giolitti-Cantoni Potassium Tellurite Solution (PTG80050) to each 10 ml of the medium aseptically, through a sterile filter.

Formula in g/l

Peptones	19,8
Mannitol	20,0
Sodium chloride	5,0
Sodium pyruvate	3,0
Glycine	1,2
Lithium chloride	5,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature, but better to use it freshly.

Quality Control:

Positive control: *Staphylococcus aureus*
Negative control: *Escherichia coli*

References: Giolitti and Cantoni (1966) J. Appl. Bact. 29: 395.

GLUTAMATE BROTH BASE, MODIFIED

A chemically defined medium for the enumeration of the coli-form group of bacteria in water.

Code Number:	MMG20500, MMG25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Dissolve 2,5 g of ammonium chloride and 6,4 g of sodium glutamate in one litre of distilled water and then add 11,4 g of broth base. Heat gently to dissolve the medium completely. Mix well and sterilise by autoclaving at 115 °C for 10 minutes. Cool quickly.

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

FORMULA in g/l

Lactose	10,000
Sodium formate	0,250
Amino acids	0,064
Minerals	0,111
Vitamins	0,003
Bromocresol purple	0,020
Buffers	0,950

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*
Negative control: *Salmonella enteritidis*

References: PHLS (1968) J. Hyg. Camb. 66: 67-82.

GN BROTH

A selective broth for the enrichment of salmonella and shigella.

Code Number:	GNB20500, GNB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 39 g in 1 litre of distilled water. Mix well and heat gently to dissolve completely. Distribute into final containers and sterilise at 115 °C for 15 minutes. Cool rapidly!

Formula in g/l

Peptones	20,0
Glucose	1,0
Mannitol	2,0
Sodium chloride	5,0
Sodium citrate	5,0
Sodium desoxycholate	0,5
Buffers	5,5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Salmonella enteritidis, Shigella sonnei*
Negative control: *Escherichia coli*

References: Hajna (1955) Public Health Lab. 13: 59.

GSP AGAR BASE

A selective medium for the detection and differentiation of *Pseudomonas* and *Aeromonas*.

Code Number:	GSP20500, GSP25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 23 g in 500 ml of distilled water. Bring to the boil to dissolve completely. Cool to 50 °C and aseptically add the contents of one vial of GSP Selective Supplement (GSU80004) reconstituted with 4 ml of sterile distilled water. Mix gently before pouring.

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Starch soluble	20,00
Sodium glutamate	10,00
Magnesium sulphate	0,50
Phenol red	0,36
Buffers	2,00
Agar	13,10

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Pseudomonas aeruginosa, Aeromonas hydrophila*

References: Kielwen et al (1969) Arch. f. Lebensmittelhyg. 20: 131.

HEKTOEN ENTERIC AGAR

A selective and differential medium for the isolation of enteric micro-organisms, especially Salmonella and some Shigella species.

Code Number:	HEA20500, HEA25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,5 (approx.) at 20 °C

Direction: Suspend 77 g in one litre of distilled water and heat with frequent agitation until the medium boils. Cool quickly.

Warning!

The medium is heat sensitive.

No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	15,300
Bile salts	9,000
Lactose	12,000
Sucrose	12,000
Salicin	2,000
Sodium chloride	5,000
Sodium thiosulphate	5,000
Ferric citrate	1,500
Acid fuchsin	0,100
Bromothymol blue	0,065
Agar	15,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Shigella flexneri*, *Salmonella enteritidis*

Negative control: *Enterococcus faecalis*

References: King and Metzger (1968) Appl. Microbiol. 16: 577.

HUGH-LEIFSON OF MEDIUM

A semisolid basal medium for the carbohydrate fermentation studies.

Code Number:	SUG20500, SUG25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 12 g in 1 litre of distilled water. Bring to the boil to dissolve completely. Distribute into final containers and sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and add the filter sterilised sugar (10 g/l) solution to the medium.

Formula in g/l

Peptones	3,00
Sodium chloride	5,00
Bromocresol purple	0,03
Buffers	1,00
Agar	3,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: Use organisms, which have known positive or negative reactions with investigated sugars.

References: Hugh and Leifson (1953). J. Bact. 66: 24.

INDOLE MOTILITY ORNITHINE (IMO) AGAR

A medium for the differentiation of gram negative enteric bacteria on the basis of the indole production, motility and the ornithine decarboxylase activity.

Code Number:	IMO20500, IMO25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,6 (approx.) at 20 °C

Direction: Suspend 26 g in one litre of distilled water and boil to dissolve the medium completely. Distribute into test tubes and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	16,00
Glucose	1,00
L-Ornithine HCl	5,00
Bromocresol purple	0,03
Buffers	1,00
Agar	3,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Escherichia coli*, *Enterobacter aerogenes*, *Klebsiella pneumoniae*

References: Ederer and Clark (1970) Appl. Microbiol. 2: 849.

IRON SULPHITE AGAR

A solid medium for the detection of sulphite reducing bacteria.

Code Number:	ISA20500, ISA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,1 (approx.) at 20 °C

Direction: Suspend 24 g in one litre of distilled water and boil to dissolve the medium completely. Distribute into test tubes and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	10,0
Sodium sulphite	0,5
Ferric citrate	0,5
Agar	13,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Clostridium sporogenes*

Negative control: *Escherichia coli*

References: Mossel et al. (1959). J. Path. Bact. 22: 278.

K AGAR BASE

A medium for the detection of *Alicyclobacillus*.

Code Number:	KSA20500, KSA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH after supplementation:	3,7 (approx.) at 20 °C

Direction: Suspend 12 g in 500 ml of distilled water. Add 0,5 ml of TWEEN 80 (TWS80100) and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and add 1 vial of Malic Acid Solution (KMS80005). Mix well before pouring.

Warning!

The medium is heat sensitive.

No further sterilisation is necessary or desirable.

Once acidified with malic acid, the medium should not be re-heated.

Formula in g/l

Peptones	8
Glucose	1
Agar	15

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Alicyclobacillus acidoterrestris*

KANAMYCIN ESCULIN AZIDE BROTH

A selective broth for the isolation of enterococci.

Code Number:	KEB20500, KEB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 33 g in one litre of distilled water and heat gently to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Mix gently before pouring.

Formula in g/l

Peptones	25,30
Sodium chloride	5,00
Sodium citrate	1,00
Sodium azide	0,15
Ferric ammonium citrate	0,50
Esculin	1,00
Kanamycin	0,02
Agar	15,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Enterococcus faecalis*

Negative control: *Escherichia coli*

References: Mossel et al. (1978) Arch. Lebensmittel-hyg. 29: 121.

KANAMYCIN ESCULIN AZIDE AGAR

A selective medium for the isolation of enterococci.

Code Number:	KEA20500, KEA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 48 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Mix gently before pouring.

Formula in g/l

Peptones	25,30
Sodium chloride	5,00
Sodium citrate	1,00
Sodium azide	0,15
Ferric ammonium citrate	0,50
Esculin	1,00
Kanamycin	0,02
Agar	15,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Enterococcus faecalis*

Negative control: *Escherichia coli*

References: Mossel et al. (1978) Arch. Lebensmittel-hyg. 29: 121.

KF STREPTOCOCCUS AGAR BASE

A selective medium for the isolation and enumeration of enterococci.

Code Number:	KFA20500, KFA25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 72 g in one litre of distilled water and boil to dissolve the medium completely. Cool to 50 °C and add one drop KF TTC Solution (KTS80005) to each 100 ml of the medium. Mix well before pouring.

Warning!

The medium is heat sensitive.

No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	20,600
Maltose	20,000
Lactose	1,000
Sodium chloride	5,000
Sodium glycerophosphate	10,000
Bromocresol purple	0,015
Sodium azide	0,400
Agar	15,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Enterococcus faecalis*

Negative control: *Escherichia coli*

References: Kenner et al (1961) Appl. Microbiol. 9: 15.

KIMMIG AGAR BASE

A solid medium for the cultivation, isolation, identification and strain preservation of fungi.

Code Number:	KIM20500, KIM25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,5 (approx.) at 20 °C

Direction: Suspend 50 g in one litre of distilled water. Add 5 ml Glycerol Supplement (GLC80100) and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Mix gently before pouring.

Formula in g/l

Peptones	15
Dextrose	19
Sodium chloride	1
Agar	15

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Candida albicans*

References: Kimmig and Rieth (1993) *Arzneimittelforsch* 3: 267

KING A AGAR BASE, USP

An elective agar for the detection and differentiation of *Pseudomonas aeruginosa* on the basis of pigment production according to USP. KING A agar enhances the production of piocyanin and inhibits the formation of fluorescein.

Code Number:	KAA20500, KAA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,1 (approx.) at 20 °C

Direction: Suspend 44 g in one litre of distilled water. Add 10 ml of Glycerol Supplement (GLC80100) and boil to dissolve the medium completely. Dispense into test tubes. Sterilise by autoclaving at 121 °C for 15 minutes. Allow to cool in slanted position.

Formula in g/l

Peptones	19,6
Magnesium chloride	1,4
Potassium sulphate	10,0
Agar	13,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Pseudomonas aeruginosa*

References: King at al (1954) *J. Lab. and Clin. Med.* 44: 301.
United States Pharmacopoeia XXVIII. (2005)

KING B AGAR BASE, USP

An elective agar for the detection and differentiation of *Pseudomonas aeruginosa* on the basis of pigment production according to USP. KING B agar enhances the production of fluorescein and inhibits the formation of piocyanin.

Code Number:	KAB20500, KAB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,1 (approx.) at 20 °C

Direction: Suspend 36 g in one litre of distilled water. Add 10 ml of Glycerol Supplement (GLC80100) and boil to dissolve the medium completely. Dispense into test tubes. Sterilise by autoclaving at 121 °C for 15 minutes. Allow to cool in slanted position.

Formula in g/l

Peptones	20,0
Magnesium sulphate	1,5
Buffers	1,5
Agar	13,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Pseudomonas aeruginosa*

References: King at al (1954) *J. Lab. and Clin. Med.* 44: 301.
United States Pharmacopoeia XXVIII. (2005)

KLIGLER IRON AGAR

A medium for the differentiation of gram negative enteric bacteria on the basis of carbohydrate fermentation and the production of hydrogen sulphide.

Code Number:	KIA20500, KIA25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 56 g in one litre of distilled water and boil to dissolve the medium completely. Dispense into final containers. Sterilise by autoclaving at 121 °C for 15 minutes. Cool in slanted position to form slants with deep butts.

Formula in g/l

Peptones	26,40
Lactose	10,00
Glucose	1,00
Sodium chloride	5,00
Sodium thiosulphate	0,30
Ferric citrate	0,30
Phenol red	0,05
Agar	13,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive controls: *Escherichia coli*, *Salmonella Enteritidis*,
Shigella flexneri

References: Kligler (1917) *Am. J. Pub. Hlth.* 7: 1042.

KLIMMER AGAR

A lactose containing selective medium for the detection and enumeration of coliforms.

Code Number:	KLA20500, KLA25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 46 g in one litre of distilled water. Boil to dissolve the medium completely. Cool to about 50 °C and pour into Petri-dishes.

Warning!

The medium is heat-sensitive.

No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	15,20
Lactose	12,00
Sodium chloride	3,60
Acridlavine	0,06
Bromothymol blue	0,20
Agar	15,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Salmonella enteritidis*

Negative control: *Staphylococcus aureus*

KOSER CITRATE BROTH

A broth for the differentiation of gram-negative bacteria on the basis of citrate utilisation.

Code Number:	KSB20500, KSB25000
Colour:	White
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,7 (approx.) at 20 °C

Direction: Suspend 6 g in one litre of distilled water and heat gently to dissolve the medium completely. Dispense into final containers. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Sodium citrate	3,000
Magnesium sulphate	0,200
Phenol red	0,015
Buffers	2,800

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Enterobacter aerogenes*

Negative control: *Escherichia coli*

References: Koser (1923) J. Bacteriol. 8: 493.

LACTOSE BROTH, PH EUR

An enrichment medium for the cultivation and presumptive identification of coliforms according to PH EUR (Broth Medium D).

Code Number:	LAB20500, LAB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,9 (approx.) at 20 °C

Direction: Suspend 13 g in 1 litre of distilled water. Mix well and heat gently to dissolve completely. Distribute into final containers fitted with Durham's tubes. Sterilise by autoclaving at 121 °C for 15 minutes. Cool rapidly.

Formula in g/l

Pancreatic digest of gelatine	5
Beef extract	3
Lactose monohydrate	5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Enterobacter aerogenes*, *Escherichia coli*

Negative control: *Enterococcus faecalis*

References: European Pharmacopoeia 5.6

LACTOSE PEPTONE BROTH, DEV

An enrichment medium for the cultivation and enumeration of coliforms.

Code Number:	LPB20500, LPB25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 35 g in one litre of distilled water. Mix well and heat gently to dissolve completely. Distribute into final containers fitted with Durham's tubes. Sterilise by autoclaving at 121 °C for 15 minutes. Cool rapidly. Large samples may require double-strength broth to reduce the final volumes.

Formula in g/l

Peptones	20,00
Lactose	10,00
Sodium chloride	5,00
Bromocresol purple	0,02

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Escherichia coli*

Negative control: *Enterococcus faecalis*

References: DEV (1963) Bundesgesetzbl., Teil I: 2613444.

LACTOSE PHENOL RED BROTH

An enrichment medium for the cultivation and presumptive identification of coliforms.

Code Number:	LFB20500, LFB25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 25 g in 1 litre of distilled water. Mix well and heat gently to dissolve completely. Distribute into final containers fitted with Durham's tubes. Sterilise by autoclaving at 121 °C for 15 minutes. Cool rapidly. Large samples may require double-strength broth to reduce the final volumes.

Formula in g/l

Peptones	10,00
Lactose	10,00
Sodium chloride	5,00
Phenol red	0,01

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Enterobacter aerogenes*, *Escherichia coli*

Negative control: *Enterococcus faecalis*

References: Murray et al (1995) Manual of clinical microbiology 6th ed.

LACTOSE SULPHITE BROTH BASE, PH EUR

Liquid medium for the determination of H₂S production by Clostridium perfringens according to PH EUR (Broth Medium R).

Code Number:	LSU20500, LSU25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,1 (approx.) at 20 °C

Direction: Suspend 10,15 g in 500 ml of distilled water. Heat gently to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add the contents of one vial of Lactose Sulphite Broth Differentiation Supplement (LSS80004) reconstituted with 4 ml of sterile distilled water. Mix well and distribute aseptically to sterile test tubes fitted with Durham's tubes.

Formula in g/l

Pancreatic digest of casein	5,0
Yeast extract	2,5
Lactose monohydrate	10,0
Sodium chloride	2,5
L-Cysteine	0,3

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Clostridium perfringens*

References: European Pharmacopoeia 5.6

LAURIA-BERTANI BROTH

A liquid medium for molecular genetics studies.

Code Number:	LBB20500, LBB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,5 (approx.) at 20 °C

Direction: Suspend 25 g in one litre of distilled water and heat gently to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Casein peptone	10
Yeast extract	5
Sodium chloride	10

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Escherichia coli*, *Staphylococcus aureus*

LAURYL SULPHATE BROTH

A selective enrichment medium for the detection of coliform organisms.

Code Number:	LSB20500, LSB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,8 (approx.) at 20 °C

Direction: Suspend 36 g in 1 litre of distilled water. Distribute into final containers fitted with Durham's tubes. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Tryptose	20,0
Lactose	5,0
Tryptophan	0,5
Sodium chloride	5,0
Sodium lauryl sulphate	0,1
Buffers	5,4

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Escherichia coli*, *Salmonella enteritidis*

Negative control: *Enterococcus faecalis*

References: APHA (1976) Compendium of Methods for the Microbiological Examination of Foods.

LEGIONELLA (CYE) AGAR BASE

A selective and differential medium for the isolation of Legionellae.

Code Number:	CYE20500, CYE25000
Colour:	Black
Appearance:	Homogeneous hygroscopic powder
pH after autoclaving with BCYE:	6,9 (approx.) at 20 °C

Directions for 100 ml selective media:

Suspend 2,5 g in 90 ml of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C. Add 5 ml of sterile distilled water to one vial of **Legionella BCYE Growth Supplement with Cysteine (LGF80015)** or **Legionella BCYE Growth Supplement without Cysteine (LWC80015)**. Shake well and add to the medium. Add 5 ml of sterile distilled water to one vial of **Legionella selective supplement, BMPA (BMP80015)** or **Legionella selective supplement, MWY (MWY80015)**. Shake well and add to the medium. Mix well the medium before pouring.

Directions for 500 ml selective media:

Suspend 12,5 g in 480 ml of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C. Add 5 ml of sterile distilled water to one vial of **Legionella BCYE Growth Supplement with Cysteine (LGF80025)** or **Legionella BCYE Growth Supplement without Cysteine (LWC80025)**. Shake well and add to the medium. Add once again 5 ml water and repeat the procedure. Add 5 ml of sterile distilled water to one vial of **Legionella selective supplement, BMPA (BMP80025)** or **Legionella selective supplement, GVP (GVP80025)** or **Legionella selective supplement, MWY (MWY80025)**. Shake well and add to the medium. Add once again 5 ml water and repeat the procedure. Mix well the medium before pouring.

Formula in g/l

Charcoal	2
Yeast extract	10
Agar	13

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Legionella pneumophila*

Negative control: *Staphylococcus aureus*, *Escherichia coli*

References: Feeley et al (1979) J. Clin. Micr. 10: 437
Dennis et al (1984) Am. Soc. Microbiol. Pp. 294

LETHEEN AGAR BASE

A highly nutritious medium that neutralizes quaternary ammonium compounds, used for sampling of environmental surfaces that have been treated with disinfectants.

Code Number:	LTA20500, LTA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 58 g in one litre of distilled water. Add 5 ml Tween 80 Supplement (TWS80100). Mix well and boil to dissolve the medium completely. Distribute into final containers and sterilise by autoclaving at 121 °C for 15 minutes. The prepared agar is turbid.

Formula in g/l

Peptones	32,2
Sodium chloride	5,0
Lecithin	0,7
Sodium bisulphite	0,1
Agar	20,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Staphylococcus aureus*

References: FDA (1992) Microbiological Methods for Cosmetics. Chapter 23.

LETHEEN BROTH BASE

A highly nutritious medium that neutralizes quaternary ammonium compounds, used for sampling of environmental surfaces that have been treated with disinfectants.

Code Number:	LTB20500, LTB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 38 g in one litre of distilled water. Add 5 ml Tween 80 Supplement (TWS80100). Mix well and boil to dissolve the medium completely. Distribute into final containers and sterilise by autoclaving at 121 °C for 15 minutes. The prepared broth is turbid.

Formula in g/l

Peptones	32,2
Sodium chloride	5,0
Lecithin	0,7
Sodium bisulphite	0,1

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Staphylococcus aureus*

References: FDA (1992) Microbiological Methods for Cosmetics. Chapter 23.

LEUCONOSTOC AGAR

A differential medium for the cultivation of *Leuconostoc* species.

Code Number:	LEA20500, LEA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,0 (approx.) at 20 °C

Direction: Suspend 184 g in 1 litre of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes

Formula in g/l

Peptones	15,8
Sucrose	150,0
Sodium chloride	1,0
Magnesium sulphate	0,2
Buffers	2,0
Agar	15,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Leuconostoc mesenteroides*

References: Atlas and Parks (1993) Handbook of Microbiological Media

LINDEN-GRAIN BROTH

A liquid sterility test medium for the cultivation of environmental microorganisms, e.g. from beverage bottles.

Code Number:	LGB20500, LGB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	4,2 (approx.) at 20 °C

Direction: Suspend 29,5 g in one litre of distilled water and heat gently to dissolve the medium completely. Distribute into final containers and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	5,5
Glucose	20,0
Ammonium sulphate	2,0
Magnesium sulphate	1,0
Buffers	1,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Candida albicans*, *Saccharomyces cerevisiae*

LISTERIA ENRICHMENT BROTH

A selective enrichment broth for the detection of *Listeria monocytogenes*.

Code Number:	LEN20500, LEN25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 36 g in one litre of distilled water. Heat gently to dissolve the medium completely. Dispense into final containers and sterilise by autoclaving at 115 °C for 15 minutes.

Warning!

The medium is heat-sensitive.

No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	26,000
Glucose	2,500
Sodium chloride	5,000
Acridavine	0,015
Cycloheximide	0,050
Nalidixic acid	0,040
Buffers	2,400

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Listeria monocytogenes*

Negative control: *Staphylococcus aureus*

References: Lovett et al (1987) J. Food Protection 50: 188.

LISTERIA ENRICHMENT BROTH, BUFFERED

A selective enrichment broth for the detection of *Listeria monocytogenes*.

Code Number:	LEB20500, LEB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 47 g in one litre of distilled water. Heat gently to dissolve the medium completely. Dispense into final containers and sterilise by autoclaving at 115 °C for 15 minutes.

Warning!

The medium is heat-sensitive.

No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	26,000
Glucose	2,500
Sodium chloride	5,000
Acridavine	0,015
Cycloheximide	0,050
Nalidixic acid	0,040
Buffers	13,500

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Listeria monocytogenes*

Negative control: *Staphylococcus aureus*

References: Lovett et al (1987) J. Food Protection 50: 188.

LISTERIA ENRICHMENT BROTH BASE, UVM - FRASER

A selective enrichment medium for the isolation of *Listeria* species.

Code Number:	LEF20500, LEF25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 27,5 g in 500 ml of distilled water and heat gently to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add the contents of one of supplement below reconstituted with 4 ml of ethanol/sterile water (1:1). Mix well.

- for **UVM I broth:** *Listeria* Selective Supplement, UVM I (LU180004)
- for **UVM II broth:** *Listeria* Selective Supplement, UVM II (LU280004)
- for **Half Fraser broth:** *Listeria* Selective Supplement, half Fraser (LSH80004)
- for **Fraser broth:** *Listeria* Selective Supplement, Fraser (LSF80004)

Formula in g/l

Proteose peptone	5,0000
Tryptone	5,0000
Beef extract	5,0000
Yeast extract	5,0000
Sodium chloride	20,0000
Aesculin	1,0000
Disodium hydrogen phosphate	12,0000
Potassium dihydrogen phosphate	2,0000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Listeria monocytogenes*

Negative control: *Staphylococcus aureus*

References: Fraser and Sperber (1988) *J. Food Protect.* 51: 762
ISO 11290-1:1997
APHA (2001) *Compendium of Methods for the Microbiological Examination of Foods* 4th ed.

LISTERIA SELECTIVE AGAR BASE, OXFORD

A selective and differential medium for the detection of *Listeria monocytogenes*.

Code Number:	LAO20500, LAO25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 29,5 g in 500 ml of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add the contents of one vial of *Listeria* Selective Supplement, Oxford (LSO80004) reconstituted with 4 ml of ethanol/sterile distilled water (1:1). Mix well before pouring.

Formula in g/l

Nutrient substrate (peptones, extracts)	23,5
Starch soluble	1,0
Sodium chloride	5,0
Lithium chloride	15,0
Ferric ammonium citrate	0,5
Aesculin	1,0
Agar	13,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Listeria monocytogenes*

Negative control: *Staphylococcus aureus*

References: Curtis et al (1989) *Letters in Appl. Microbiol.* 8: 95.

LISTERIA SELECTIVE AGAR BASE, PALCAM

A selective and differential medium for the detection of *Listeria monocytogenes*.

Code Number:	LAP20500, LAP25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 36 g in 500 ml of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add the contents of one vial of *Listeria* Selective Supplement, Palcam (LSP80004) reconstituted with 4 ml of sterile distilled water. Mix well before pouring.

Formula in g/l

Nutrient substrate (peptones, extracts)	26,00
Mannitol	10,00
Glucose	0,50
Starch soluble	1,00
Sodium chloride	5,00
Lithium chloride	15,00
Aesculin	0,80
Ferric ammonium citrate	0,60
Phenol red	0,08
Agar	13,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Listeria monocytogenes*

Negative control: *Staphylococcus aureus*

References: van Netten et al (1989) *Int. J. Food Micro.* 8: 299

LOEWENSTEIN-JENSEN MEDIUM BASE

A strongly selective medium for the cultivation of *Mycobacterium tuberculosis* and other mycobacterial species.

Code Number:	LJM20500, LJM25000
Colour:	Greenish
Appearance:	Homogeneous hygroscopic powder
Final pH:	7,1 (approx.) at 20 °C

Direction: Suspend 38 g in 600 ml of distilled water to which 12 ml of glycerol have been added. Boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 1000 ml of sterile mixed whole egg. Mix gently until the mixture is uniform and without bubbles. Distribute into final containers and arrange it in slanted position. Coagulate and inspissate at 85°C for 45 min.

Formula in g/l

Potato flour	30,00
L-Asparagine	3,60
Magnesium sulphate	0,24
Sodium citrate	0,60
Malachite green	0,40
Buffer	3,16

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Mycobacterium tuberculosis*

References: Jensen (1932) Zentralbl. Bakteriol. Parastenkd. Infektionskr. Hyg. Abt. I Orig. 125: 222.

LURIA AGAR

A solid medium for molecular genetics studies.

Code Number:	LBA20500, LBA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 38g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Casein peptone	10
Yeast extract	5
Sodium chloride	10
Agar	13

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Staphylococcus aureus*

References: Miller (1972) Experiments in Molecular Genetics, Cold Spring Harbor Laboratory.

LYSINE DECARBOXYLASE BROTH

A broth for the differentiation of bacteria on the basis of lysine decarboxylase.

Code Number:	LDB20500, LDB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,1 (approx.) at 20 °C

Direction: Suspend 9 g in one litre of distilled water and heat gently to dissolve the medium completely. Dispense into final containers. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Yeast extract	3,000
Glucose	1,000
L-Lysine	5,000
Bromocresol purple	0,016

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Salmonella enteritidis*

Negative control: *Citrobacter freundii*

References: Taylor (1961) Appl. Microbiol 9: 487.

LYSINE IRON (LIA) AGAR

A medium for the differentiation of gram negative enteric bacteria on the basis of lysine decarboxylate and hydrogen sulfite production.

Code Number:	LIA20500, LIA25000
Colour:	Bluish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,7 (approx.) at 20 °C

Direction: Suspend 33 g in one litre of distilled water and boil to dissolve the medium completely. Distribute into test tubes and sterilise by autoclaving at 121 °C for 15 minutes. Cool in slanted position to form slants with deep butts.

Formula in g/l

Peptones	8,00
Glucose	1,00
L-Lysine-HCl	10,00
Sodium thiosulphate	0,04
Ferric citrate	0,50
Bromocresol purple	0,02
Agar	13,50

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Salmonella enteritidis*, *Proteus mirabilis*, *Citrobacter freundii*

References: Edwards and Fife (1961) Appl. Microbiol. 9: 478.

M17 AGAR

A solide medium for the cultivation and enumeration of lactic streptococci.

Code Number:	M1A20500, M1A25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,9 (approx.) at 20 °C

Direction: Suspend 55 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	17,25
Lactose	5,00
Magnesium sulphate	0,25
Sodium glycerophosphate	19,00
Ascorbic acid	0,50
Agar	13,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Streptococcus agalactiae*

References: Terzaghi and Sandine (1975) Applied Microbiol. 29: 807,

M-GREEN AGAR

A selective end differential medium for the detection of fungi.

Code Number:	MGA20500, MGA25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 87 g in 1 litre of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 118 °C for 15 minutes

Formula in g/l

Peptones	19,900
Glucose	50,000
Magnesium sulphate	2,000
Diastase	0,050
Thiamine HCl	0,050
Bromocresol green	0,026
Buffers	2,000
Agar	13,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Saccharomyces cerevisiae, Aspergillus niger*

References: Lenette et al (1985) Manual of Microbiol. 4th ed.

M17 BROTH

A liquid medium for the cultivation and enumeration of lactic streptococci.

Code Number:	M1B20500, M1B25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,9 (approx.) at 20 °C

Direction: Suspend 42 g in one litre of distilled water and heat gently to dissolve the medium completely. Dispense into final containers. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	17,25
Lactose	5,00
Magnesium sulphate	0,25
Sodium glycerophosphate	19,00
Ascorbic acid	0,50

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Streptococcus agalactiae*

References: Terzaghi and Sandine (1975) Applied Microbiol. 29: 807,

M-GREEN BROTH

A selective end differential medium for the detection of fungi.

Code Number:	MGB20500, MGB25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 74 g in one litre of distilled water and heat gently to dissolve the medium completely. Dispense into final containers. Sterilise by autoclaving at 118 °C for 15 minutes.

Formula in g/l

Peptones	19,900
Glucose	50,000
Magnesium sulphate	2,000
Diastase	0,050
Thiamine HCl	0,050
Bromocresol green	0,026
Buffers	2,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Saccharomyces cerevisiae, Aspergillus niger*

References: Lenette et al (1985) Manual of Microbiol. 4th ed.

MACCONKEY AGAR No.3

A selective and differential medium for the detection of coliform organisms and enteric pathogens.

Code Number:	MCA20500, MCA25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,1 (approx.) at 20 °C

Direction: Suspend 52 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	20,500
Bile salts No.3	1,500
Lactose	10,000
Sodium chloride	5,000
Neutral red	0,030
Crystal violet	0,001
Agar	15,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Shigella sonnei*, *Proteus mirabilis*

Negative control: *Enterococcus faecalis*

References: MacConkey (1900) The Lancet

MACCONKEY AGAR, PH EUR – USP

A selective and differential medium for the detection of coliform organisms and enteric pathogens according to PH EUR (Agar Medium H - Harmonised).

Code Number:	MCE20500, MCE25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,1 (approx.) at 20 °C

Direction: Suspend 50 g in 1 litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Pancreatic digest of gelatin	17,000
Peptones	3,000
Bile salts	1,500
Lactose monohydrate	10,000
Sodium chloride	5,000
Neutral red	0,030
Crystal violet	0,001
Agar	13,500

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Shigella sonnei*, *Proteus mirabilis*

Negative control: *Enterococcus faecalis*

References: European Pharmacopoeia 5.6

MACCONKEY AGAR, SORBITOL

A selective and differential medium for the detection of *Escherichia coli* O157.

Code Number:	MCS20500, MCS25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 56 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	21,000
Bile salts	5,000
Sorbitol	10,000
Sodium chloride	5,000
Neutral red	0,050
Crystal violet	0,001
Agar	15,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli* O157

Negative control: *Escherichia coli*

References: Rappaport and Henig (1952) J. Clin. Path. 5: 361.

MACCONKEY AGAR WITHOUT CRYSTAL VIOLET

A selective and differential medium for the detection of coliform organisms and enteric pathogens as well as some staphylococci.

Code Number:	MWC20500, MWC25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 56 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	21,00
Bile salts	5,00
Lactose	10,00
Sodium chloride	5,00
Neutral red	0,05
Agar	15,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Shigella sonnei*, *Proteus mirabilis*, *Staphylococcus aureus*

Negative control: *Enterococcus faecalis*

References: MacConkey (1900) The Lancet

MACCONKEY AGAR WITHOUT SALT

A selective and differential medium for the urine examination. The medium is electrolyte deficient to prevent the swarming of the most *Proteus* species.

Code Number:	MWS20500, MWS25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 51 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	21,000
Bile salts	5,000
Lactose	10,000
Neutral red	0,050
Crystal violet	0,001
Agar	15,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Shigella sonnei*, *Proteus mirabilis*

Negative control: *Enterococcus faecalis*

References: MacConkey (1900) The Lancet

MACCONKEY BROTH, PH EUR - USP

A differential medium for the detection of coliform organisms according to PH EUR (Broth Medium G - Harmonised).

Code Number:	MBE20500, MBE25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 35 g in one litre of distilled water and heat gently to dissolve the medium completely. Mix well and distribute into final containers fitted with Durham tube. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Pancreatic digest of gelatin	20,00
Dehydrated ox bile	5,00
Lactose monohydrate	10,00
Bromocresol purple	0,01

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Escherichia coli*, *Proteus mirabilis*

Negative control: *Enterococcus faecalis*

References: European Pharmacopoeia 5.6

MACCONKEY BROTH

A differential medium containing neutral red for the detection of coliform organisms.

Code Number:	MCB20500, MCB25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 38 g in one litre of distilled water and heat gently to dissolve the medium completely. Mix well and distribute into final containers fitted with Durham tube. Sterilise by autoclaving at 121 °C for 15 minutes

Formula in g/l

Peptones	18,00
Bile salts	5,00
Lactose	10,00
Sodium chloride	5,00
Neutral red	0,05

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Escherichia coli*, *Proteus mirabilis*

Negative control: *Enterococcus faecalis*

References: WHO (1963) Int. Stand. for Drinking Water

MALACHITE GREEN BROTH BASE

A selective enrichment medium for the cultivation of *Pseudomonas aeruginosa*.

Code Number:	MIB20500, MIB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,6 (approx.) at 20 °C

Direction: Suspend 8,4 g in one litre of distilled water and heat gently to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and add 1 ml of Malachite Green Solution (MSO80060). Mix well and distribute aseptically into sterile test tubes.

Formula in g/l

Peptones	8,0
Buffer	0,4

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Pseudomonas aeruginosa*

Negative control: *Escherichia coli*

References: Habs and Kirschner (1943) Z. Hyg. 124: 557.

MALONATE AGAR

A semi-solid medium for the malonate fermentation studies.

Code Number:	MAA20500, MAA25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,7 (approx.) at 20 °C

Direction: Suspend 12 g in one litre of distilled water and boil to dissolve the medium completely. Dispense into final containers and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	1,00
Sodium malonate	3,00
Sodium chloride	2,00
Ammonium sulphate	2,00
Bromothymol blue	0,03
Buffers	1,00
Agar	3,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Enterobacter aerogenes*

Negative control: *Escherichia coli*

MALT EXTRACT AGAR

A medium for the detection, isolation and enumeration of yeast and moulds.

Code Number:	MEA20500, MEA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	5,4 (approx.) at 20 °C

Direction: Suspend 50 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 115 °C for 10 minutes. If it is desired to adjust the reaction to pH 3.5, cool to 55°C and add Lactic Acid Solution (LAS80100) to the agar in the necessary quantity.

Warning!

The medium is heat sensitive.

No further sterilisation is necessary or desirable.

Once acidified with lactic acid, the medium should not be re-heated.

Formula in g/l

Peptones	5
Malt extract	30
Agar	15

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Candida albicans*

Negative control (at pH=3.5): *Bacillus cereus*

References: Galloway and Burgess (1952) Applied Mycology and Bacteriology 3rd ed.: 54.

MALT EXTRACT BROTH

A liquid medium for the cultivation of yeast and moulds.

Code Number:	MBR20500, MBR25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	5,4 (approx.) at 20 °C

Direction: Suspend 20 g in one litre of distilled water and heat gently to dissolve the medium completely. Distribute into final containers and sterilise by autoclaving at 115 °C for 10 minutes. If it is desired to adjust the reaction to pH 3.5, cool to 55°C and add Lactic Acid Solution (LAS80100) to the broth in the necessary quantity.

Warning!

The medium is heat sensitive.

No further sterilisation is necessary or desirable.

Once acidified with lactic acid, the medium should not be re-heated.

Formula in g/l

Peptones	5
Malt extract	15

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Candida albicans*

Negative control (at pH=3.5): *Bacillus cereus*

References: Galloway and Burgess (1952) Applied Mycology and Bacteriology 3rd ed.: 54.

MANNITOL LYSDINE BRILLIANT GREEN AGAR

A selective and differential medium for the isolation of Salmonella.

Code Number:	MLA20500, MLA25000
Colour:	Greenish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,8 (approx.) at 20 °C

Direction: Suspend 54 g in 1 litre of distilled water and soak for 10 minutes. Heat gently and allow to boil for a few seconds to dissolve the agar. Cool to about 50 °C and pour into Petri-dishes.

Warning!

The medium is heat-sensitive.

No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	22,0000
Mannitol	3,0000
Sodium chloride	4,0000
Sodium thiosulphate	4,0000
L-Lysine HCl	5,0000
Ferric ammonium citrate	1,0000
Brilliant green	0,0125
Violet red	0,0200
Agar	15,0000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Salmonella enteritidis*

Negative control: *Staphylococcus aureus*

References: Pascual Anderson (1992). Microbiologia Alimentaria. Diaz de Santos, S.A. Madrid

MANNITOL SALT AGAR, PH EUR - USP

A selective medium for the isolation and presumptive identification of pathogenic staphylococci according to PH EUR (Mannitol Salt Agar - Harmonised).

Code Number:	MSA20500, MSA25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,5 (approx.) at 20 °C

Direction: Suspend 110 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Pancreatic digest of caseine	5,000
Peptic digest of animal tissue	5,000
Beef extract	1,000
D-Mannitol	10,000
Sodium chloride	75,000
Phenol red	0,025
Agar	14,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Staphylococcus aureus*, *Staphylococcus epidermidis*
Negative control: *Escherichia coli*

References: Chapman (1945) J. Bact. 50: 201.
European Pharmacopoeia 5.6

MAXIMUM RECOVERY DILUENT

A protective and isotonic diluent for maximum recovery of micro-organisms.

Code Number:	MRD20500, MRD25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 9,5 g in 1 litre of distilled water. Heat gently to dissolve the medium completely and distribute into final containers. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	1,0
Sodium chloride	8,5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature

Quality Control:

Positive control: *Escherichia coli*

References: Straker and Stokes (1957). Appl. Bact. 26: 493.

MEMBRAN LAURYL SULPHATE (MLS) BROTH

A selective medium for the enumeration of coliform organisms and *Escherichia coli*.

Code Number:	MLS20500, MLS25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 76 g in 1 litre of distilled water. Distribute into final containers. Sterilise by autoclaving at 121 °C for 15 minutes. Cool quickly.

Formula in g/l

Peptone	44,8
Lactose	30,0
Sodium lauryl sulphate	1,0
Buffers	0,2

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Escherichia coli*
Negative control: *Bacillus subtilis*

References: Burnhan (1967) Proc. Soc. Wat. Treat Exam 16: 40.

MOTILITY AGAR

A semi-solid medium for the detection of motility of gram negative enteric bacilli.

Code Number:	MOA20500, MOA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 22 g in one litre of distilled water and boil to dissolve the medium completely. Dispense into final containers and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	13,00
Sodium chloride	5,00
2,3,5-Triphenyltetrazolium chloride	0,05
Agar	4,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Escherichia coli*
Negative control: *Shigella flexneri*

References: Tittsler and Sandholzer (1936) J. Bacteriol. 31: 575.

M-PA-B AGAR

A differential medium for the selective recovery and enumeration of *Pseudomonas aeruginosa* from strongly contaminated samples.

Code Number:	MPB20500, MPB25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 38 g in one litre of distilled water and heat with frequent agitation until the medium boils. Transfer immediately to a water bath at 50 °C. Pour into plates as soon as the medium has cooled.

Warning!

The medium is heat-sensitive.

No further sterilisation is necessary or desirable.

Formula in g/l

Yeast extract	2,000
Xylose	1,250
Lactose	1,250
Sucrose	1,250
L-Lysine	5,000
Sodium chloride	5,000
Sodium thiosulphate	5,000
Ferric ammonium citrate	0,800
Magnesium sulphate	1,500
Kanamycin	0,008
Nalidixic acid	0,037
Cycloheximide	0,150
Sulphapyridine	0,170
Phenol red	0,080
Agar	14,500

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C, but better to use it freshly.

Quality Control:

Positive control: *Pseudomonas aeruginosa*

Negative control: *Escherichia coli*

References: Levin and Cabelli. (1972) Appl. Microbiol. 24: 864.

M-PA-C AGAR

A differential medium for the selective recovery and enumeration of *Pseudomonas aeruginosa* from slightly contaminated samples.

Code Number:	MPA20500, MPA25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 37 g in one litre of distilled water and heat with frequent agitation until the medium boils. Transfer immediately to a water bath at 50 °C. Pour into plates as soon as the medium has cooled.

Warning!

The medium is heat-sensitive.

No further sterilisation is necessary or desirable.

Formula in g/l

Yeast extract	2,000
Xylose	1,250
Lactose	1,250
Sucrose	1,250
L-Lysine	5,000
Sodium chloride	5,000
Sodium thiosulphate	5,000
Ferric ammonium citrate	0,800
Magnesium sulphate	1,500
Kanamycin	0,008
Nalidixic acid	0,037
Phenol red	0,080
Agar	13,800

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C, but better to use it freshly.

Quality Control:

Positive control: *Pseudomonas aeruginosa*

Negative control: *Escherichia coli*

References: Levin and Cabelli (1972) Appl. Microbiol. 24: 864.

MRS AGAR BASE

A low selective medium for the isolation and cultivation of *Lactobacillus* species.

Code Number:	MRA20500, MRA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,2 (approx.) at 20 °C

Direction: Suspend 68 g in one litre of distilled water. Add 1 ml of TWEEN 80 Supplement (TWS80100) and boil to dissolve the medium completely. Dispense into tubes or little bottles and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	25,50
Glucose	20,00
Sodium acetate	5,00
Magnesium sulphate	0,20
Manganese sulphate	0,05
Ammonium citrate	2,00
Buffers	2,25
Agar	13,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Lactobacillus acidophilus*

Negative control: *Staphylococcus aureus*

References: DeMan, Rogosa and Sharpe (1960) J. Appl. Bact. 23: 30.

MRS BROTH BASE

A low selective medium for the cultivation of *Lactobacillus* species.

Code Number:	MRB20500, MRB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,2 (approx.) at 20 °C

Direction: Suspend 56 g in one litre of distilled water. Add 1 ml of TWEEN 80 Supplement (TWS80100) and heat gently to dissolve the medium completely. Dispense into final containers and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	25,50
Glucose	20,00
Sodium acetate	5,00
Magnesium sulphate	0,20
Manganese sulphate	0,05
Ammonium citrate	2,00
Buffers	2,25

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Lactobacillus acidophilus*

Negative control: *Staphylococcus aureus*

References: DeMan, Rogosa and Sharpe (1960) J. Appl. Bact. 23: 30.

MRSA SCREEN AGAR BASE

A differentiating medium for the presumptive identification of MRSA.

Code Number:	MRS20500, MRS25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 39 g in 500 ml of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add the contents of one vial of MRSA Selective Supplement (MSS80004) reconstituted with 4 ml of sterile distilled water. Mix gently before pouring

Formula in g/l

Peptones	19,5
Starch soluble	1,5
Sodium chloride	40,0
Agar	17,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *MRSA*

Negative control: *MSSA*

MRVP BROTH

A liquid medium for the differentiation of bacteria by means of the methyl red and Voges-Proskauer reactions.

Code Number:	MVP20500, MVP25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 17 g in one litre of distilled water. Mix well and heat gently to dissolve the medium completely. Distribute into final containers. Sterilise by autoclaving at 121 °C for 15 minutes. Cool rapidly.

Formula in g/l

Peptones	7
Glucose	5
Buffers	5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control:

Methyl red: *Escherichia coli*

Voges-Proskauer: *Enterobacter aerogenes*

Negative control:

Methyl red: *Enterobacter aerogenes*

Voges-Proskauer: *Escherichia coli*

References: Voges and Proskauer (1898) Z. Hyg. 28: 20.

MUELLER-HINTON AGAR

An antimicrobial susceptibility testing medium, which may be used in internationally recognised standard procedures.

Code Number:	MHA20500, MHA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 38 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	19,5
Starch soluble	1,5
Agar	17,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Pseudomonas aeruginosa*, *Escherichia coli*, *Staphylococcus aureus*, *Enterococcus faecalis*

References: Mueller and Hinton (1941) Proc. Soc. Exp. Biol. Med. 48: 330.

MUELLER-HINTON II AGAR

An antimicrobial susceptibility testing medium which fits to the requirements of NCCLS. Medium has extremely low concentrations of thymine and thymidine as well as appropriate levels of calcium and magnesium ions.

Code Number:	MHT20500, MHT25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 38 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	19,5
Starch soluble	1,5
Agar	17,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Pseudomonas aeruginosa*, *Escherichia coli*, *Staphylococcus aureus*, *Enterococcus faecalis*

References: Mueller and Hinton (1941) Proc. Soc. Exp. Biol. Med. 48: 330.

MUELLER-HINTON AGAR WITH GLUCOSE AND METHYLENE BLUE

A standard medium for the antimycotical susceptibility testing.

Code Number:	MHF20500, MHF25000
Colour:	Bluish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 58 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	19,5000
Glucose	20,0000
Starch soluble	1,5000
Methylene blue	0,0005
Agar	17,0000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Candida albicans*

References: Mueller-Hinton (1941) Proc. Soc. Exp. Biol. Med. 48: 330.

MUELLER-HINTON BROTH

An antimicrobial susceptibility testing medium, which may be used in internationally recognised standard procedures.

Code Number:	MHB20500, MHB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 22 g in one litre of distilled water and heat gently to dissolve the medium completely. Dispense into final containers. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	20,5
Starch soluble	1,5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Pseudomonas aeruginosa*, *Escherichia coli*, *Staphylococcus aureus*, *Enterococcus faecalis*

References: Mueller and Hinton (1941) Proc. Soc. Exp. Biol. Med. 48: 330.

MYCOPLASMA (PPLO) AGAR BASE

A highly nutritious agar base for the preparation of media for cultivation of Mycoplasma.

Code Number:	MYA20500, MYA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,8 (approx.) at 20 °C

Direction: Suspend 17,5 g in 500 ml of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and add enrichments (horse serum, specially prepared yeast extract). For a selective medium (which inhibits bacteria) add inhibitors (thallium acetate and antibiotics).

Formula in g/l

Nutrient substrate (heart infusion, peptones)	16
Sodium chloride	5
Agar	14

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Mycoplasma pneumoniae*

References: Morton et al. (1951) Am. J. Syphil. Gonorrh. Vener. Dis. 35: 361.

MYCOPLASMA (PPLO) BROTH BASE

A highly nutritious broth base for the preparation of media for cultivation of Mycoplasma.

Code Number:	MYB20500, MYB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,8 (approx.) at 20 °C

Direction: Suspend 10,5 g in 500 ml of distilled water and heat gently to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and add enrichments (horse serum, specially prepared yeast extract). For a selective medium (which inhibits bacteria) add inhibitors (thallium acetate and antibiotics).

Formula in g/l

Nutrient substrate (heart infusion, peptones)	16
Sodium chloride	5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Mycoplasma pneumoniae*

References: Morton et al. (1951) Am. J. Syphil. Gonorrh. Vener. Dis. 35: 361.

NEUTRALISING FLUID BASE, PH EUR

A fluid for the neutralise of the activity of the antimicrobial agents according to PH EUR.

Code Number:	NSE20500, NSE25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 20,1 g in 1 litre of distilled water. Add 30 ml Tween 80. Mix well and boil to dissolve the medium completely. Dispense into final containers. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptone	1,0
Sodium chloride	4,3
Histidin HCl	1,0
Lecitin	3,0
Potassium dihydrogen phosphate	3,6
Disodium hydrogen phosphate	7,2

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Staphylococcus aureus*

References: European Pharmacopoeia 5.6

NITRATE BROTH

A liquid medium for the detection of the nitrate reduction.

Code Number:	NIT20500, NIT25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 12 g in one litre of distilled water. Mix well and heat gently to dissolve the medium completely. Distribute into final containers fitted with Durham's tubes. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	10
Potassium nitrate	2

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Pseudomonas aeruginosa, Escherichia coli*

Negative control: *Enterococcus faecalis*

References: MacFaddin (1980) Biochemical test for the identification of medical bacteria, 2nd ed. Williams and Wilkins, Baltimore

NUTRIENT AGAR

A general purpose medium for the cultivation of non-fastidious organisms.

Code Number:	NUA20500, NUA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 29 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	11
Sodium chloride	5
Agar	13

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Staphylococcus aureus*

References: APHA (1917) Standard methods of water analysis, 3rd ed. New York.

NUTRIENT AGAR, DEV

A solid medium for determining total microbial count of water according to the DEV.

Code Number:	NUD20500, NUD25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 43 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Meat peptone	10
Meat extract	10
Sodium chloride	5
Agar	18

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Staphylococcus aureus*

References: DEV

NUTRIENT BROTH

A general purpose medium for the cultivation of nonfastidious organisms.

Code Number:	NUB20500, NUB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 16 g in one litre of distilled water and heat gently to dissolve the medium completely. Distribute into final containers and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	11
Sodium chloride	5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Escherichia coli*, *Staphylococcus aureus*

References: APHA (1985) Standard methods for the examination of water and wastewater.

NUTRIENT BROTH NO.2

A general purpose medium for the cultivation organisms.

Code Number:	NUN20500, NUN25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 25 g in one litre of distilled water and heat gently to dissolve the medium completely. Distribute into final containers and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	20
Sodium chloride	5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Escherichia coli*, *Staphylococcus aureus*

References: British Pharmacopoeia (1980) London

ORANGE SERUM AGAR

A solid medium for the cultivation and enumeration of microorganisms in citrus juice concentrates.

Code Number:	OSA20500, OSA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	5,5 (approx.) at 20 °C

Direction: Suspend 40 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 115 °C for 15 minutes.

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	13
Glucose	4
Orange serum (solid form)	5
Buffers	3
Agar	15

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Lactobacillus acidophilus*, *Saccharomyces cerevisiae*

References: APHA (1976) Compendium of Methods for Microbiological Examination of foods.

ORANGE SERUM BROTH

A liquid medium for the cultivation of microorganisms in citrus juice concentrates.

Code Number:	OSB20500, OSB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	5,5 (approx.) at 20 °C

Direction: Suspend 25 g in one litre of distilled water and heat gently to dissolve the medium completely. Sterilise by autoclaving at 115 °C for 15 minutes.

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	13
Glucose	4
Orange serum (solid form)	5
Buffers	3

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Lactobacillus acidophilus*, *Saccharomyces cerevisiae*

References: APHA (1976) Compendium of Methods for Microbiological Examination of foods.

OXYTETRACYCLINE GLUCOSE YEAST EXTRACT AGAR BASE

A selective medium for the enumeration of moulds and yeast.

Code Number:	OGY20500, OGY25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 19 g in 500 ml of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add the contents of one vial of OGYE Selective Supplement (OGS80004) reconstituted with 4 ml of sterile distilled water. Mix well before pouring.

Formula in g/l

Yeast extract	5,0000
Glucose	20,0000
Vitamin H	0,0001
Agar	13,0000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Aspergillus niger*, *Saccharomyces cerevisiae*

Negative control: *Escherichia coli*

References: Mossel et al (1970) Appl. Bact. 35: 454.

ÖNÖZ AGAR

A selective and differential medium for the isolation of enteric micro-organisms, especially *Salmonella* and some *Shigella* species.

Code Number:	ON020500, ON025000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,1 (approx.) at 20 °C

Direction: Suspend 81 g in one litre of distilled water and heat with frequent agitation until the medium boils. Mix well and pour plates immediately.

Warning!

The medium is heat sensitive.

No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	16,50000
Bile salts	3,82500
Lactose	11,50000
Sucrose	13,00000
L-Phenylalanine	5,00000
Magnesium sulphate	0,40000
Sodium citrate	9,30000
Sodium thiosulphate	4,25000
Ferric citrate	0,50000
Neutral red	0,02200
Aniline blue	0,25000
Metachrome yellow	0,47000
Brilliant green	0,00166
Buffers	1,00000
Agar	15,00000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Salmonella enteritidis*, *Shigella sonnei*, *Proteus mirabilis*

Negative control: *Enterococcus faecalis*

References: Önöz (1978) Zbl. Bakt. Hyg. A240: 16.

PEPTONE WATER

A basal medium for the carbohydrate fermentation studies.

Code Number:	PEW20500, PEW25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 15 g in one litre of distilled water. Heat gently to dissolve the medium completely and distribute into final containers. Sterilise by autoclaving at 121 °C for 15 minutes. Add the filter sterilised indicator and sugar (10 g/l) solution to the medium.

Formula in g/l

Peptones	10
Sodium chloride	5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: Use organisms, which have known positive and negative reactions with investigated sugars.

References: Cruikshank (1968). Med. Microbiology 11th ed.

PEPTON WATER, BUFFERED

A pre-enrichment medium for isolation of *Salmonella* species.

Code Number:	PWB20500, PWB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 20 g in 1 litre of distilled water. Heat gently to dissolve the medium completely and distribute into final containers. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	10
Sodium chloride	5
Buffers	5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Salmonella enteritidis*

References: APHA (1976) Compendium of Methods for the Microbiological Examination of Foods.

PEPTON WATER, BUFFERED, PH EUR - USP

An enrichment medium for the test of microbial contamination in the Pharmacopoeia according to PH EUR (Buffered Sodium Chloride Peptone Solution pH 7.0 - Harmonised).

Code Number:	PBE20500, PBE25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 16 g in 1 litre of distilled water and heat gently to dissolve the medium completely. To this solution surface-active agents or inactivators of antimicrobial agents may be added, such as: polysorbate 80 1 g/l to 10 g/l. Distribute into final containers and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptone	1,0
Sodium chloride	4,3
Potassium dihydrogen phosphate	3,6
Disodium hydrogen phosphate	7,1

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Salmonella typhimurium*

References: European Pharmacopoeia 5.6

PEPTON WATER, DOUBLE BUFFERED

A pre-enrichment medium for the isolation of *Salmonella* species.

Code Number:	PWD20500, PWD25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 25 g in one litre of distilled water. Heat gently to dissolve the medium completely and distribute into final containers. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	10
Sodium chloride	5
Buffers	10

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Salmonella enteritidis*

References: ISO 6579 (1993) Detection of salmonellae (reference method).

PERFRINGENS (OPSP) AGAR BASE

A highly selective medium for the enumeration of *Clostridium perfringens*.

Code Number:	POB20500, POB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 23,5 g in 500 ml of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add the contents of one vial each of Perfringens Selective Supplements, OPSP, A + B (POS80004) reconstituted with 4 ml of sterile distilled water. Mix well before pouring.

Formula in g/l

Peptones	33,5
Sodium metabisulphite	1,0
Ferric ammonium citrate	1,0
Buffers	1,5
Agar	10,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Clostridium perfringens*

References: Harmon et al. (1971) J. Appl. Microbiol. 22: 688.
Sahidi and Fergusson (1971) J. Appl. Microbiol. 21: 500.

PERFRINGENS (TSC+SFP) AGAR BASE

A selective and differential medium for the enumeration and presumptive identification of *Clostridium perfringens*.

Code Number:	PAB20500, PAB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,6 (approx.) at 20 °C

Direction for TSC Agar:

Suspend 23,5 g in 475 ml of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 25 ml of Sterile Egg Yolk Emulsion (EYE80025) and the contents of one vial of Perfringens Selective Supplement, TSC (PSS80004) reconstituted with 4 ml of sterile distilled water. Mix well before pouring.

Direction for Egg Yolk Free TSC Agar:

Suspend 23,5 g in 500 ml of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add the contents of one vial of Perfringens Selective Supplement, TSC (PSS80004) reconstituted with 4 ml of sterile distilled water. Mix well before pouring.

Direction for SFP Agar:

Suspend 23,5 g in 475 ml of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 25 ml of Sterile Egg Yolk Emulsion (EYE80025) and the contents of one vial of Perfringens Selective Supplement, SFP (PFS80004) reconstituted with 4 ml of sterile distilled water. Mix well before pouring.

Direction for Egg Yolk Free SFP Agar:

Suspend 23,5 g in 500 ml of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add the contents of one vial of Perfringens Selective Supplement, SFP (PFS80004) reconstituted with 4 ml of sterile distilled water. Mix well before pouring.

Formula in g/l

Peptones	31
Sodium metabisulphite	1
Ferric ammonium citrate	1
Agar	14

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Clostridium perfringens*

References: Harmon et al. (1971) J. Appl. Microbiol. 22: 688.

PharmaBio® BAIRD-PARKER AGAR BASE

Code Number: PBPA20500, PBPA25000

See: Baird-Parker Agar Base, PH EUR

PharmaBio® KING B AGAR BASE

Code Number: PKAB20500, PKAB25000

See: King B Agar Base, USP

PharmaBio® BISMUTH SULPHITE AGAR

Code Number: PBSA20500, PBSA25000

See: Bismuth Sulphite agar, USP

PharmaBio® LACTOSE BROTH

Code Number: PLAB20500, PLAB25000

See: Lactose Broth, PH EUR

PharmaBio® BRILLIANT GREEN (BPLS) AGAR

Code Number: PBPE20500, PBPE25000

See: Brilliant Green (BPLS) agar, PH EUR

PharmaBio® LACTOSE SULPHITE BROTH BASE

Code Number: PLSU20500, PLSU25000

See: Lactose Sulphite Broth Base, PH EUR

PharmaBio® CETRIMIDE AGAR BASE

Code Number: PCAB20500, PCAB25000

See: Cetrimide Agar Base, PH EUR-USP

PharmaBio® MACCONKEY AGAR

Code Number: PMCE20500, PMCE25000

See: MacConkey Agar PH EUR-USP

PharmaBio® COLUMBIA AGAR

Code Number: PCLE20500, PCLE25000

See: Columbia Agar, PH EUR-USP

PharmaBio® MACCONKEY BROTH

Code Number: PMBE20500, PMBE25000

See: MacConkey Broth, PH EUR-USP

PharmaBio® DESOXYCHOLATE CITRATE AGAR

Code Number: PDCE20500, PDCE25000

See: Desoxycholate Citrate Agar, PH EUR

PharmaBio® MANNITOL SALT AGAR

Code Number: PMSA20500, PMSA25000

See: Mannitol Salt Agar, PH EUR-USP

PharmaBio® EE BROTH

Code Number: PEEB20500, PEEB25000

See: EE Broth, PH EUR-USP

PharmaBio® NEUTRALISING FLUID BASE

Code Number: PNSE20500, PNSE25000

See: Neutralising Fluid Base, PH EUR

PharmaBio® EOSIN METHYLENE BLUE AGAR

Code Number: PEMB20500, PEMB25000

See: Eosin Methylene Blue Agar, USP

PharmaBio® PEPTON WATER, BUFFERED

Code Number: PPBE20500, PPBE25000

See: Pepton Water, Buffered, PH EUR-USP

PharmaBio® KING A AGAR BASE

Code Number: PKAA20500, PKAA25000

See: King A Agar Base, USP

PharmaBio® POTATO DEXTROSE AGAR

Code Number: PPDA20500, PPDA25000

See: Potato Dextrose Agar, PH EUR-USP

PharmaBio® R2A AGAR

Code Number: PR2A20500, PR2A25000

See: R2A Agar, PH-EUR

PharmaBio® TETRATHIONATE BROTH BASE, USP

Code Number: PTTU20500, PTTU25000

See: Tetrathionate Broth Base, USP

PharmaBio® RAPPAPORT-VASSILIADIS BROTH BASE

Code Number: PRVB20500, PRVB25000

See: Rappaport-Vassiliadis Broth Base, PH EUR-USP

PharmaBio® THIOGLYCOLLATE MEDIUM

Code Number: PTHM20500, PTHM25000

See: Thioglycollate Medium, PH EUR

PharmaBio® SABOURAUD CHLORAMPHENICOL AGAR

Code Number: PSCE20500, PSCE25000

See: Sabouraud Chloramphenicol Agar, PH EUR

PharmaBio® TRYPTONE SOYA AGAR

Code Number: PTSE20500, PTSE25000

See: Tryptone Soya Agar, PH EUR-USP

PharmaBio® SABOURAUD DEXTROSE (4%) AGAR

Code Number: PSDA20500, PSDA25000

See: Sabouraud Dextrose (4%) Agar, PH EUR-USP

PharmaBio® TRYPTONE SOYA BROTH

Code Number: PTSB20500, PTSB25000

See: Tryptone Soya Broth, PH EUR-USP

PharmaBio® SABOURAUD DEXTROSE BROTH

Code Number: PSDB20500, PSDB25000

See: Sabouraud Dextrose Broth, PH EUR-USP

PharmaBio® VIOLET RED BILE GLUCOSE AGAR, PH EUR

Code Number: PVBE20500, PVBE25000

See: Violet Red Bile Glucose Agar, PH EUR-USP

PharmaBio® SELENITE CYSTINE BROTH BASE

Code Number: PSCB20500, PSCB25000

See: Selenite Cystine Broth Base, USP

PharmaBio® VIOLET RED BILE GLUCOSE AGAR

Code Number: PVBH20500, PVBH25000

See: Violet Red Bile Glucose Agar, PH EUR-USP

PharmaBio® TSI AGAR

Code Number: PTSI20500, PTSI25000

See: Triple Sugar Iron (TSI) Agar, PH EUR

PharmaBio® VOGEL-JOHNSON AGAR BASE

Code Number: PVJA20500, PVJA25000

See: Vogel-Johnson Agar Base, USP

PharmaBio® TETRATHIONATE BROTH BASE, PH EUR

Code Number: PTTE20500, PTTE25000

See: Tetrathionate Broth Base, PH EUR

PharmaBio® XLD AGAR

Code Number: PXLD20500, PXLD25000

See: XLD Agar, PH EUR-USP

PHENOL RED AGAR BASE

A solid basal medium for the carbohydrate fermentation studies.

Code Number:	PHA20500, PHA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 30 g in one litre of distilled water. Bring to the boil to dissolve completely. Distribute into final containers and sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and add the filter sterilised sugar (10 g/l) solution to the medium. Allow to cool in slanted position such that deep butts are formed.

Formula in g/l

Peptones	10,00
Sodium chloride	5,00
Phenol red	0,02
Agar	15,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: Use organisms, which have known positive or negative reactions with investigated sugars.

References: Ewing (1986). Edwards and Ewing's identification of enterobacteriaceae. 4th ed.

PHENYLALANINE RHAMNOSE AGAR

A medium for the differentiation of gram negative enteric bacteria on the basis of the phenylalanine deamination and the rhamnose fermentation.

Code Number:	PRH20500, PRH25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,7 (approx.) at 20 °C

Direction: Suspend 12 g in one litre of distilled water and boil to dissolve the medium completely. Distribute into test tubes and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	1,00
Rhamnose	1,00
Sodium chloride	2,00
L-Phenylalanine	1,00
Bromothymol blue	0,04
Buffers	2,00
Agar	5,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Escherichia coli*, *Proteus mirabilis*

References: Henrikson (1950) J. Bacteriol. 60: 225.

PIKE BROTH

A selective medium for the cultivation of enterococci.

Code Number:	PBB20500, PBB25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 31 g in one litre of distilled water and heat gently to dissolve the medium completely. Dispense into final containers. Sterilise by autoclaving at 115 °C for 15 minutes.

Formula in g/l

Peptones	30,700
Glucose	0,200
Sodium azide	0,065
Violet red	0,002

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Enterococcus faecalis*
Negative control: *Escherichia coli*

References: Pike (1944) Proc. Soc. Exp. Biol. and Med. 57: 187

PLATE COUNT AGAR

A standard medium for the enumeration of total viable organisms.

Code Number:	PCA20500, PCA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 23,5 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	5,0
Yeast extract	2,5
Glucose	1,0
Agar	15

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Staphylococcus aureus*

References: APHA (1978) Standard Methods for the Examination of Dairy Products.

PLATE COUNT AGAR No.2

A standard medium for the enumeration of total viable organisms.

Code Number:	PAT20500, PAT25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 24 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	5
Beef extract	3
Glucose	1
Agar	15

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Staphylococcus aureus*

References: APHA (1980) Standard Methods for the Examination of Water and wastewater 15th ed.

PLATE COUNT SKIM MILK AGAR

A solid medium for the enumeration of viable organisms in milk and dairy products.

Code Number:	PCS20500, PCS25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 23 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 12,1 °C for 15 minutes.

Formula in g/l

Peptones	8
Glucose	1
Skim milk	1
Agar	13

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Staphylococcus aureus*

References: APHA (1985) Standard Methods for the Examination of Dairy Products, 15rd ed. New York.

PLATE COUNT BROTH

A non selective nutrient medium for the enumeration of total viable organisms with MPN procedure.

Code Number:	PCB20500, PCB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 9 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	8
Glucose	1

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Escherichia coli*, *Staphylococcus aureus*

POTATO DEXTROSE AGAR, PH EUR - USP

A medium for the detection, isolation and enumeration of yeast and moulds according to PH EUR (Potato Dextrose Agar - Harmonised).

Code Number:	PDA20500, PDA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	5,6 (approx.) at 20 °C

Direction: Suspend 39 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 115 °C for 10 minutes. If it is desired to adjust the reaction to pH 3.5, cool to 55 °C and add Lactic Acid Solution (LAS80100) to the agar in the necessary quantity (about 10 ml).

Warning!

The medium is heat sensitive.

No further sterilisation is necessary or desirable.

Once acidified with lactic acid, the medium should not be re-heated.

Formula in g/l

Dextrose	20
Infusion from potatoes (200 g)	4
Agar	15

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Candida albicans*

Negative control (at pH=3.5): *Bacillus cereus*

References: European Pharmacopoeia 5.6

PURPLE LACTOSE AGAR BASE, MODIFIED

A differentiating medium for the isolation, enumeration and presumptive identification of micro-organisms from urine.

Code Number:	BLA20500, BLA25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 35 g in 980 ml of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 20 ml of sterile defibrinated blood. Mix well before pouring.

Formula in g/l

Peptones	9,000
Lactose	10,000
Sodium tiosulphate	0,200
Ferrous citrate	0,200
L-Cystine	0,100
Esculin	0,500
Bromocresol purple	0,025
Agar	15,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Proteus mirabilis*, *Salmonella enteritidis*, *Enterococcus faecalis*

R2A AGAR, PH EUR

A medium for the bacterial examination of water according to PH EUR (Agar medium S).

Code Number:	R2A20500, R2A25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 18 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Proteose peptone	0,500
Caseine hydrolysat	0,500
Yeast extract	0,500
Glucose	0,500
Starch soluble	0,500
Sodium pyruvate	0,300
Magnesium sulphate, anhydrous	0,024
Dipotassium hydrogen phosphate	0,300
Agar	14,900

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Staphylococcus aureus*,

References: European Pharmacopoeia 5.6

R2A BROTH

A medium for the bacterial examination of water.

Code Number:	R2B20500, R2B25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 3,2 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	1,500
Glucose	0,500
Starch soluble	0,500
Sodium pyruvate	0,300
Magnesium sulphate, anhydrous	0,024
Buffers	0,300

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Escherichia coli*, *Staphylococcus aureus*

References: Stark and McCoy (1938) Zentralb. Bakt. Parasit. Infekt. Hyg. Abt. 2. 98: 201

RAPPAPORT-VASSILIADIS BROTH BASE, PH EUR - USP

A selective enrichment broth for the isolation of Salmonellae according to PH EUR (Rappaport-Vassiliadis Salmonella Enrichment Broth - Harmonised).

Code Number:	RVB20500, RVB25000
Colour:	Greenish
Appearance:	Homogeneous hygroscopic powder
Final pH:	5,2 (approx.) at 20 °C

Direction: Fill up the 27 ml of Rappaport-Vassiliadis Magnesium Chloride Solution (RMG81000) to 1,000 ml with distilled water. Suspend 13,5 g of dehydrated media and heat gently to dissolve completely. Distribute into final containers and sterilise by autoclaving at 115 °C for 15 minutes.

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Soya peptone	4,500
Sodium chloride	8,000
Malachite green	0,036
Dipotassium phosphate	0,400
Potassium dihydrogen phosphate	0,600

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Salmonella enteritidis*

Negative control: *Escherichia coli*

References: Rappaport et al (1956) J. Clin. Path. 9: 261.
European Pharmacopoeia 5.6

RAPPAPORT-VASSILIADIS (MSRV) MEDIUM BASE

A semi-solid medium for the detection of motile Salmonellae.

Code Number:	MSR20500, MSR25000
Colour:	Greenish
Appearance:	Homogeneous hygroscopic powder
Final pH:	5,5 (approx.) at 20 °C

Direction: Fill up the 10 ml of DIASALM-MSRV Magnesium Chloride Solution (DSM80500) to 485 ml with distilled water. Suspend 10,5 g of dehydrated media and bring to the boil with frequent agitation to dissolve completely. Cool to 50 °C and aseptically add the contents of one vial of Novobiocin Supplement (DSN80010) reconstituted with 4 ml of sterile distilled water. Mix gently before pouring.

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	9,180
Sodium chloride	7,340
Malachite green	0,037
Buffers	1,470
Agar	3,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C

Quality Control:

Positive control: *Salmonella enteritidis*
Negative control: *Pseudomonas aureus*

References: De Smedt et al (1986) J. Food Prot. 48: 510.

REINFORCED CLOSTRIDIAL (RCM-DRCM) MEDIUM BASE, PH EUR - USP

A semi-solid medium for the cultivation and enumeration of anaerobes, especially Clostridium species according to PH EUR (Medium P - Reinforced Media for Clostridia - Harmonised).

Code Number:	RCM20500, RCM25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,8 (approx.) at 20 °C

Direction for RCM medium: Suspend 38 g in one litre of distilled water and boil to dissolve the medium completely. Distribute into final containers and sterilise by autoclaving at 121 °C for 15 minutes.

Direction for DRCM medium: Suspend 19 g in 500 ml of distilled water and boil to dissolve the medium completely. Distribute into final containers and sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C. Dissolve the content of one vial of DRCM Differential Supplement (DRS80002) with 2,5 ml of distilled water and add one drop (50 µl) to each 10 ml of the medium aseptically, through a sterile filter.

Formula in g/l

Peptones	10,0
Beef extract	10,0
Yeast extract	3,0
Glucose monohydrate	5,0
Starch soluble	1,0
Sodium chloride	5,0
Sodium acetate	3,0
L-Cysteine HCl	0,5
Agar	0,5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Clostridium perfringens*

References: European Pharmacopoeia 5.6

Hirsh and Grinsted (1954) J. Dairy Res. 21: 101
Gibbs and Freame (1965) J. Appl. Bact. 28: 95.

REINFORCED CLOSTRIDIAL (RCM) AGAR

A non selective medium for the cultivation and enumeration of anaerobes, especially Clostridium species.

Code Number:	RCA20500, RCA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,8 (approx.) at 20 °C

Direction: Suspend 51 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	23,0
Glucose	5,0
Starch	1,0
L-Cysteine HCl	0,5
Sodium chloride	5,0
Sodium acetate	3,0
Agar	13,5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Clostridium perfringens*

References: Hirsh and Grinsted (1954) J. Dairy Res. 21: 101

REINFORCED CLOSTRIDIAL DIFFERENTIAL BROTH

A differential medium for the enumeration of all clostridia by the MPN method.

Code Number:	RCD20500, RCD25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,8 (approx.) at 20 °C

Direction: Suspend 38,5 g in one litre of distilled water and heat gently to dissolve the medium completely. Distribute into final containers and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	23,000
Glucose	5,000
Starch	1,000
L-Cysteine HCl	0,500
Sodium chloride	5,000
Sodium acetate	3,000
Sodium metabisulphite	0,500
Ferric ammonium citrate	0,500
Resazurin	0,002

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Clostridium perfringens*

References: Gibbs and Freame (1965) J. Appl. Bact. 28: 95.

RINGER SOLUTION, 1/4 STRENGTH

A sterile isotonic diluent for bacteriological specimens.

Code Number:	RIS20500, RIS25000
Colour:	White
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 5 g in one litre of distilled water and heat gently to dissolve the medium completely. Dispense into final containers. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Sodium chloride	2,25
Potassium chloride	0,01
Calcium chloride	0,01
Sodium bicarbonate	0,05

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

References: Davis (1956) Lab. Cont. of Dairy Plant.

ROGOSA AGAR BASE

A selective medium for the isolation and enumeration of *Lactobacillus* species.

Code Number:	ROA20500, ROA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,2 (approx.) at 20 °C

Direction: Suspend 82 g in one litre of distilled water. Add 1 ml of TWEEN 80 and boil to dissolve the medium completely. Add about 1,32 ml glacial acetic acid and mix thoroughly. Heat to 90 – 100 °C for 2 – 3 minutes with frequent agitation. Distribute into final containers

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	15,200
Glucose	20,000
Sodium acetate	17,000
Ammonium citrate	2,000
Magnesium sulphate	0,575
Manganese sulphate	0,120
Ferrous sulphate	0,034
Buffers	6,000
Agar	20,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Lactobacillus acidophilus*

Negative control: *Staphylococcus aureus*

References: Rogosa et al (1951) J. Appl. Bact. 62: 132.

ROSE BENGAL CHLORAMPHENICOL AGAR

A selective medium for the enumeration of yeast and moulds.

Code Number:	RBA20500, RBA25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 32 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	5,40
Glucose	10,00
Magnesium sulphate	0,50
Chloramphenicol	0,10
Rose bengal	0,05
Buffers	1,00
Agar	15,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Saccharomyces cerevisiae*

Negative control: *Escherichia coli*

References: APHA (1978) Standard Method for the Examination of Dairy Products. 14th ed.

ROSE BENGAL DICHLORAN AGAR

A selective agar for the enumeration of yeast and moulds. The dicloran enhanced the selectivity of medium.

Code Number:	RBD20500, RBD25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 32 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	5,400
Glucose	10,000
Magnesium sulphate	0,500
Chloramphenicol	0,100
Dichloran	0,002
Rose bengal	0,050
Buffers	1,000
Agar	15,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Saccharomyces cerevisiae*

Negative control: *Escherichia coli*

References: APHA (1978) Standard Method for the Examination of Dairy Products. 14th ed.

SABOURAUD DEXTROSE (1%) MALTOSÉ (1%) AGAR

A solid medium for the cultivation molds and yeast.

Code Number:	SDM20500, SDM25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	5,4 (approx.) at 20 °C

Direction: Suspend 45 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	10
Glucose	10
Maltose	10
Agar	15

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Candida albicans*, *Trichophyton mentagrophytes*

References: Sabouraud (1892) Ann. Dermatol. Syphil. 3: 1061.

SABOURAUD DEXTROSE (2%) AGAR

A solid medium for the cultivation pathogenic and non pathogenic fungi, particularly dermatophytes.

Code Number:	SDD20500, SDD25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,4 (approx.) at 20 °C

Direction: Suspend 45 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	10
Glucose	20
Agar	15

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Candida albicans*, *Trichophyton mentagrophytes*

References: Emmons et al. (1977) Medical mycolgy. Lea & Febiger, Philadelphia

SABOURAUD DEXTROSE (4%) AGAR, PH EUR - USP

An acidic pH medium for the cultivation and isolation of pathogenic and non pathogenic yeasts and fungi, particularly dermatophytes according to PH EUR (Sabouraud Dextrose Agar - Harmonised)

Code Number:	SDA20500, SDA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	5,6 (approx.) at 20 °C

Direction: Suspend 65 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Mixture of peptic digest of animal tissue and pancreatic digest of caseine (1:1)	10
Glucose	40
Agar	15

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Candida albicans*, *Trichophyton mentagrophytes*

References: Sabouraud (1892) Ann. Dermatol. Syphil. 3: 1061. European Pharmacopoeia 5.6

SABOURAUD MALTOSE (4%) AGAR

An acidic pH medium for the isolation of dermatophytes and other yeasts and fungi.

Code Number:	SMA20500, SMA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	5,6 (approx.) at 20 °C

Direction: Suspend 65 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	10
Maltose	40
Agar	15

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Candida albicans*, *Trichophyton mentagrophytes*

References: Sabouraud (1892) Ann. Dermatol. Syphil. 3: 1061.

SABOURAUD CHLORAMPHENICOL AGAR, PH EUR

A selective medium for the isolation of all species of fungi according to PH EUR (Agar Medium C - Sabouraud Glucose Agar with Chloram-phenicol).

Code Number:	SCE20500, SCE25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	5,6 (approx.) at 20 °C

Direction: Suspend 65 g in 1 litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	10,00
Glucose monohydrate	40,00
Chloramphenicol	0,05
Agar	15,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C (plates) or at room temperature (tubes).

Quality Control:

Positive control: *Candida albicans*, *Trichophyton mentagrophytes*

Negative control: *Escherichia coli*

References: European Pharmacopoeia 5.6

SABOURAUD CHLORAMPHENICOL AGAR

A selective medium for the isolation of all species of fungi and dermatophytes from contaminated specimens.

Code Number:	SCH20500, SCH25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,4 (approx.) at 20 °C

Direction: Suspend 45 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Sabouraud dextrose (2%) agar	44,5
Chloramphenicol	0,5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C (plates) or at room temperature (tubes).

Quality Control:

Positive control: *Candida albicans*, *Trichophyton mentagrophytes*

Negative control: *Escherichia coli*

References: Sabouraud (1892) Ann. Dermatol. Syphil. 3: 1061.

SABOURAUD CHLORAMPHENICOL ACTIDION AGAR

A selective medium for the isolation of dermatophytes from specimens containing mixed flora.

Code Number:	SCA20500, SCA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,4 (approx.) at 20 °C

Direction: Suspend 45 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Sabouraud dextrose (2%) agar	44,0
Chloramphenicol	0,5
Cycloheximide	0,5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C (plates) or at room temperature (tubes).

Quality Control:

Positive control: *Candida albicans*, *Trichophyton mentagrophytes*

Negative control: *Escherichia coli*

References: Sabouraud (1892) Ann. Dermatol. Syphil. 3: 1061.

SABOURAUD CHLORAMPHENICOL GENTAMICIN AGAR

A selective medium for the isolation of all species of yeast and other fungi from contaminated specimens.

Code Number:	SCG20500, SCG25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,8 (approx.) at 20 °C

Direction: Suspend 45 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Sabouraud dextrose (2%) agar	44,90
Chloramphenicol	0,05
Gentamicin	0,01

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C (plates) or at room temperature (tubes).

Quality Control:

Positive control: *Candida albicans*, *Trichophyton mentagrophytes*

Negative control: *Escherichia coli*

References: Sabouraud (1892) Ann. Dermatol. Syphil. 3: 1061.

SABOURAUD CHLORAMPHENICOL GENTAMICIN TETRAZOLIUM AGAR

A selective medium for the isolation and differentiation of *Candida* species.

Code Number:	STG20500, STG25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	5,6 (approx.) at 20 °C

Direction: Suspend 45 g in one litre of distilled water and boil to dissolve the medium completely. Distribute into tubes (100x16mm) and sterilise by autoclaving at 121 °C for 15 minutes. Allow to cool in slanted position.

Formula in g/l

Sabouraud dextrose (2%) agar	44,60
Chloramphenicol	0,25
Gentamicin	0,10
Triphenyltetrazolium chloride	0,05

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C (plates) or at room temperature (tubes).

Quality Control:

Positive control: *Candida albicans*

Negative control: *Escherichia coli*

References: Pagano et al. (1958) Antibiotics Ann. 6: 137.

SABOURAUD DEXTROSE BROTH, PH EUR - USP

A liquid sterility test medium for the detection yeast and moulds according to PH EUR (Sabouraud Dextrose Broth - Harmonised)

Code Number:	SDB20500, SDB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	5,7 (approx.) at 20 °C

Direction: Suspend 30 g in one litre of distilled water and boil to dissolve the medium completely. Distribute into final containers and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Mixture of peptic digest of animal tissue and pancreatic digest of caseine (1:1)	10
Glucose	20

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Candida albicans*, *Saccharomyces cerevisiae*

References: European Pharmacopoeia 5.6

SABOURAUD CHLORAMPHENICOL BROTH

A selective medium for the culturing of all species of fungi and dermatophytes from contaminated specimens.

Code Number:	SCC20500, SCC25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,4 (approx.) at 20 °C

Direction: Suspend 30 g in one litre of distilled water and heat gently to dissolve the medium completely. Dispense into final containers. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	10,0
Glucose	19,5
Chloramphenicol	0,5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Candida albicans*, *Trichophyton mentagrophytes*

Negative control: *Escherichia coli*

References: Sabouraud (1892) Ann. Dermatol. Syphil. 3: 1061.

SALMONELLA SHIGELLA (SS) AGAR, MODIFIED

A selective and differential medium for the isolation of enteric micro-organisms, especially Salmonella and some Shigella species. The medium supplemented with phenylalanine is suitable to distinguish Salmonella spp. from Proteus spp.

Code Number:	SSA20500, SSA25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 66 g in one litre of distilled water and heat with frequent agitation until the medium boils. Mix well and pour plates immediately.

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	12,0000
Bile salts	8,5000
Lactose	10,0000
L-Phenylalanine	1,0000
Sodium citrate	10,0000
Sodium thiosulphate	8,5000
Ferric citrate	1,0000
Neutral red	0,0250
Brilliant green	0,0003
Agar	15,0000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C, but better the use is for a few days.

Quality Control:

Positive control: *Escherichia coli*, *Salmonella enteritidis*,
Shigella sonnei, *Proteus mirabilis*

Negative control: *Enterococcus faecalis*

References: Leifson (1935) J. Path. Bact. 40: 476.

SALT BROTH

A selective medium for the presumptive identification of enterococci by determining their salt tolerance.

Code Number:	SBR20500, SBR25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 85 g in one litre of distilled water and heat gently to dissolve the medium completely. Dispense into final containers. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	20
Sodium chloride	65

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Staphylococcus aureus*

Negative control: *Escherichia coli*

SCHAEDLER AGAR

A reducing medium for the isolation and cultivation of anaerobic bacteria.

Code Number:	SAA20500, SAA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,6 (approx.) at 20 °C

Direction: Suspend 42 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 5-7% of sterile defibrinated blood when required. Mix well before pouring.

Formula in g/l

Nutrient substrate (peptones, extracts)	18,000
Glucose	5,800
Sodium chloride	1,700
L-Cysteine HCl	0,400
Vitamins	0,011
Buffers (TRIS and phosphates)	3,100
Agar	14,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control (with blood): *Bacteroides fragilis*, *Clostridium perfringens*

References: Schaedler et al. (1965) J. Exp. Med. 122: 59.

SCHAEDLER BROTH

A broth form of Schaedler agar for the general cultivation of anaerobic bacteria.

Code Number:	SAB20500, SAB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,6 (approx.) at 20 °C

Direction: Suspend 29 g in one litre of distilled water and heat gently to dissolve the medium completely. Distribute into final containers and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Nutrient substrate (peptones, extracts)	18,000
Glucose	5,800
Sodium chloride	1,700
L-Cysteine HCl	0,400
Vitamins	0,011
Buffers (TRIS and phosphates)	3,100

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Bacteroides fragilis*, *Clostridium perfringens*

References: Schaedler et al. (1965) J. Exp. Med. 122: 59.

SELENITE BROTH BASE

An enrichment medium for the isolation of Salmonella and some species of Shigella.

Code Number:	SEB20500, SEB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Dissolve 4 grams of Selenite Supplement (SES80110) in one litre of distilled water and then add 19 g of broth base. Heat gently to dissolve the medium completely. Mix well and distribute into final containers. If the broth is not used on the day of preparation, sterilise at 100 °C for 10 minutes. Cool quickly. A small amount of coloured precipitate is not detrimental.

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	5
Lactose	4
Buffers	10

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Salmonella enteritidis*, *Shigella sonnei*

Negative control: *Escherichia coli*

References: Leifson (1936) Am. J. Hyg. 24: 423.

SELENITE CYSTINE BROTH BASE, USP

An enrichment medium for the isolation of Salmonella and some species of Shigella according to USP. The L-Cystine improves the recovery of Salmonella.

Code Number:	SCB20500, SCB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Dissolve 4 grams of Selenite Supplement (SES80110) in one litre of distilled water and then add 19 g of broth base. Heat gently to dissolve the medium completely. Mix well and distribute into final containers. If the broth is not used on the day of preparation, sterilise at 100 °C for 10 minutes. Cool quickly. A small amount of coloured precipitate is not detrimental.

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	5,00
Lactose	4,00
L-Cystine	0,01
Buffers	10,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Salmonella enteritidis*, *Shigella sonnei*

Negative control: *Escherichia coli*

References: North and Bartam (1953) Appl. Microbiol. 1: 130.
United States Pharmacopoeia XXVIII. (2005)

SIM MEDIUM

A medium for the differentiation of enteric bacteria on the basis of motility, hydrogen sulphite and indole production.

Code Number:	SIM20500, SIM25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,7 (approx.) at 20 °C

Direction: Suspend 30 g in one litre of distilled water and boil to dissolve the medium completely. Distribute into test tubes and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	26,0
Sodium thiosulphate	0,2
Ferrous ammonium sulphate	0,2
Agar	3,5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Shigella sonnei*, *Proteus mirabilis*, *Escherichia coli*

References: Blazevic (1968) Appl. Microbiol. 16: 668.

SIMMONS CITRATE AGAR

A medium for the differentiation of gram-negative bacteria on the basis of citrate utilisation.

Code Number:	CIT20500, CIT25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,9 (approx.) at 20 °C

Direction: Suspend 24 g in one litre of distilled water and boil to dissolve the medium completely. Dispense into test tube. Sterilise by autoclaving at 121 °C for 15 minutes. Allow to cool in slanted position.

Formula in g/l

Sodium chloride	5,00
Sodium citrate	2,00
Magnesium sulphate	0,20
Bromothymol blue	0,08
Buffers	1,70
Agar	15,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Klebsiella pneumoniae*

Negative control: *Escherichia coli*

References: Simmons (1926) J. Infect. Dis. 39: 209.

SLANETZ-BARTLEY AGAR

A selective medium for the detection of enterococci.

Code Number:	SLA20500, SLA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 44 g in one litre of distilled water and boil to dissolve the medium completely. If the media is not used on the day of preparation, sterilise at 100 °C for 20 minutes. Cool quickly to 50 °C and dispense into Petri-dishes.

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	25,0
Glucose	2,0
Sodium azide	0,4
Tetrazolium chloride	0,1
Buffers	4,0
Agar	12,5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Enterococcus faecalis*

Negative control: *Escherichia coli*

References: Slanetz and Bartley (1957) J. Bact. 74: 591.

TEST AGAR, pH 6.0

A solid medium for the detection of antimicrobial inhibitors.

Code Number:	T6020500, T6025000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,0 (approx.) at 20 °C

Direction: Suspend 25 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 1 ml *Bacillus subtilis* spore suspension. After mixing immediately pour plates.

Formula in g/l

Peptones	6,9
Sodium chloride	5,1
Agar	13,0

Storage conditions: Store the dehydrated medium tightly closed in a cool dry place and use before the expiry date on the label. Store the prepared medium in the dark, at 1-3 °C. Do not freeze! Additional packing in wealded plastic bag is highly recommended.

Quality Control:

Positive control: *Bacillus subtilis*

References: Levetzow (1971) Bundesgesundheitsblatt 14, 15/16: 211

STAPHYLOCOCCUS MEDIUM No.110

A selective medium for the isolation and presumptive identification of pathogenic staphylococci.

Code Number:	STM20500, STM25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,1 (approx.) at 20 °C

Direction: Suspend 150 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Disperse the precipitate by gentle agitation before pouring.

Formula in g/l

Peptones	13
Mannitol	10
Lactose	2
Sodium chloride	75
Gelatin	30
Buffers	5
Agar	15

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Staphylococcus aureus*

Negative control: *Escherichia coli*

References: APHA (1976) Compendium of Methods for the Microbiological Examination of Foods.

TEST AGAR, pH 7.2

A solid medium for the detection of antimicrobial inhibitors.

Code Number:	T7220500, T7225000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 26 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 1 ml *Bacillus subtilis* spore suspension. After mixing immediately pour plates.

Formula in g/l

Peptones	7,0
Sodium chloride	5,0
Buffer	0,8
Agar	13,2

Storage conditions: Store the dehydrated medium tightly closed in a cool dry place and use before the expiry date on the label. Store the prepared medium in the dark, at 1-3 °C. Do not freeze! Additional packing in wealded plastic bag is highly recommended.

Quality Control:

Positive control: *Bacillus subtilis*

References: Levetzow (1971) Bundesgesundheitsblatt 14, 15/16: 211

TEST AGAR, pH 8.0

A solid medium for the detection of antimicrobial inhibitors.

Code Number:	T8020500, T8025000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	8,0 (approx.) at 20 °C

Direction: Suspend 27,5 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 1 ml *Bacillus subtilis* spore suspension. After mixing immediately pour plates.

Formula in g/l

Peptones	6,9
Sodium chloride	5,1
Buffer	2,4
Agar	13,1

Storage conditions: Store the dehydrated medium tightly closed in a cool dry place and use before the expiry date on the label. Store the prepared medium in the dark, at 1-3 °C. Do not freeze! Additional packing in wealded plastic bag is highly recommended.

Quality Control:

Positive control: *Bacillus subtilis*

References: Levetzow (1971) Bundesgesundheitsblatt 14, 15/16: 211

TCBS AGAR

A selective medium for the isolation of pathogenic vibrios.

Code Number:	TCB20500, TCB25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	8,6 (approx.) at 20 °C

Direction: Suspend 91 g in 1 litre of distilled water and soak for 10 minutes. Heat gently and allow to boil for a few seconds to dissolve the agar. Cool to about 50 °C and pour into Petri-dishes.

Warning!

The medium is heat sensitive.

No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	18,00
Sucrose	20,00
Bacteriological bile	8,00
Sodium chloride	10,00
Sodium thiosulphate	10,00
Sodium citrate	10,00
Ferric citrate	1,00
Bromothymol blue	0,04
Thymol blue	0,04
Agar	14,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Vibrio cholera*

Negative control: *Escherichia coli, Proteus mirabilis*

References: Kobayashi et al (1963). Jap. J. Bact. 18. 10-11: 387

TERGITOL 7 AGAR BASE

A differential and selective medium for the detection and enumeration of coliforms.

Code Number:	TEA20500, TEA25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 54 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 10 drops of Tergitol 7 TTC Solution (TES80007). Mix well before pouring.

Formula in g/l

Peptones	20,50
Lactose	20,00
Tergitol 7	0,10
Bromothymol blue	0,05
Agar	13,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C, but better to use it for a few days.

Quality Control:

Positive control: *Escherichia coli, Proteus mirabilis*

Negative control: *Enterococcus faecalis*

References: Chapman (1947) J. Bact. 53: 504.

TETRATHIONATE BROTH BASE, MULLER-KAUFFMAN

A selective broth for the enrichment of salmonellae in addition with inhibition of protease.

Code Number:	MTB20500, MTB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,6 (approx.) at 20 °C

Direction: Suspend 41 g in 480 ml of distilled water and boil to dissolve the medium completely. Cool to 50 °C and aseptically add the contents of one vial of Tetrathionate Iodine-Iodide Selective Supplement (TTS80010) reconstituted with 10 ml of sterile distilled water and 10 ml of a 0,1% brilliant green solution. Mix well and distribute aseptically into sterile test tubes.

Warning!

The medium is heat sensitive.

Do not heat after the addition of the supplement.

The complete medium should be used on the day of preparation.

Formula in g/l

Peptones	7,00
Sodium chloride	4,50
Bacteriological bile	4,80
Calcium carbonate	25,00
Sodium thiosulphate	40,70

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C, no longer than 24 hours.

Quality Control:

Positive control: *Salmonella enteritidis*

Negative control: *Escherichia coli*

References: Muller (1923) C. R. Soc. Biol. 89: 434.

Kauffmann (1930) Zbl. Bakt. I. Orig. 119: 148.

TETRATHIONATE BROTH BASE, MULLER-KAUFFMAN (MKTTn)

A selective broth for the enrichment of salmonellae according to ISO standard.

Code Number:	TMK20500, TMK25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	8,0 (approx.) at 20 °C

Direction: Suspend 45 g in 475 ml of distilled water and boil to dissolve the medium completely. Cool to 50 °C and aseptically add the contents of one vial of Novobiocin (20 mg) Selective Supplement (DSN80020) reconstituted with 4 ml of sterile distilled water and 10 ml of a 0,1% brilliant green solution. Mix well and add the contents of one vial of Tetrathionate Iodine-Iodide Selective Supplement (TTS80010) reconstituted with 10 ml of sterile distilled water. Mix well and distribute aseptically into sterile test tubes.

Warning!

The medium is heat sensitive.

Do not heat after the addition of the supplement.

The complete medium should be used on the day of preparation.

FORMULA in g/l

Peptones	13,4
Sodium chloride	2,6
Bile salts	4,8
Calcium carbonate	38,7
Sodium thiosulphate	30,5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C, no longer than 24 hours.

Quality Control:

Positive control: *Salmonella enteritidis*

Negative control: *Proteus mirabilis*

References: ISO 6579: 2002

TETRATHIONATE BROTH BASE, PH EUR

A selective enrichment medium for the isolation of Salmonellae according to PH EUR (Broth Medium I – Tetrathionate Bile Brilliant Green Broth).

Code Number:	TTE20500, TTE25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,0 (approx.) at 20 °C

Direction: Suspend 31,5 g in 500 ml of distilled water and boil to dissolve the medium completely. Cool to 50 °C and aseptically add the contents of one vial of Tetrathionate Iodine-Iodide Selective Supplement (TTS80010) reconstituted with 10 ml of sterile distilled water. Mix well and distribute aseptically into sterile test tubes.

Warning!

The medium is heat sensitive.

Do not heat after the addition of the supplement.

The complete medium should be used on the day of preparation.

Formula in g/l

Peptones	8,60
Ox bile, dried	8,00
Sodium chloride	6,40
Calcium carbonate	20,00
Sodium thiosulphate	20,00
Brilliant green	0,07

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C, no longer than 24 hours.

Quality Control:

Positive control: *Salmonella enteritidis*

Negative control: *Escherichia coli*

References: European Pharmacopoeia 5.6

TETRATHIONATE BROTH BASE, USP

A selective enrichment medium for the isolation of *Salmonella typhi* and other salmonellae according to USP.

Code Number:	TTB20500, TTB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	8,4 (approx.) at 20 °C

Direction: Suspend 23 g in 500 ml of distilled water and boil to dissolve the medium completely. Cool to 50 °C and aseptically add the contents of one vial of Tetrathionate Iodine-Iodide Selective Supplement (TTS80010) reconstituted with 10 ml of sterile distilled water. Mix well and distribute aseptically into sterile test tubes.

Warning!

The medium is heat sensitive.

Do not heat after the addition of the supplement.

The complete medium should be used on the day of preparation.

Formula in g/l

Peptones	5
Bile salts	1
Calcium carbonate	10
Sodium thiosulphate	30

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C, no longer than 24 hours.

Quality Control:

Positive control: *Salmonella enteritidis*

Negative control: *Escherichia coli*

References: United States Pharmacopoeia XXVIII. (2005)

THIOGLYCOLLATE MEDIUM, BREWER

A modified medium for the cultivation of both aerobic and anaerobic organisms, especially in the sterility testing of the biological product.

Code Number:	TBR20500, TBR25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 20 g in one litre of distilled water and boil to dissolve the medium completely. Distribute into final containers and sterilise by autoclaving at 121°C for 15 minutes.

Formula in g/l

Peptones	8,000
Glucose	5,000
Sodium chloride	5,000
Sodium thioglycollate	1,100
Methylene blue	0,002
Agar	0,900

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Clostridium perfringens*, *Staphylococcus aureus*

References: Brewer (1940) J. Am. Med. Assoc. 115: 598.

THIOGLYCOLLATE MEDIUM, PH EUR

A medium for the sterility testing according to PH EUR (Fluid Thioglycollate Medium for Sterility Testing). The medium is primarily intended for the culture of anaerobic bacteria, however, it will also detect aerobic bacteria.

Code Number:	THM20500, THM25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,1 (approx.) at 20 °C

Direction: Suspend 30 g in 1 litre of distilled water and bring to the boil to dissolve the medium completely. Distribute into final containers and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Pancreatic digest of casein	15,250
Yeast extract	5,000
Glucose monohydrate	5,500
Sodium chloride	2,500
Sodium thioglycollate	0,500
L-cystine	0,500
Resazurin	0,001
Agar	0,750

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Clostridium sporogenes*, *Pseudomonas aeruginosa*, *Staphylococcus aureus*

References: European Pharmacopoeia 5.6

THIOGLYCOLLATE MEDIUM WITH HEMIN + VITAMIN K3

A medium for the sterility testing. The medium is primarily intended for the culture of anaerobic bacteria.

Code Number:	THK20500, THK25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,1 (approx.) at 20 °C

Direction: Suspend 30 g in 1 litre of distilled water and bring to the boil to dissolve the medium completely. Distribute into final containers and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Pancreatic digest of casein	15,250
Yeast extract	5,000
Glucose monohydrate	5,500
Sodium chloride	2,500
Sodium thioglycollate	0,500
L-cystine	0,500
Hemin	0,005
Vitamin K3	0,001
Resazurin	0,001
Agar	0,500

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Clostridium perfringens*

References: Lanette et al (1985) Manual of Clinical Microbiol. 4th ed.

TODD-HEWITT BROTH

A general-purpose medium for the cultivation primarily of beta-haemolytic streptococci.

Code Number:	THB20500, THB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,8 (approx.) at 20 °C

Direction: Suspend 37 g in one litre of distilled water and heat gently to dissolve the medium completely. Distribute into final containers and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Nutrient substrate (heart infusion, peptones)	30
Glucose	2
Sodium chloride	2
Buffers	3

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Streptococcus pneumoniae*

References: Todd and Hewitt (1932) J. Path. Bact. 35: 973

TRANSPORT MEDIUM, AMIES, WITH CHARCOAL

An improved semi solid, non-nutritional medium for the transportation of fastidious pathogens with prolonged survival of organisms between collection and culturing. The added charcoal neutralises the toxic metabolic products to gonococci.

Code Number:	TAC20500, TAC25000
Colour:	Black
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 20 g in 1 litre of distilled water. Bring to the boil to dissolve completely and dispense into final containers. Sterilise at 121 °C for 15 minutes. Cool to 50 °C and mix by inversion to distribute the charcoal uniformly.

Formula in g/l

Sodium chloride	3,0
Sodium thioglycollate	1,0
Potassium chloride	0,2
Calcium chloride	0,1
Magnesium chloride	0,1
Charcoal	10,0
Buffers	1,6
Agar	4,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Shigella flexneri*

References: Amies (1967). Can. J. Pub. Hlth. 58: 296.

TRANSPORT MEDIUM, AMIES, WITHOUT CHARCOAL

An improved semi solid, non-nutritional medium for the transportation of fastidious pathogens with prolonged survival of organisms between collection and culturing.

Code Number:	TAW20500, TAW25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 10 g in 1 litre of distilled water. Bring to the boil to dissolve completely and dispense into final containers. Sterilise at 121 °C for 15 minutes.

Formula in g/l

Sodium chloride	3,0
Sodium thioglycollate	1,0
Potassium chloride	0,2
Calcium chloride	0,1
Magnesium chloride	0,1
Buffers	1,6
Agar	4,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Haemophilus influenzae*

References: Amies (1967). Can. J. Pub. Hlth. 58: 296.

TRANSPORT MEDIUM, CARY-BLAIR

A semi solid, non-nutritional medium for the transportation of Gram negative and anaerobic organisms.

Code Number:	TCW20500, TCW25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	8,3 (approx.) at 20 °C

Direction: Suspend 13 g in 1 litre of distilled water. Bring to the boil to dissolve completely and dispense into final containers. Sterilise at 121 °C for 15 minutes.

Formula in g/l

Sodium chloride	5,00
Calcium chloride	0,09
Sodium thioglycollate	1,50
Buffers	1,00
Agar	5,40

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Shigella sonnei*

References: Cary and Blair, (1964). J. Bact. 88: 96.

TRANSPORT MEDIUM, STUART, WITH CHARCOAL

A semi solid, non-nutritional medium for the transportation of fastidious pathogenic organisms. The added charcoal neutralises the toxic metabolic products to gonococci.

Code Number:	TSC20500, TSC25000
Colour:	Black
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 26 g in 1 litre of distilled water. Bring to the boil to dissolve completely and dispense into final containers. Sterilise at 121 °C for 15 minutes. Cool to 50 °C and mix by inversion to distribute the charcoal uniformly.

Formula in g/l

Sodium glycerophosphate	10,000
Sodium thioglycollate	0,500
Calcium chloride	0,100
Charcoal	10,000
L-Cysteine	0,400
Methylene blue	0,001
Agar	5,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Streptococcus pyogenes*

References: Stuart et al. (1959). Pub. Hlth. Rep. Wash. 74. 431.

TRANSPORT MEDIUM, STUART, WITHOUT CHARCOAL

A semi solid, non nutritional medium for the transportation of fastidious pathogenic organisms.

Code Number:	TSW20500, TSW25000
Colour:	Greyish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 16 g in 1 litre of distilled water. Bring to the boil to dissolve completely and dispense into final containers. Sterilise at 121 °C for 15 minutes.

Formula in g/l

Sodium glycerophosphate	10,000
Sodium thioglycollate	0,500
Calcium chloride	0,100
L-Cysteine	0,400
Methylene blue	0,001
Agar	5,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Streptococcus pyogenes*

References: Stuart et al. (1959). Pub. Hlth. Rep. Wash. 74. 431.

TRICHOMONAS (CPLM) MEDIUM BASE, MODIFIED

A liquid medium for the cultivation of *Trichomonas vaginalis*.

Code Number:	CPL20500, CPL25000
Colour:	Brownish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,0 (approx.) at 20 °C

Direction: Suspend 17,5 g in 425 ml of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add the contents of one vial of Trichomonas Selective Supplement (TSS80004) reconstituted with 4 ml of sterile distilled water and 70 ml of sterile inactivated (i.e. serum held at 56 °C for 30 minutes) and pH adjusted (6.0) horse serum. Mix gently before pouring.

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Nutrient substrate (peptones, liver extract)	26,000
Maltose	1,000
L-Cysteine	2,000
Ringer solution	4,500
Methylene blue	0,005
Buffers	0,500
Agar	1,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Trichomonas vaginalis*

References: Johnson and Trussel (1943) Proc. Soc. Exp. Biol. 54: 245.
Szénási et al (1999) Hungarian Venerological Archive 3: 215

TRIBUTYRIN AGAR BASE

A non-selective medium for the detection and enumeration of lipolytic microorganisms.

Code Number:	TRA20500, TRA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,5 (approx.) at 20 °C

Direction: Suspend 20 g in one litre of distilled water. Add 10 ml of Tributyrin Supplement (TRS80250) and mix uniformly. Heat with continuous agitation until boiling. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C with frequent agitation and pour plates immediately to solidify rapidly.

Warning!

The ready medium must be an uniformly turbid gel!

Formula in g/l

Peptones	8
Agar	12

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Lipase positive control: *Staphylococcus aureus*
Lipase negative control: *Escherichia coli*

References: Anderson (1939) Ber. 3. Int. Microbiol. Congress. 3: 726.

TRICHOMONAS MEDIUM BASE

A liquid medium for the cultivation of *Trichomonas vaginalis*.

Code Number:	TRM20500, TRM25000
Colour:	Brownish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,4 (approx.) at 20 °C

Direction: Suspend 18,5 g in 455 ml of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add the contents of one vial of Trichomonas Selective Supplement (TSS80004) reconstituted with 4 ml of sterile distilled water and 40 ml of sterile inactivated (i.e. serum held at 56 °C for 30 minutes) and pH adjusted (6.4) horse serum. Mix gently before pouring.

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Liver extract	24,5
Glucose	5,0
Sodium chloride	6,5
Agar	1,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Trichomonas vaginalis*

References: Freinberg and Whittington (1957) J. Clin. Path. 10: 327.

TRIPLE SUGAR IRON (TSI) AGAR, PH EUR

A medium for the differentiation of gram negative enteric bacteria on the basis of carbohydrate fermentation and the production of hydrogen sulphite according to PH EUR (AGAR Medium M).

Code Number:	TSI20500, TSI25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 66 g in one litre of distilled water and boil to dissolve the medium completely. Dispense into test tubes and sterilise by autoclaving at 121 °C for 15 minutes. Allow to cool in slanted position such that deep butts are formed.

Formula in g/l

Peptones	20,000
Beef extract	3,000
Yeast extract	3,000
Lactose monohydrate	10,000
Sucrose	10,000
Glucose	1,000
Sodium chloride	5,000
Sodium thiosulphate	0,300
Ferric citrate	0,300
Phenol red	0,025
Agar	13,400

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive controls: *Escherichia coli*, *Salmonella Enteritidis*,
Pseudomonas aeruginosa

References: European Pharmacopoeia 5.6

TRYPTONE BILE AGAR

A differential medium for the enumeration of *Escherichia coli* with DPM method.

Code Number:	TBA20500, TBA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 37 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Tryptone	20,5
Bile salts	1,5
Agar	15,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*
Negative control: *Staphylococcus aureus*

References: Anderson and Baird-Parker (1975) J. Appl. Bact. 39: 111.

TRYPTONE SOYA AGAR

A highly nutritious general purpose medium for the growth of a wide variety of organisms.

Code Number:	TSA20500, TSA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 45 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Tryptone	17,0
Soya peptone	3,0
Glucose	2,5
Sodium chloride	5,0
Buffers	2,5
Agar	15,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Streptococcus pneumoniae*,
Staphylococcus aureus

References: United States Pharmacopoeia XXVIII. (2005)

TRYPTONE SOYA AGAR, PH EUR - USP

A highly nutritious general purpose medium for the growth of a wide variety of organisms according to PH EUR (Agar Medium B - Casein Soya-Bean Digest Agar - Harmonised).

Code Number:	TSE20500, TSE25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 40 g in 1 litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Pancreatic digest of casein	15
Papaic digest of soya-bean meal	5
Sodium chloride	5
Agar	15

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Streptococcus pneumoniae*, *Staphylococcus aureus*

References: European Pharmacopoeia 5.6

TRYPTONE SOYA BROTH, PH EUR - USP

A highly nutritious general purpose medium for the growth of a wide variety of organisms. The medium is primarily intended for the culture of fungi and aerobic bacteria according to PH EUR (Broth Medium A - Casein Soya-Bean Digest Broth - Harmonised).

Code Number:	TSB20500, TSB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 30 g in one litre of distilled water and heat gently to dissolve the medium completely. Distribute into the final containers and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Pancreatic digest of casein	17,0
Papaic digest of soya-bean meal	3,0
Glucose monohydrate	2,5
Sodium chloride	5,0
Dipotassium hydrogen phosphate	2,5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature

Quality Control:

Positive control: *Streptococcus pneumoniae*, *Staphylococcus aureus*, *Candida albicans*

References: European Pharmacopoeia 5.6

TRYPTONE SOYA YEAST EXTRACT AGAR

A highly nutritious medium for the growth of a wide variety of organisms especially *Listeria monocytogenes*.

Code Number:	TYA20500, TYA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 51 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Tryptone	17,0
Soya peptone	3,0
Yeast extract	6,0
Glucose	2,5
Sodium chloride	5,0
Buffers	2,5
Agar	15,0

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Listeria monocytogenes*

References: APHA (1992) Compendium of Methods for the Microbiological Examination of Foods 3rd ed. ISO 10560 (1993)

TRYPTONE SOYA BILE (mTSB) BROTH WITH NOVOBIOCIN

A selective medium for the isolation enterohemorrhagic *Escherichia coli* (EHEC).

Code Number:	TBN20500, TBN25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 33 g in one litre of distilled water and heat gently to dissolve the medium completely. Distribute into the final containers and sterilise by autoclaving at 121 °C for 15 minutes

Formula in g/l

Tryptone	17,00
Soya peptone	3,00
Bile salts	1,50
Glucose	2,50
Sodium chloride	5,00
Novobiocin	0,02
Buffers	4,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli* O157

References: ISO Standard 16654 (1999)

TRYPTONE WATER

A liquid medium for the testing of the organism's ability to produce indole from tryptophan.

Code Number:	TRW20500, TRW25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,5 (approx.) at 20 °C

Direction: Suspend 15 g in 1 litre of distilled water. Heat gently to dissolve the medium completely. Distribute into final containers and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Tryptone	10
Sodium chloride	5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Escherichia coli*

Negative control: *Enterobacter aerogenes*

References: Farmer (1985) J. Clin. Microbiol. 21: 46.

TRYPTOPHAN BROTH

A liquid medium for the detection of indole production.

Code Number:	TRB20500, TRB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,5 (approx.) at 20 °C

Direction: Suspend 16 g in one litre of distilled water. Heat gently to dissolve the medium completely. Distribute into final containers and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	10
L-Tryptophan	1
Sodium chloride	5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Escherichia coli*

Negative control: *Enterobacter aerogenes*

References: ISO 9308-1: 2000

TYROBUTYRICUM BROTH BASE

A liquid medium for the identification of *Clostridium tyrobutyricum*.

Code Number:	TYB20500, TYB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
Final pH:	6,0 (approx.) at 20 °C

Direction: Fill up 10 ml of Tyrobutyricum Sodium Lactate Solution (SLT80140) with distilled water to one litre. Suspend 36 g of dehydrated media and heat gently to dissolve completely. Distribute into final containers and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	30,5000
Sodium acetate	5,0000
L-Cysteine	0,5000
Resazurin	0,0025

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Clostridium tyrobutyricum*

Negative control: *Staphylococcus aureus*

TRYPTOSE PHOSPHATE BROTH

A buffered broth for cultivation of fastidious bacteria.

Code Number:	TPB20500, TPB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,3 (approx.) at 20 °C

Direction: Suspend 30 g in one litre of distilled water and heat gently to dissolve the medium completely. Distribute into the final containers and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Tryptose	20,5
Glucose	2,0
Sodium chloride	5,0
Buffers	2,5

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Streptococcus pneumoniae*

References: Grinsberg et al. (1955) Proc. Soc. Exper. Biol. Med. 89: 66.

UNIVERSAL BEER AGAR

A solid medium for the isolation of beer spoilage organisms.

Code Number:	UBA20500, UBA25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,3 (approx.) at 20 °C

Direction: Suspend 57 g in 750 ml of distilled water and boil to 30 minutes. Without delay, add 250 ml of beer to be investigated (without degassing) and sterilise by autoclaving at 121 °C for 10 minutes.

Warning!

The medium is heat sensitive.

No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	25,40
Tomato extract	7,00
Glucose	10,00
Mg(II), Na(I), Fe(III) and Mn(II) salts	0,15
Buffers	1,50
Agar	13,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Lactobacillus acidophilus*, *Saccharomyces cerevisiae*

References: Kozulis and Page (1968) Proc. Am. Brew. Chem: 52

UREA AGAR BASE

A solid medium for the differentiation of organisms, especially the Enterobacteriaceae, on the basis of urease production.

Code Number:	URA20500, URA25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,8 (approx.) at 20 °C

Direction: Suspend 22 g in one litre of distilled water and boil to dissolve the medium completely. Distribute into test tubes and sterilise by autoclaving at 121 °C for 15 minutes. Cool to 55-60 °C. Dissolve the content of one vial of Urea Supplement (URS80040) with 25 ml of distilled water (by keeping for 30 minutes at 37 °C) and add 4 drop (200 µl) to each 5 ml of the medium aseptically, through a sterile filter. Mix well and allow to set in slope position.

Formula in g/l

Peptones	1,000
Glucose	1,000
Sodium chloride	5,000
Phenol red	0,012
Buffers	2,000
Agar	13,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Proteus mirabilis*

Negative control: *Escherichia coli*

References: Christensen (1946) J. Bact. 52: 461.

UREA BROTH BASE

A liquid medium for the differentiation of organisms, especially the Enterobacteriaceae, on the basis of urease production.

Code Number:	URB20500, URB25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,8 (approx.) at 20 °C

Direction: Suspend 9 g in one litre of distilled water and heat gently to dissolve the medium completely. Distribute into test tubes and sterilise by autoclaving at 121 °C for 15 minutes. Cool to 55-60 °C. Dissolve the content of one vial of Urea Supplement (URS80040) with 25 ml of distilled water (by keeping for 30 minutes at 37 °C) and add 4 drop (200 µl) to each 5 ml of the medium aseptically, through a sterile filter. Mix well.

Formula in g/l

Peptones	1,000
Glucose	1,000
Sodium chloride	5,000
Phenol red	0,012
Buffers	2,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Proteus mirabilis*

Negative control: *Escherichia coli*

References: Christensen (1946) J. Bact. 52: 461.

UREA INDOLE BROTH

A liquid medium for the differentiation of organisms, especially the Enterobacteriaceae, on the basis of urease and indole production.

Code Number:	URI20500, URI25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,7 (approx.) at 20 °C

Direction: Suspend 37 g in one litre of distilled water and heat gently to dissolve the medium completely. Distribute into final containers and sterilise at 100 °C for 15 minutes.

Warning!

The medium is heat sensitive.

No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	10,000
Sodium chloride	2,300
Urea	20,000
Buffers	4,600
Phenol red	0,012

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Proteus mirabilis, Escherichia coli*

Negative control: *Shigella sonnei*

References: Roland et al (1947) Ann. Inst. Pasteur 73: 914.

UREA INDOLE BROTH BASE

A liquid medium for the differentiation of organisms, especially the Enterobacteriaceae, on the basis of urease and indole production.

Code Number:	UIB20500, UIB25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,7 (approx.) at 20 °C

Direction: Suspend 17 g in one litre of distilled water and heat gently to dissolve the medium completely. Distribute into test tubes and sterilise by autoclaving at 121 °C for 15 minutes. Cool to 55-60 °C. Dissolve the content of one vial of Urea Supplement (URS80040) with 25 ml of distilled water (by keeping for 30 minutes at 37 °C) and add 4 drop (200 µl) to each 5 ml of the medium aseptically, through a sterile filter. Mix well.

Formula in g/l

Peptones	10,000
Sodium chloride	2,300
Buffers	4,600
Phenol red	0,012

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Proteus mirabilis, Escherichia coli*

Negative control: *Shigella sonnei*

References: Roland et al (1947) Ann. Inst. Pasteur 73: 914.

VIOLET RED BILE GLUCOSE AGAR, PH EUR

A glucose containing selective medium for the detection and enumeration of Enterobacteriaceae according to PH EUR (Agar Medium F - Crystal Violet Neutral Red Bile Agar with Glucose).

Code Number:	VBE20500, VBE25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 51,5 g in one litre of distilled water. Boil to dissolve the medium completely. Cool to about 50 °C and pour into Petri-dishes.

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Pancreatic digest of gelatin	7,000
Yeast extract	3,000
Bile salts	1,500
Glucose monohydrate	10,000
Lactose monohydrate	10,000
Sodium chloride	5,000
Neutral red	0,030
Crystal violet	0,002
Agar	15,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C, but better to use it freshly.

Quality Control:

Positive control: *Escherichia coli*, *Proteus mirabilis*
Negative control: *Staphylococcus aureus*

References: European Pharmacopoeia 5.6

VIOLET RED BILE GLUCOSE AGAR, PH EUR – USP

A glucose containing selective medium for the detection and enumeration of Enterobacteriaceae according to PH EUR (Violet Red Bile Glucose Agar – Harmonised).

Code Number:	VBH20500, VBH25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 41,5 g in one litre of distilled water. Boil to dissolve the medium completely. Cool to about 50 °C and pour into Petri-dishes.

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Pancreatic digest of gelatin	7,000
Yeast extract	3,000
Bile salts	1,500
Glucose monohydrate	10,000
Sodium chloride	5,000
Neutral red	0,030
Crystal violet	0,002
Agar	15,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C, but better to use it freshly.

Quality Control:

Positive control: *Escherichia coli*, *Proteus mirabilis*
Negative control: *Staphylococcus aureus*

References: European Pharmacopoeia 5.6
Mossel (1985) int. 7. Food Microbiol. 2: 27.
ISO Standard: 7402-1993

VIOLET RED BILE LACTOSE (VRBL) AGAR

A lactose containing selective medium for the detection and enumeration of coliform.

Code Number:	VBH20500, VBH25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 41,5 g in one litre of distilled water. Boil to dissolve the medium completely. Cool to about 50 °C and pour into Petri-dishes.

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	10,000
Bile salt	1,500
Lactose	10,000
Sodium chloride	5,000
Neutral red	0,030
Crystal violet	0,002
Agar	15,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C, but better to use it freshly.

Quality Control:

Positive control: *Escherichia coli*, *Proteus mirabilis*
Negative control: *Staphylococcus aureus*

References: Mossel (1985) int. 7. Food Microbiol. 2: 27.
ISO Standard: 4832-2006

VIOLET RED BILE LACTOSE (VRBL) AGAR, BUFFERED

A lactose containing selective medium for the detection and enumeration of coliform from soured milk products.

Code Number:	VBB20500, VBB25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 44 g in one litre of distilled water. Boil to dissolve the medium completely. Cool to about 50 °C and pour into Petri-dishes.

Warning!

The medium is heat sensitive.
No further sterilisation is necessary or desirable.

Formula in g/l

Peptones	10,000
Bile salt	1,500
Lactose	10,000
Sodium chloride	5,000
Neutral red	0,030
Crystal violet	0,002
Buffers	3,000
Agar	14,500

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C, but better to use it freshly.

Quality Control:

Positive control: *Escherichia coli*, *Proteus mirabilis*

Negative control: *Staphylococcus aureus*

VOGEL-JOHNSON AGAR BASE, USP

A selective medium for the isolation of *Staphylococcus aureus* according to USP.

Code Number:	VJA20500, VJA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 60 g in one litre of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 1 ml of Vogel-Johnson Potassium Tellurite Solution (PTV80009). Mix well before pouring.

Formula in g/l

Peptones	15,000
Mannitol	10,000
Lithium chloride	5,000
Glycine	10,000
Phenol red	0,025
Buffers	5,000
Agar	15,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Staphylococcus aureus*

Negative control: *Escherichia coli*

References: Vogel and Johnson (1961) J. Pub. Hlth. Lab. 18: 131.
United States Pharmacopoeia XXVIII. (2005)

WILKINS-CHALGREN AGAR

A solid medium for the general growth of anaerobic organisms especially recommended for antimicrobial susceptibility testing.

Code Number:	WCA20500, WCA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,1 (approx.) at 20 °C

Direction: Suspend 46 g in one litre of distilled water and bring to the boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add 5 - 7% sterile defibrinated blood, if desired. Mix well before pouring.

Formula in g/l

Nutrient substrate (peptones, extracts)	25,000
Glucose	1,000
Sodium chloride	5,000
L-Arginine	1,000
Sodium pyruvate	1,000
Vitamins	0,006
Agar	13,000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Bacteroides fragilis*, *Peptostreptococcus anaerobius*

References: Wilkins and Chalgren (1976) Antimicrob. Agents Chemoter. 10: 926.

WILKINS-CHALGREN BROTH

A liquid medium for the general growth of anaerobic organisms especially recommended for antimicrobial susceptibility testing.

Code Number:	WCB20500, WCB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,1 (approx.) at 20 °C

Direction: Suspend 33 g in one litre of distilled water and heat gently to dissolve the medium completely. Distribute into final containers and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Nutrient substrate (peptones, extracts)	25,000
Glucose	1,000
Sodium chloride	5,000
L-Arginine	1,000
Sodium pyruvate	1,000
Vitamins	0,006

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Bacteroides fragilis*, *Peptostreptococcus anaerobius*

References: Wilkins and Chalgren (1976) Antimicrob. Agents Chemoter. 10: 926.

WL DIFFERENTIAL AGAR

A differential medium for the control of industrial fermentation, particularly the processing of beer.

Code Number:	WLD20500, WLD25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	5,5 (approx.) at 20 °C

Direction: Suspend 75 g in one litre of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	9,2000
Glucose	50,0000
Potassium chloride	0,5500
Calcium chloride	0,1250
Magnesium sulphate	0,1250
Ferric chloride	0,0025
Manganese sulphate	0,0025
Bromocresol green	0,0220
Cycloheximide	0,0040
Agar	15,0000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Lactobacillus acidophilus*

Negative control: *Saccharomyces cerevisiae*

References: Green and Gray (1950) Wallerstein Lab. Commun. 13: 357.

WL NUTRIENT AGAR

A solid medium for the control of industrial fermentation, particularly the processing of beer.

Code Number:	WLN20500, WLN25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	5,5 (approx.) at 20 °C

Direction: Suspend 75 g in one litre of distilled water. Bring to the boil to dissolve completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	9,2000
Glucose	50,0000
Potassium chloride	0,5500
Calcium chloride	0,1250
Magnesium sulphate	0,1250
Ferric chloride	0,0025
Manganese sulphate	0,0025
Bromocresol green	0,0220
Agar	15,0000

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Lactobacillus acidophilus*, *Saccharomyces cerevisiae*

References: Green and Gray (1950) Wallerstein Lab. Commun. 13: 357.

WL DIFFERENTIAL BROTH

A differential medium for the control of industrial fermentation, particularly the processing of beer.

Code Number:	WDB20500, WDB25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	5,5 (approx.) at 20 °C

Direction: Suspend 60 g in one litre of distilled water. Heat gently to dissolve the medium completely. Distribute into final containers and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	9,2000
Glucose	50,0000
Potassium chloride	0,5500
Calcium chloride	0,1250
Magnesium sulphate	0,1250
Ferric chloride	0,0025
Manganese sulphate	0,0025
Bromocresol green	0,0220
Cycloheximide	0,0040

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Lactobacillus acidophilus*

Negative control: *Saccharomyces cerevisiae*

References: Green and Gray (1950) Wallerstein Lab. Commun. 13: 357.

WL NUTRIENT BROTH

A liquid medium for the control of industrial fermentation, particularly the processing of beer.

Code Number:	WLB20500, WLB25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	5,5 (approx.) at 20 °C

Direction: Suspend 60 g in one litre of distilled water. Heat gently to dissolve the medium completely. Distribute into final containers and sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	9,2000
Glucose	50,0000
Potassium chloride	0,5500
Calcium chloride	0,1250
Magnesium sulphate	0,1250
Ferric chloride	0,0025
Manganese sulphate	0,0025
Bromocresol green	0,0220

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Lactobacillus acidophilus*, *Saccharomyces cerevisiae*

References: Green and Gray (1950) Wallerstein Lab. Commun. 13: 357.

WORT AGAR BASE

A solid medium for the cultivation and enumeration of yeast.

Code Number:	WOA20500, WOA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	4,8 (approx.) at 20 °C

Direction: Suspend 49 g in one litre of distilled water add 2,5 ml Glycerol Supplement (GLC80100) and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool quickly.

Warning!

Prolonged heating diminish the gel strength of the agar.

Formula in g/l

Peptones	1,00
Malt extract	15,00
Maltose	12,75
Dextrin	2,75
Ammonium chloride	1,00
Buffers	1,50
Agar	15,00

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Saccharomyces cerevisiae*

Negative control: *Escherichia coli*

References: Parfitt (1933) J. Dairy Sci. 16: 141.

WORT BROTH BASE

An enrichment broth medium for the cultivation of yeast.

Code Number:	WOB20500, WOB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	4,8 (approx.) at 20 °C

Direction: Suspend 34 g in one litre of distilled water. Add 2,5 ml Glycerol Supplement (GLC80100) and heat gently to dissolve the medium completely. Dispense into final containers. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	1,00
Malt extract	15,00
Maltose	12,75
Dextrin	2,75
Ammonium chloride	1,00
Buffers	1,50

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Saccharomyces cerevisiae*

Negative control: *Escherichia coli*

References: Parfitt (1933) J. Dairy Sci. 16: 141.

XLD AGAR, PH EUR - USP

A selective medium for the isolation and differentiation of gram-negative micro-organisms, especially *Shigella* species according to PH EUR (Agar Medium K - Xylose Lysine Deoxycholate Agar - Harmonised).

Code Number:	XLD20500, XLD25000
Colour:	Pinkish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 57 g in one litre of distilled water and heat with frequent agitation until the medium boils. Mix well and pour plates immediately.

Warning!

The medium is heat sensitive.

No further sterilisation is necessary or desirable.

Formula in g/l

Yeast extract	3,00
Xylose	3,50
Lactose monohydrate	7,50
Sucrose	7,50
L-Lysine	5,00
Sodium desoxycholate	2,50
Sodium chloride	5,00
Sodium thiosulphate	6,80
Ferric ammonium citrate	0,80
Phenol red	0,08
Agar	15,30

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Shigella flexneri*, *Salmonella enteritidis*

Negative control: *Enterococcus faecalis*

References: European Pharmacopoeia 5.6

YEAST EXTRACT AGAR

A nutrient medium for the plate count of organisms in water and dairy products.

Code Number:	YEA20500, YEA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,2 (approx.) at 20 °C

Direction: Suspend 25 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	7
Yeast extract	3
Agar	15

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Escherichia coli*, *Staphylococcus aureus*

References: Windle Taylor (1958) The examination of Waters and Water Supplies, 7th ed., 394.

YEAST MALT AGAR

A solid medium for the cultivation of fungi.

Code Number:	YMA20500, YMA25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,2 (approx.) at 20 °C

Direction: Suspend 37 g in one litre of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	6
Yeast extract	3
Malt extract	3
Dextrose	10
Agar	15

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Candida albicans*

References: Atlas and Park (1993) Handbook of Micr. Media

YEAST MALT BROTH

A liquid medium for the cultivation of fungi.

Code Number:	YMB20500, YMB25000
Colour:	Yellowish
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	6,2 (approx.) at 20 °C

Direction: Suspend 23 g in one litre of distilled water and heat gently to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes.

Formula in g/l

Peptones	7
Yeast extract	3
Malt extract	3
Dextrose	10

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at room temperature.

Quality Control:

Positive control: *Candida albicans*

References: Atlas and Park (1993) Handbook of Micr. Media

YERSINIA AGAR BASE

A selective (when supplemented with CIN inhibitor) and differential medium for the isolation of *Yersinia enterocolitica*.

Code Number:	YAB20500, YAB25000
Colour:	Beige
Appearance:	Homogeneous hygroscopic powder
pH before autoclaving:	7,4 (approx.) at 20 °C

Direction: Suspend 30 g in 500 ml of distilled water and boil to dissolve the medium completely. Sterilise by autoclaving at 121 °C for 15 minutes. Cool to 50 °C and aseptically add the contents of one vial of Yersinia Selective Supplement (CIN80004) reconstituted with 4 ml of sterile distilled water. Mix well before pouring.

Formula in g/l

Peptones	24,000
Mannitol	20,000
Sodium chloride	1,000
Sodium pyruvate	2,000
Sodium deoxycholate	0,500
Magnesium sulphate	0,010
Neutral red	0,020
Crystal violet	0,001
Agar	12,500

Storage conditions: Store the dehydrated medium tightly closed in a dry place at room temperature and use before the expiry date on the label. Store the prepared medium protected from light at 2-8 °C.

Quality Control:

Positive control: *Yersinia enterocolitica*

Negative control: *Escherichia coli*

References: Schiemann (1979) Can. J. Microbiol. 25: 1928.

