

Extended Spectrum β -Lactamase (ESBL) Detection Chrom Agar Plate (M1140)

Recommended For the detection of Extended Spectrum β -Lactamase-producing organisms.

Composition

Ingredients	g/ L
Peptone mixture -----	12.00
Chromogenic mixture -----	4.00
Sodium chloride -----	5.00
Buffer mix -----	4.00
Agar -----	15.00

Description

ESBL Detection Chrom Agar is chromogenic screening medium for the selective isolation of ESBL producing organisms. It contains peptone mix which serves as the carbon and nitrogen sources, long chain amino acids, vitamins and other growth nutrients. Chromogenic mixture is used to differentiate the ESBL producing organisms on the basis of colour.

ESBL producing E.coli grow as either pink or purple colonies.

ESBL producing members of the **KESC** group produce bluish green colonies; Proteus, Morganella and Providencia do not utilize any chromogen resulting in colourless to light brown colonies. This medium can be inoculated with liquid suspension equivalent to 0.5 McFarland turbidity, prepared from rectal screening swabs, faecal samples or from isolated colony. Isolated colonies should not be directly plated on to this medium, because the high level inoculum may cause false positive results. Further confirmation using biochemical identification tests is recommended.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines. After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use only. For professional use only. Follow good microbiological lab practices while handling specimens and culture.

Limitations

1. Some species may show poor growth due to nutritional variations.
2. Slight colour variation may be observed depending upon strains.
3. Isolated colonies should not be directly plated on to this medium, because the high level inoculum may cause false positive results.
4. Further confirmation using biochemical identification tests is recommended.
5. The surface of the medium should be dry when inoculated.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality control**Physical/Chemical control**

Color : Cream to yellow pH: 6.60-7.00

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Microbiological activity

Organisms	Inoculum CFU/ml	Growth
Escherichia coli NCTC 13351	50-100	Good growth, pink-purple colonies
Klebsiella pneumonia ATCC 700603	50-100	Good growth, bluish green colonies
Staphylococcus aureus ATCC 25923	$\geq 10^4$	inhibited
Candida albicans ATCC 10231	$\geq 10^4$	inhibited
Escherichia coli ATCC 25922	$\geq 10^4$	inhibited

Storage and Shelf Life

Store between 2-8°C. Use before expiry date on the label. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques.

Reference

1. Journal of Clinical Microbiology, February 2007, Page 501-505, Vol. 45, No. 2
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition
3. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock, D.W. (2015), Manual of Clinical Microbiology, 11th Edition. Vol. 1.