



## **Product Data Sheet**

### **CLOSTRIDIUM BROTH BASE**

**Product No.** GB-DCM-00094-1A

### **INTENDED USE**

For identification of spores of Clostridium tyrobutyricum.

### **PRODUCT SUMMARY**

Ripening of cheese under controlled conditions of temperature and humidity determine the final flavour and body characteristics of the product. Microbial spoilage in cheese is generally limited because of the combined effect of acid and salt and is less likely in the lower moisture cheese. Spores of Clostridium tyrobutyricum in the milk used for the manufacture of Emmentaler, Edam and Gouda can survive the heat treatment used for cheese milk and cause late gas formation (blowing defect) and related off-flavour during ripening. Even low spore densities of this anaerobe in milk used for cheese production can bring about this phenomenon, if the growth conditions are suitable. Clostridium Broth Base is recommended for the identification of spores of C. tyrobutyricum. C. tyrobutyricum ferments lactate and acetate to butyrate, CO<sub>2</sub> and H<sub>2</sub>. As against C. butyricum, C. tyrobutyricum grows in media with lower acidic pH. Low pH value of the media helps in inhibiting other microbial flora thereby favoring growth of C. tyrobutyricum

### **Product Specifications**

<b>Ingredients</b>	<b>Gms / Ltr</b>
Casein peptone	15.000
Meat extract	10.000
Yeast extract	5.000
Sodium acetate	5.000
L-Cystine	0.250

### **INSTRUCTION FOR USE**

- Dissolve 35.5 grams in 1000 ml purified / distilled water.
- Heat if necessary to dissolve the medium completely.
- Add 10 ml of 50% sodium lactate. Cool at 45-50°C.
- Mix well and dispense into tubes.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Gas	Incubation Temperature	Incubation Period
Clostridium perfringens	10543	50-100	Luxuriant	Positive reaction	35-37°C	Upto 7 Days
Clostridium tyrobutyricum	25755	50-100	Luxuriant	Positive reaction	35-37°C	Upto 7 Days
Escherichia coli	25922	50-100	Good	Variable reaction	35-37°C	Upto 7 Days
Pseudomonas aeruginosa	27853	>=103	Inhibited	-	35-37°C	Upto 7 Days
Staphylococcus aureus subsp.aureus	25923	>=103	Good	Negative reaction	35-37°C	Upto 7 Days

### QUALITY CONTROL SPECIFICATIONS

Appearance of Powder.

Cream to yellow homogeneous free flowing powder.

Appearance of prepared medium: Yellowish brown coloured, clear solution without any precipitate.

pH (at 25°C) :

6.0±0.2

### PRINCIPLE

Casitose, meat extract and yeast extract provide the essential nutrients mainly the nitrogen compounds whereas Lcysteine promotes the growth of Clostridial species by maintaining a low oxygen tension in the medium.

### 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.

**This product is for research use only.**