CHROMagar™ COL-*APSE*

Chromogenic medium for detection of Colistin resistant Gram-negative bacteria.

Instructions For Use
For Research Use Only (RUO).
Not for use in diagnostic procedures.

ENGLISH

Instructions For Use

REFERENCES

Pack Size		Ordering References		Base (B)		Supplement (S)
5000 mL	= 250 Tests of 20 mL	CO262	=	CO262(B) Weight: 212.5 g	+	CO262(S) Volume: 10 mL

INTENDED USE

CHROMagar™ COL-*APSE* is a selective and differential chromogenic culture medium, intended for use in the qualitative direct detection of gastrointestinal colonization with colistin-resistant Gram-negative bacteria (COL-R) to aid in the prevention and control of COL-R in healthcare settings. The test is performed with rectal swab, perineal swabs and stools samples from patients to screen for COL-R colonization. Results can be interpreted after 18-24 h of aerobic incubation at 35-37 °C.

The medium can also be used as an early warning indicator for diagnostic tests of infections to signal the possible presence of COL-R bacteria. This use does not replace the institution's protocols. CHROMagar™ COL-*APSE* is not intended to diagnose COL-R infection nor to guide nor monitor treatment for infections. A lack of growth or the absence of colonies on CHROMagar™ COL-*APSE* does not preclude the presence of COL-R. Further identification, susceptibility testing, and epidemiological typing is needed on suspect colonies.

CHROMagar™ COL-*APSE* can also be used in the detection of COL-R in the analyses of food products for human consumption, animal feed, in livestock and in environmental samples.

COMPOSITION

The product is composed of a powder base (B) and a supplement (S).

Product =	Base (B)	+	Supplement (S)
Total	42.5 g/L		2 mL/L
Composition	Agar 15.0 Peptones 20.0 Salt 5.0 Chromogenic and selective mix 0.8 Growth factors 1.7		Growth factors mix
Aspect	Powder Form		Liquid Form
STORAGE	**15-30 °C**		**15-30 °C**
FINAL MEDIA pH	7.1 +/- 0.2		

Need some Technical Documents?

Available for download on www.CHROMagar.com

- Certificate of Analysis (CoA) --> One per Lot
- Material Safety Data Sheet (MSDS)

PREPARATION **(Calculation for 1 L)**

Step 1
Preparation of Base + S

- Disperse slowly 42.5 g of powder base in 1 L of purified water.
- Add 2 mL of CHROMagar™ COL-*APSE* supplement S into slurry.
- Stir until the agar is well thickened.
- Heat and bring to boiling (100 °C) while swirling or stirring regularly.

DO NOT HEAT TO MORE THAN 100 °C. DO NOT AUTOCLAVE AT 121 °C.

Warning 1: If using an autoclave, do so without pressure.

Advice 1: For the 100 °C heating step, mixture may also be brought to a boil in a microwave oven: after initial boiling, remove from oven, stir gently, then return to oven for short repeated bursts of heating until complete fusion of the agar grains has taken place (large bubbles replacing foam).

- Cool in a water bath to 45-50 °C, swirling or stirring gently to homogenize.

Advice 2: in case of product samples containing a high load of *Proteus*, Cefixime can be added after the previous step at 0.05 mg/L.

Step 2
Pouring

- Pour into sterile Petri dishes.
- Let it solidify and dry.

Storage

- Store in the dark before use.
- Prepared media plates can be kept for one day at room temperature.
- Plates can be stored for up to 1 month under refrigeration (2/8 °C) if properly prepared and protected from light and dehydration.

CHROMagar™ COL-*APSE*

SPECIMEN COLLECTION AND HANDLING

CHROMagar™ COL-*APSE* can be used with the following specimens: rectal, perineal and stool swab.

This medium can also be used in the food industry with food, animal feed, livestock and environmental samples.

Use of transport devices approved for collection of such specimens is recommended.

MATERIAL REQUIRED BUT NOT PROVIDED

Standard microbiological laboratory material for culture media preparation, control, streaking, incubation and waste disposal.

INOCULATION

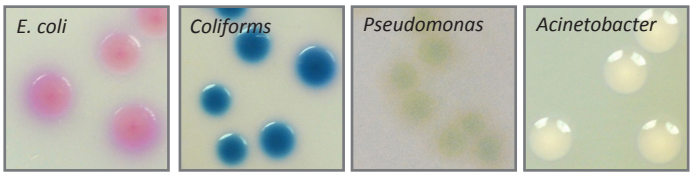
Related samples can be processed by direct streaking on the plate.

- If the agar plate has been refrigerated, allow to warm to room temperature before inoculation.
- Streak sample onto plate.
- Incubate in aerobic conditions at 35-37 °C for 18-24 hours.

INTERPRETATION

Microorganism	Typical colony appearance
COL-R *E. coli*	→ dark pink to reddish
COL-R Coliforms	→ metallic blue
COL-R *Pseudomonas*	→ translucent, +/- natural pigmentation cream to green
COL-R *Acinetobacter*	→ cream, opaque
Other COL-R Gram (-)	→ colourless, natural pigmentation
COL-S Gram (-) bacteria	→ inhibited
Gram (+) bacteria, yeasts	→ inhibited

Typical colony appearance



The pictures shown are not contractual.

PERFORMANCE

	Analytical data *	Clinical data **
		CHROMagar™ COL-*APSE*
Sensitivity	100 %	-
Specificity	81 %	-
NPV	-	100 %
PPV	-	83 %

* Data obtained after a 24 h incubation at 37 °C in aerobic conditions in the study «CHROMagar COL-*APSE*: a selective bacterial culture medium for the isolation and differentiation of colistinresistant Gram-negative pathogen». Abdul Momin *et al.*, 2017. *J. Med. Microbiol.*

** Data obtained after a 24 h incubation at 37 °C in aerobic conditions with 98 human stool samples in the study «Wide dissemination of colistin-resistant *Escherichia coli* with the mobile resistance gene mcr in healthy residents in Vietnam». Yamamoto *et al.*, 2018. *J. Antimicrob. Chemother.*

LIMITATIONS AND COMPLEMENTARY TESTS

- Species final identification may require additional testing such as biochemical tests.
- Resistance to colistin for *E. coli, Klebsiella, Enterobacter* and *Salmonella* can be confirmed by microdilution method.
- Some *Hafnia* can grow in mauve like *E. coli* but they can be identified with an additionnal test such as Indole test.

QUALITY CONTROL

Please perform Quality Control according to the use of the medium and the local QC regulations and norms.
Good preparation of the medium can be tested, isolating the following ATCC strains:

Microorganism	Typical colony appearance
MCR-1 *E. coli* NCTC 13846	→ dark pink to reddish
COL-S *E. coli* ATCC® 25922 (WDCM 00013)	→ mostly inhibited
S. marcescens ATCC® 13880	→ green-blue
E. faecalis ATCC® 29212 (WDCM 00087)	→ inhibited

WARNINGS AND PRECAUTIONS

- For Research Use Only (RUO). Not for use in diagnostic procedures.
- This laboratory product should be used only by trained personnel (healthcare professional, etc). Wear appropriate protective clothing, gloves and eye/face protection and handle appropriately with procedures and good laboratory practices.
- Use of the medium may be difficult for people who have problems recognising colours.
- For a good microbial detection, collection and transport of specimen should be well handled and adapted to the particular specimen according to good laboratory practices.
- Culture media should not be used as manufacturing material or components.
- Do not ingest or inhale the product.
- Do not use the product after the expiry date.
- Do not use the product if it show any evidence of contamination or any sign of deterioration.
- Do not use the product if the packaging is damaged.
- Any change or modification in the procedure may affect the results.
- Any change or modification of the required storage temperature may affect the performance of the product.
- Unappropriate storage may affect the shelf life of the product.
- Recap the bottles/vials tightly after each preparation and keep them in a low humidity environment, protected from moisture and light.
- Reading and interpretation should be performed using isolated colonies.
- Some precipitate may be observed in the agar but these do not affect the performance of the product.
- Interpretation of the test results should be made taking into consideration colonial and microscopic morphology and if necessary, the results of any other tests performed.
- Laboratory, chemical or biohazardous wastes must be handled and discarded in accordance with all local and national regulations.
- For hazard and precaution recommendations related to some chemical components in this medium, please refer to the pictogram(s) mentioned on the labels. The Safety Data Sheet (SDS) is available on www.chromagar.com

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DISPOSAL OF WASTE

After use, all plates and any other contaminated materials must be sterilized or disposed of by appropriate internal procedures and in accordance with local legislations. Plates can be destroyed by autoclaving at 121 °C for at least 20 minutes.

LITERATURE REFERENCES

Please contact DRG for further information.

IFU/LABEL INDEX

Catalogue reference


Consult instructions for use


Quantity of powder sufficient for X liters of media


Expiry date


Required storage temperature


Store away from humidity


Protect from light


Manufacturer

NT-EXT-101 USA V7.0 / 18-May-22

CHROMagar™
The Chromogenic Media Pioneer

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