



## Broth Medium R (Lactose monohydrate sulphite Medium)

M1287B

Lactose monohydrate sulphite Medium is recommended for detection and enumeration of *Clostridium* in pharmaceutical products as per British Pharmacopoeia, 2009.

### Composition\*\*

Ingredients	Gms / Litre
Pancreatic digest of casein	5.000
Yeast extract	2.500
Sodium chloride	2.500
Lactose monohydrate	10.000
Cystine hydrochloride	0.300
Final pH ( at 25°C)	7.1±0.1

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 19.8 grams of dehydrated medium in 1000 ml purified/ distilled water. Heat if necessary to dissolve in tubes containing inverted Durham's tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and add filter-sterilized solution of 1.2% sodium metabisulphite R (0.5ml) and 1.0% ferric ammonium citrate (0.5ml) to each tube.

### Principle And Interpretation

Lactose Monohydrate Sulphite Medium base is prepared as per the British Pharmacopoeia (1) and is cited as Medium R. This medium is useful in semi-quantitative test for presence of *Clostridium perfringens* in pharmaceutical products where the level of this species is a criterion of quality.

The medium contains pancreatic digest of casein and yeast extract, which provides essential nitrogenous compounds for *Clostridia*. Lactose monohydrate serves as carbon or fermentable carbohydrate source. Cystine hydrochloride rich in sulphur content provides reduced conditions. Sodium metabisulphite and ferric ammonium citrate act as indicators of sulphite reduction, indicated by blackening of the medium.

### Quality Control

#### Appearance

Cream to yellow homogeneous free flowing powder

#### Colour and Clarity of prepared medium

Light amber coloured clear solution without any precipitate

#### pH

7.00-7.20

#### Growth Promotion Test

Growth Promotion is carried out in accordance with British pharmacopoeia

#### Cultural Response

M1287B: Cultural characteristics after an incubation at 46±0.5°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth	H2S	Gas
<b>Cultural Response</b> <i>Clostridium perfringens</i> ATCC 13124	50-100	luxuriant	Positive reaction, blackening of medium	Positive reaction

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<i>Clostridium sporogenes</i> <i>ATCC 19404</i>	50-100	luxuriant	negative reaction no blackening of medium	positive reaction
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### Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label.

### Reference

1. British Pharmacopoeia, 2009, The Stationery office British Pharmacopoeia.

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