ISO Sensitivity Test Agar

Code: KM1204

A semi-defined nutritionally rich sensitivity medium. It is composed of specially selected peptones with a small amount of glucose, solidified with a very pure agar and is free from antagonists.

Typical formula	**(g/l)**
Peptones	12.0
Glucose	2.0
Sodium Chloride	2.8
Disodium hydrogenphosphate	0.4
Sodium glycerophosphate	0.22
Sodium gluconate	0.1
Sodium acetate	1.0
Uridine	0.3
Starch	1.0
Chemical mix	0.078
Agar	13.0

pH: 7.4 ± 0.2

Directions
Weigh 31.5 grams of powder and add to 1 litre of deionised water (conductivity <10ms). Swirl to mix then sterilise by autoclaving at 121°C for 15 minutes. If required cool to 55°C and add 5-7% sterile defibrinated blood or 6% defibrinated blood according to preference. Mix well then pour plates.

Q.C. organisms: *S. aureus* NCTC 6571, *E. coli* NCTC 10418 (antibiotic sensitivity zones)

Storage: Plates up to 7 days at 2-8ºC in the dark.

Inoculation method: Stokes method, surface inoculum for semi confluent growth, or breakpoint technique.

Incubation: 37ºC aerobically for 18-24 hours.

References
Ericsson, H. M., Sherris, J. C. 1971. Antibiotic sensitivity testing. Report of an international collaborative study. Acta. Pathol. Microbiol. Scand. Suppl. 217: 1-90.
Garrod, L. P. and Waterworth, P. M. 1969. Effect of medium composition on the apparent sensitivity of Pseudomonas aeruginosa to gentamicin. J. Clin. Pathol. 22: 534-538.

Helicobacter Pylori Medium

A selective medium for the isolation of Helicobacter Pylori, the causative agent of chronic gastritis.

Code: KM1035

Typical formula	**(g/l)**
Tryptone	5.0
Sodium chloride	5.0
Beef Extract	10.0
Meat Peptone	5.0
Charcoal	4.0
Acid Hydrolysed Casein	3.0
Ferrous sulphate	0.25
Sodium pyruvate	0.25
Sodium carbonate	0.4
Agar	12.0

pH: 7.4 ± 0.2

Directions
Suspend 45.0 grams of powder and disperse in 1 litre of deionised water. Soak for 10 minutes, swirl to mix and sterilise at 121ºC for 15 minutes. Cool to 47ºC and add 100ml of Horse Serum, and 2 vials of VCA supplement. Mix well and pour, continue to mix whilst pouring to keep the charcoal in suspension.

Description
Helicobacter Pylori medium is a modification of CCDA Medium for the isolation of Campylobacter spp. it incorporates a rich agar base supplemented with horse serum to promote optimum growth, and Vancomycin, Cefsulodin, and Amphoteracin as selective agents.

Q.C. organisms: *Helicobacter Pylori, E. Coli* (inhibition)

Storage: Plates up to 7 days at 2-8ºC the dark.

Innoculation: Surface streaking for single colonies.

Incubation: 37 ºC for 72 hours.

References
King, S. and Metzger, W. I. 1967. A new medium for the isolation of Salmonella and Shigella species. Bact. Proc. Am. Soc. Microbiol. 77. King, S. and Metzger, W. I. 1968. A new plating medium for the isolation of enteric pathogens. Hektoen Enteric Agar, Appl. Microbiol., 16(4), 577.

ISOPROPYL-BETA-D-THIOGALACTOPYRANOSIDE (IPTG)

An enzyme Inducer for beta-Galactosidase

Code: IP1-8000

M.F.: $C_9H_{18}O_5S$
M.W.:238.30 g/mol
CAS RN.: (367-93-1)

Appearance	white to slightly off-white crystalline powder
Solution (1% in water)	colourless, clear
Water content	< 0.5%
Assay (HPLC)	≥ 99.0%
Purity (HPLC)	> 99.0% area%
Dioxane content (GC)	< 5 ppm
Specific rotation (c=1 in water)	$(a)_D$ - 31.5º +/- 1.0º $(a)_{546}$ - 37.5º +/- 1.0º
IR_	consistent with assigned structure_

Shelf Life: 2 years if stored at the correct temperature.

Store in Deep freeze (below -15ºC) / Protect from light.

This product is synthetically produced by an ISO 9001 & GMP certified company.

INDOLE NITRATE BROTH

A liquid medium for nitrate and indole tests

Code: KM6452

Typical formula	**(g/l)**
Tryptone	20.0
Disodium Phosphate	2.0
Glucose	1.0
Potassium Nitrate	1.0
Agar	1.0

pH 7.2 +/- 0.2

Directions
Suspend 25g in 1000 ml of cold distilled water; heat to boiling, distribute and sterilise at 121°C for 15 minutes.

Description
Indole Nitrate Broth is a medium used to test the ability of the organisms to produce indole and to reduce nitrates to nitrites. The medium allows the growth of aerobes, microacrophiles and anaerobes. The use of 0.1 % agar reduces the diffusion of oxygen into the medium and delays the dispersion of the reducing compounds and carbon dioxide, allowing the growth of the anaerobes. The peptone used in Indole Nitrate Broth affords an amount of tryptophan necessary to the development of the indole production reaction. The indole forming in tryptophan catabolism reacts with p-dimethylamino-benzaldehyde of Kovacs' reagent in an acidified medium, giving a red colour. The nitrites forming in the medium by reduction of potassium nitrate, in acidic medium, react with α-naphthol giving a red colour. The positive test is given by the development of a pink-red colour in the medium. If no colour change is observed, it means that no reduction of nitrates has occurred and that nitrites have been further reduced to ammonia or nitrogen. The presence of nitrates not reduced by the organisms can be revealed by addition of zinc to the broth, after carrying out the nitrate test. Zinc, when added to the medium, reduces nitrates to nitrites and a development of red colour is produced by reaction of nitrites with α-naphthol.

Quality assurance (37°C-3 days)

Indole positive, nitrate positive control
E.coli ATCC 25922

Indole negative, nitrate negative control
A.calcoaceticus ATCC 19606

Storage
Dehydrated medium: 15-30°C
User prepared tubes: 7 days at 2-8°C

References
APHA (1963) - Diagnostic Procedures and Reagents, 4th edition.
Cowan & Steel's Manual for the Identification of Medical Bacteria, 2nd edition, revised by S.T., Cowan. Cambridge: University Press. (1974).

Iron Sulphite Agar

A medium for the detection and identification of sulphite reducing clostridia.

Code: KM4079

Typical formula	**(g/l)**
Tryptone	10.0
Sodium Sulphite	0.5
Ferric Citrate	0.5
Agar	13.0

pH 7.1 ± 0.2

Directions
Suspend 24g of powder and add to 1 litre of deionised water (conductivity <10ms). Swirl to mix. Heat to boiling stirring frequently, distribute into tubes or flasks and sterilise at 121°C for 15 minutes. Mix well and pour into sterile plates or leave in tubes.