
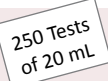


## REFERENCES

 Pack Size 5000 mL = 	Ordering Reference <b>LN762</b>	Base (B) LN762(B) Weight: 212 g	Supplement (S) LN762(S) Volume: 40 mL
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## MEDIUM PURPOSE

Chromogenic medium for detection and differentiation of Gram (+) bacteria resistant to linezolid

Gram (+) cocci pose a global threat to human health due to the emergence of resistance to antibiotics. Linezolid has a broad spectrum of activity against a variety of pathogenic Gram (+) microorganisms, such as MRSA, VRS, and VRE. However, the emergence of strains resistant to linezolid (LIN-R) and horizontal spread of resistance linked to the *cf*r gene, have been increasingly reported after approval of its clinical use.

Although the prevalence of linezolid resistance remains low, the emergence of LIN-R strains is still of great concern. Today, linezolid sensitivity in Gram (+) clinical specimens is primarily monitored by surveillance programs in Europe and in the United States. Clinical isolates for surveillance of LIN-R strains include swabs from the nose (for screening of *Staphylococcus*), perianal and rectal areas (for screening of *Enterococcus*).

CHROMagar™ LIN-R is a qualitative chromogenic screening medium for the detection, isolation and differentiation of strains of *Staphylococcus* and *Enterococcus* resistant to linezolid.

## COMPOSITION

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

Product	=	Base (B)	+	Supplement (S)
Total g/L		42.4 g/L		8 mL/L
Composition g/L		Agar 15.0 Peptones 20.0 Salt 7.0 Chromogenic and selective mix 0.4		Growth factors
Aspect		Powder Form		Liquid Form
STORAGE		15-30 °C		15-30 °C
FINAL MEDIA pH		6.9 +/- 0.2		

### Need some Technical Documents?

Available for download on [www.CHROMagar.com](http://www.CHROMagar.com)

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

## PREPARATION (Calculation for 1 L)

### Step 1

Base + supplement

- Disperse slowly 42.4 g of powder base in 1 L of purified water.
  - Add 8 mL of supplement into slurry.
  - Stir until agar is well thickened.
  - Autoclave at 110 °C during 5 min.
- DO NOT AUTOCLAVE AT 121 °C. DO NOT HEAT LONGER THAN 5 MIN.

### Step 2

Pouring

- Cool at 45/50 °C keeping on stirring.
- Pour medium 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™ LIN-R

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

## SPECIMEN COLLECTION AND HANDLING

CHROMagar™ LIN-R can be used with the following specimens: Stools and nasal, rectal and perianal swabs.

Sampling and transport equipment must be used in accordance with the recommendations of their suppliers for the conservation of samples.

## MATERIAL REQUIRED BUT NOT PROVIDED

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

## INOCULATION

Related samples are inoculated by direct streaking on the plate.

- If the agar plate has been refrigerated, allow to warm at room temperature before inoculation.
- Streak sample onto plate.
- Incubate in aerobic conditions at 35-37 °C for 36-48 hours.

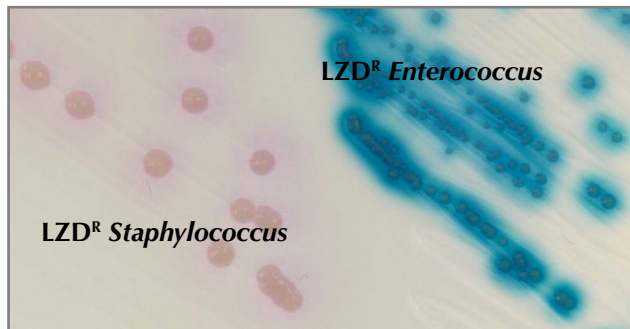
## INTERPRETATION

Qualitative reading and interpretation of the petri dishes

Microorganism	Typical colony appearance
LZD <sup>R</sup> <i>S. aureus</i>	→ pink
LZD <sup>R</sup> <i>S. epidermidis</i>	→ pink
LZD <sup>R</sup> <i>Enterococcus</i>	→ steel blue
LZD <sup>S</sup> Gram (+) bacteria	→ limited growth or inhibited
Gram (-) bacteria and yeasts	→ inhibited

LZD<sup>R</sup>: Linezolid resistant, LZD<sup>S</sup>: Linezolid sensitive

### Typical colony appearance



The pictures shown are not contractual.

## PERFORMANCE

In the following study, 134 pure strains (*Enterococcus* spp., *S. aureus*, *S. epidermidis*, etc.) were tested and read after 24-48 h incubation at 35-37 °C.

	CHROMagar™ LIN-R
Sensitivity	99 % *
Specificity	100 % *

\* Data obtained from the study «Excellent performance of CHROMagar™ LIN-R to selectively screen for linezolid-resistant *enterococci* and *staphylococci*» F. Layer et al. Diagn. Microb. Infect. Dis. 2021

## LIMITATIONS AND COMPLEMENTARY TESTS

- The final identification must be confirmed by biochemical tests or by mass spectrophotometry (eg. MALDI-TOF). They can be done directly from the suspicious colonies observed on the medium.
- In heavily inoculated samples, LZD<sup>S</sup> bacteria may slightly grow.
- Resistance to Linezolid for Gram (+) Bacteria must be confirmed.

## 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
<i>S. epidermidis</i> LZD <sup>R</sup> NCTC 13924	→ pink with pink halo
<i>E. faecalis</i> LZD <sup>R</sup> NCTC 14360	→ steel blue with blue halo
<i>S. aureus</i> ATCC® 25923	→ inhibited
<i>E. faecalis</i> ATCC® 29212	→ inhibited
<i>E. coli</i> ATCC® 8739	→ 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.
- 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 shows any evidence of contamination or any sign of deterioration (compacted powder, color change, ...).
- Do not use the product if the packaging is damaged.
- Any change or modification in the production 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 tightly after each preparation and keep them in a low humidity environment, protected from moisture and light.
- Do not re-use the culture medium poured into a petri dish after a first use.
- After opening the bottles and with an appropriate conservation, open bottles can be used under the same conditions until each product's expiry date.
- Reading and interpretation should be performed using isolated colonies.
- 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](http://www.chromagar.com)

- Any incident or complaint related to the environment must be declared to the manufacturer at the following email address: chromagar@chromagar.com
- Any serious incident occurring in connection with the environment must be declared to the competent authorities and to the manufacturer at the following email address: chromagar@chromagar.com

## 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 refer to our website page «Publications» for scientific publications about this particular product.

Web link: <http://www.chromagar.com/publication.php>

## 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

## REVISION HISTORY

This is version V1.1 of this document

NT-EXT-120 USA V1.1 / 06-May-24

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