

## CM 22,179 – 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  $\beta$ -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
Colistin Resistant E.coli	-	50-100	luxuriant	≥ 50%	pink to purple	35-37°C	18 -24 Hours
Colistin Resistant Klebsiella pneumoniae	-	50-100	luxuriant	≥ 50%	metallic blue	35-37°C	18 -24 Hours
Colistin Resistant Pseudomonas aeruginosa	-	50-100	luxuriant	≥ 50%	colourless, greenish pigment may be observed	35-37°C	18 -24 Hours
Colistin Sensitive Gram negative bacteria	-	≥ 1000	inhibited	0%	-	35-37°C	18 -24 hours
Staphylococcus aureus subsp.	25923	≥ 1000	inhibited	0%	-	35-37°C	18 -24 Hours

**PACKAGING:**

Inpacksizeof500gm 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**




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

**REFERENCES**

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- 2 Liu YY, Wang Y, Walsh TR, Yi LX, Zhang Retal. Emergence of plasmid-mediated colistin resistance mechanism MCR-1 in animals and human beings in China: a microbiological and molecular biological study. Lancet Infect Dis 2016;16
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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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 <b>GMP</b> Good Manufacturing Practices Certified	 <b>IVD</b> For In Vitro Diagnostic Use	 <b>QTY.</b> Quantity	 <b>REF</b> Catalogue Number	 <b>Manufacturer</b>
 <b>Temperature Unit</b>	 <b>LOT/ B. NO.</b> Lot / Batch Number	 <b>QR Code</b>	 <b>Consults Instructions for Use</b>	 <b>Best Before</b>

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

\*For Lab Use Only

