

TM 2117 – CHROMOGENIC COLISTIN RESISTANT AGAR BASE

INTENDED USE

Recommended for isolation and differentiation of gram negative colistin resistant microorganisms.

PRODUCT SUMMARY AND EXPLANATION

Chromogenic Colistin Resistant Agar Base is a chromogenic medium designed for the detection and differentiation of Colistin resistant species of Enterobacteriaceae, *E.coli*, *K pneumoniae* and *Salmonella* species. Colistin is considered as last choice of antibiotic because, it has side effects, including nephrotoxicity and ototoxicity, and it is broadly active against Gram negative bacteria. But with the increasing prevalence of infections caused by MDR gram-negative bacteria, colistin has reemerged as therapy agent. Plasmid-mediated colistin (COL) resistance due to the mcr-1 pEtN gene was identified in China. Recent clinical data also shows the use of colistin is acceptably safe if certain precautions are taken.

COMPOSITION

Ingredients	Gms / Ltr
Casein Acid Hydrolysate	20.000
Agar	17.000
Chromogenic mixture	1.500

PRINCIPLE

Casein Acid Hydrolysate provide nitrogenous and carbonaceous compounds, long chain amino acids, sulphur and other essential nutrients. Chromogenic mixture incorporated helps in colour differentiation. The chromogenic substrates are specifically cleaved by enzyme β -D-galactosidase produced by colistin resistant *E.coli* resulting in pink to purple coloured colonies. Whereas colistin resistant *K. pneumoniae* cleaves the other chromogenic substrate producing metallic blue coloured colonies. *Pseudomonas* species produce colorless colonies may be with light pigment. Presence of amino acids like phenylalanine and tryptophan from peptones helps for detection of tryptophan deaminase activity, indicating the presence of *Proteus* species, *Morganella* species and *Providencia* species by appearing brown. The medium is intended to be used as a screening medium. Isolates should be tested further for colistin susceptibility following CLSI guidelines.

INSTRUCTION FOR USE

- Dissolve 38.50 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi (121°C) for 15 minutes.
- Cool to 45-50°C. Aseptically add rehydrated content of 1 vial of Chromogenic Colistin Resistant Selective Supplement. 5. Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder
Appearance of prepared medium	: Light amber coloured clear to slight opalescent gel forms in Petri plates
pH (at 25°C)	: 7.3 ± 0.2

INTERPRETATION



Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Color of the colony	Incubation Temperature	Incubation Period
<i>Colistin Resistant E.coli</i>	-	50-100	luxuriant	≥ 50%	pink to purple	35-37°C	18 -24 Hours
<i>Colistin Resistant Klebsiella pneumoniae</i>	-	50-100	luxuriant	≥ 50%	metallic blue	35-37°C	18 -24 Hours
<i>Colistin Resistant Pseudomonas aeruginosa</i>	-	50-100	luxuriant	≥ 50%	colourless, greenish pigment may be observed	35-37°C	18 -24 Hours
<i>Colistin Sensitive Gram negative bacteria</i>	-	≥ 1000	inhibited	0%	-	35-37°C	18 -24 hours
<i>Staphylococcus aureus subsp.</i>	25923	≥ 1000	inhibited	0%	-	35-37°C	18 -24 Hours

PACKAGING:

In pack size of 500gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 2-8°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

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4. Lim LM, Ly N, Anderson D, Yang JC, Macander L, Jarkowski A, Forrest A, Bulitta JB, Tsuji BT.2010. Resurgence of colistin: a review of resistance, toxicity, pharmacodynamics, and dosing. Pharmacotherapy 30:1279–1291. doi:10.1592/phco.30.12.1279.



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 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 LOT/ B. NO. Lot / Batch Number	 QR Code	 Consults Instructions for Use	 Best Before

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**
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