

Technical Data Sheet

ReadyPlate™55 KIT

Lactose TTC Agar

Ordering number: 1.46760.0150

For the detection and enumeration of coliform and E.coli in water and other filterable liquids by the membrane filtration technique.

General

This Kit contains TGE Agar and EZ Pak Membrane Filter that complies according to ISO 7704. It is released through an ISO 17025 accredited lab in compliance of the specifications stated in ISO 11133.

The KIT consist of 150pcs **ReadyPlate™55** Lactose TTC Agar (146759) and 150 pieces of **EZ PAK®** white gridded cellulose esters membrane filters, 0.45µm pore size.



Mode of Action

Degradation of lactose to acid is indicated by the pH indicator bromothymol blue, which changes the colour of the medium under the membrane to yellow. Selectivity is achieved by the use of sodium heptadecylsulfate (Tergitol®7) and 2,3,5-Triphenyltetrazoliumchloride (TTC) to inhibit most Gram-positive bacteria. TTC is also part of the differential system. The reduction of TTC by lactose-negative bacteria produces dark red colonies. Lactose-positive E. coli and coliform bacteria reduce TTC weakly; hence their colonies are yellow-orange.

Typical Composition

ReadyPlate™55 Lactose TTC Agar	
Peptone	10 g/l
Yeast Extract	6 g/l
Meat Extract	5 g/l
Lactose	20 g/l
Bromothymol Blue	50 mg/l
Sodium Heptadecyl Sulfate (Tergitol®) 7	0.1 g/l
2,3,5-Triphenyl Tetrazolium Chloride (TTC)	25 mg/
Agar	12 g/l

The appearance of the medium is clear and blue-green. The pH value is in the range of 7.0-7.4. The medium can be adjusted and/or supplemented according to the performance criteria required.

The KIT contains 150 pieces of EZ PAK® white gridded cellulose esters membrane filters, 0.45µm pore size.

Application and Interpretation

Depend on the purpose for which the medium is used.

Each plate is provided with a label including a data matrix code for paperless plate identification. The code consists of a two-dimensional 20-digit serial number, which harbors the following information:

Digits 1-3: here code 923 (corresponds to article 146760); digits 4-9: lot number; digits 10-14: batch specific individual number; digits 15-20: expiration date (YY/MM/DD).

Please check each agar plate before using it on sterility and pay attention to aseptic handling in order to avoid false positive results.

Membrane filtration of water samples: Place the inoculated membrane filters on the surface of the plates. Incubate the inoculated plates under aerobic conditions at 21 ± 3 h (possibly also up to 44 ± 4 h) at 36 ± 2 °C. Lactose-positive bacteria tend to turn yellow under the membrane and are counted.

For additional identification of suspect colonies, they are subcultured on a non-selective agar (e.g. Tryptic Soy Agar) and then subjected to an oxidase test. Oxidase-negative microorganisms are counted as coliform bacteria. The suspect colonies are also subcultured in tryptophan broth and the indolyl formation capacity is tested. All oxidase-negative and indolyl-positive microorganisms are counted as *E. coli*.



Storage and Shelf Life

The product can be used for sampling until the expiry date if stored upright, protected from light and properly sealed at +15 °C to +25 °C.

Condensation can be prevented by avoiding quick temperature shifts and mechanical stress.

The testing procedures as described on the CoA can be started up to the expiry date printed on the label.

Disposal

Please mind the respective regulations for the disposal of used culture medium (e.g. autoclave for 20 min at 121 °C, disinfect, incinerate etc.).

Quality Control

Function	Control strains	Incubation	Reference medium	Method of control	Expected results
Productivity	E.coli ATCC 25922 WDCM 0013	21±3°C at 36±2 H	Media batch Lactose TTC validated	Membrane Filtration - Quantitative	70-140%, Yellow colour in the medium under the membrane
	E.coli ATCC 8579 WDCM 0012				
	C. freundii ATCC 43864 WDCM 00006				
Specificity	P. aeruginosa ATCC 27853 WDCM 00025			Qualitative	Red colonies, blue color in the medium

Please refer to the actual batch related Certificate of Analysis.

A recovery rate of 70 % is equivalent to a productivity value of 0.7.

Literature

EU GMP Medicinal Products for Human and Veterinary use (2008): Annex1 Manufacture of Sterile Medicinal Products.

Guidance for Industry (2004): Sterile Drug Products Produced by Aseptic Processing - Current Good Manufacturing Practice.

Official Journal of the European Community L 330/32 (1998): Directive 98/83/EC of the Council of 03 November 1998 on the quality of water intended for human consumption.

PDA Technical Report No. 13 (2014 Revised): Fundamentals of an Environmental Monitoring Program.

ISO International Standardisation Organisation. Microbiology of food, animal feed and water – Preparation, production, storage and performance testing of culture media. EN ISO 11133:2014.



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Ordering Information

Product	Cat. No.	Pack size	Other packaging Size
ReadyPlate™ 55 KIT Lactose TTC Agar	1.46760.0150	KIT	
ReadyPlate™ 55 Lactose TTC Agar	1.46759.0020	20x55mm	
Lactose TTC Agar + Tergitol® 7	1.46185.0020	20 x 90mm	120 x 90mm
ReadyPlate™ 55 CCA ISO 9308	1.46757.0020	20x55mm	200x 55mm
ReadyPlate™ 55 KIT CCA ISO 9308	146758.0150	KIT	
ReadyPlate™ CHROM CCA ISO 9308	1.46689.0020	20 x 90mm	
ReadyPlate™ TSA ISO, FDA-BAM, EP+USP	1.46431.0020	20 x 90mm	100 x 90mm
GranuCult™ Tryptic Soy Agar EP,USP,JP,ISO FDA-BAM	1.05458.0500	500 g	5Kg
Chromocult® Coliform Agar	1.10426.0500	500 g	
KOVACS' indole reagent	1.09293.0100	100 ml	
Bactident® KOVACS' Indole Reagent	1.11350.0001	30 ml	
Bactident® Oxidase	1.13300.0001	50 strips	
EZ-PAK® Filters MCE 0.45µm 47mm white gridded	EZHAWG474	4 x 150 pcs	

* The KIT Contains 150 x 55mm Media and 1 box x150 membrane Filters.

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 For Technical Service, please visit:
www.merckmillipore.com/techservice



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