



Reinforced Medium for Clostridia

RDM-RMC-01

Principle

Reinforced medium for clostridia is used for enumerating and cultivating *Clostridia*. It is also recommended by USP, IP and EP for microbial limit testing of pharmaceutical products and raw material used in pharmaceutical industries. Media is composed of meat extract (equivalent to beef extract), peptone, yeast extract, soluble starch, glucose monohydrate, cysteine hydrochloride, sodium chloride, sodium acetate and small quantity of agar. Meat extract, peptone, yeast extract, starch, and cysteine hydrochloride provide nutrients and co-factors required for growth of *Clostridia*. In addition to that cysteine hydrochloride acts as reducing agent and soluble starch absorb toxic metabolites from the medium. Glucose monohydrate is included in the medium as an energy source. Sodium chloride maintains osmotic equilibrium. Sodium acetate acts as buffering agent. Less quantity of agar makes the medium semi solid and helps in maintaining anaerobic conditions.

Use: Recommended for enumerating *Clostridia* from pharmaceutical products.

Contents*

Ingredients

	Gram/Litre
Meat Extract#	10.00
Peptone	10.00
Yeast Extract	3.00
Soluble Starch	1.00
Glucose Monohydrate	5.00
Cysteine Hydrochloride	0.50
Sodium Chloride	5.00
Sodium Acetate	3.00
Agar	0.50
pH at 25°C	6.8 ±0.2

* Formula adjusted for optimum performance and parameters

Equivalent to beef extract

Directions: Dissolve 38.00 grams in 1000 ml distilled water. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 min, cool it to 42-45 °C and distribute aseptically in test tubes. Allow to cool and inoculate test sample aseptically.

Specimens types analyzed

Pharmaceutical samples, clinical and non-clinical samples etc.

Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Light beige colored free flowing, homogeneous powder
Reaction of 3.8% solution	6.8 ±0.2 at 25 °C
pH	6.60- 7.00
Gelling	Firm comparable with 0.5% agar gel
Color and clarity of ready medium	Light amber colored opalescent medium
Growth Promotion properties	Best at ≤ 100 CFU at 32-37 °C for 18-72 h
Indicative properties	Optimum at ≤ 100 CFU at 32-37 °C for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response

Organism	ATCC	Inoculum	Growth	Incubation Temp.	Incubation period
<i>Clostridium sporogenes</i>	19404	50-100	Luxurious	33-37 °C	18-72 h

Storage and Shelf Life

Hygroscopic; keep container tightly closed. Store in cool dry place.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

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3. *Indian Pharmacopoeia*, (2018), Govt. of India, the Controller of Publication, New Delh
4. Rand, M. C., Arnold E. Greenberg, and Michael J. Taras, (1976), *Standard methods for the examination of water and wastewater*. Prepared and published jointly by American Public Health Association, American Water Works Association, and Water Pollution Control Federation.
5. *The Japanese Pharmacopoeia*, 17th Ed. (2016), The Ministry of Health, Labour And Welfare
6. *The United States Pharmacopoeia*, (2014), The United States Pharmacopoeial Convention. 12601 Twinbrook Parkway, Rockvukke, MD 20852.

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