

## TM 2103 - GUM LISTERIA MEDIUM

### INTENDED USE

For the isolation of *Listeria monocytogenes* from clinical and non-clinical specimens.

### PRODUCT SUMMARY AND EXPLANATION

Many media with agar have been developed to isolate and cultivate *Listeria monocytogenes*. But when the colonies are observed by special optical illumination, due to opaqueness of agar there is interference in the colour and characteristics of the colonies. Hence Martin et al experimented with various formulations and found replacing the agar with self-gelling gellan gum resulted in the formation of a transparent medium. This helped in colonial visualization and identification of *Listeria* using Henrys Oblique Light System. The Henrys oblique light system consists of a 6-volt lamp projected onto a concave mirror to the underside of the stage of a stereomicroscope at 45° angle, which provides the transmitted oblique light.

### COMPOSITION

Ingredients	Gms / Ltr
Casein enzymic hydrolysate	5.700
Papaic digest of soyabean meal	1.000
Dextrose	0.830
Sodium chloride	1.700
Dipotassium phosphate	0.830
Magnesium chloride	0.330
Nalidixic acid	0.050
Gellan gum	8.000

### PRINCIPLE

The medium contains casein enzymic hydrolysate and papaic digest of soyabean meal, which act as the nitrogen and carbon source. Dextrose is an energy source. Sodium chloride and magnesium chloride salt provide essential ions. Dipotassium phosphate provides buffering to the medium. Nalidixic acid inhibits gram-negative bacteria. Gellan gum, a solidifying agent provides more transparency to the medium than agar.

### INSTRUCTION FOR USE

- Dissolve 18.44 grams in 1000 ml distilled water.
- Heat to boiling with frequent agitation to dissolve the medium.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- 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** : Pale to light yellow coloured, opalescent gel forms in Petri plates.  
**pH (at 25°C)** : 7.2±0.2

### INTERPRETATION

Cultural characteristics observed after an incubation.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
<i>Escherichia coli</i>	25922	50-100	None-poor	0=10%	35 - 37°C	18- 24 Hours
<i>Listeria monocytogenes</i>	19112	50-100	Good	40-50%	35 - 37°C	18- 24 Hours

**PACKAGING:**

In pack size of 500 gm bottles.

**STORAGE**

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°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**

1. Martin R. S., Sumarah R. K. and MacDonald M. A., 1984, Clin. Invest. Med., 7:233.
2. Shungu D., Valiant M., Tutlane V., Weisberg E., Wessberger B., Koupal L., Gadebusch H. and Stapley E, 1983, Appl. Env. Microbiol., 46:840.
3. Henry, 1933, J. Infect. Dis., 52:374.

 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative	 CE European Conformity	 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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