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Crossley SM Medium

Used for examination of meat and meat products for sporing anaerobes

REF: BS.1/CR01.100.0100	100 Gram	REF: BS.1/CR01.250.0250	250 Gram
REF: BS.1/CR01.500.0500	500 Gram		

CLINICAL SIGNIFICANCE

This medium was originally described by Crossley for the examination of meat and meat products for the detection of anaerobic bacteria (2). 10 ml of the medium is inoculated with 1-2 grams of food sample. The tubes are incubated at 35-37°C for 3-4 days. Peptone serves as a source of carbonaceous and nitrogeneous compounds, long chain amino acids, vitamins and other essential nutrients. Bromocresol purple is the pH indicator. The reaction are observed at regular intervals to determine the change.

METHOD PRINCIPLE

Skimmed milk powder contains the carbohydrate lactose along with three main proteins i.e. casein, lactalbumin and lactoglobulin (1). Therefore an organism may exhibit one or several of the following metabolic properties, each specific for a particular species aiding bacterial identification. The various metabolic functions are lactose fermentation, clot formation, peptonization (digestion) and gas formation (5).

MEDIA COMPOSITION

Item	Formula per liter of medium
- Skimmed Milk Powder# - Peptone - Bromocresol purple	100.0 gm. 10.00 gm. 0.100 gm.

Equivalent to Skim milk powder
Final pH 6.0 ± 0.2 at 2

PRECAUTIONS AND WARNINGS

Media to be handled by entitled and professionally educated person. Do not ingest or inhale.

Good Laboratories practices using appropriate precautions should be followed in:

- Wearing personnel protective equipment (overall, gloves, glasses,).
- Do not pipette by mouth.
- In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.
- Respect country requirement for waste disposal.

S56: dispose of this material and its container at hazardous or special waste collection point.
S57: use appropriate container to avoid environmental Contamination.
S61: avoid release in environment.
For further information, refer to the Crossley Milk medium material safety data sheet.

STORAGE AND STABILITY

BioScien Crossley Milk medium dehydrated media are stable until expiration date stated on label when properly stored 10-30°C. The prepared medium should be stored at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to avoid lump development due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in a dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

MEDIA PREPARATION

- Suspend 110.1 grams in 100 ml purified / distilled water, agitating continuously.
- Adjust pH to 6.8 ± 0.2 at 25°C
- Mix well and make up the volume to 1000 ml.
- Dispense into tubes or flasks as desired.
- Sterilize by autoclaving at 15 lbs pressure (121°C) for 5 minutes.

Deterioration

The color of BioScien Crossley Milk medium is Light yellow to pale blue homogeneous free flowing powder. If there are any physical changes, discard the medium. prepared medium Pale blue coloured opaque milky solution. should not be used if there are any signs of deterioration (shrinking, cracking, or discoloration), and contaminations.

SPECIMEN COLLECTION AND PRESERVATION

Meat and meat products

EQUIPMENT REQUIRED NOT PROVIDED

- Sterile cups
- Sterile tubes
- Sterile loops
- Incubator

PERFORMANCE CHARACTERISTICS

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature

Cultural characteristics observed after an incubation at 23-27°C for up to 4 days

Test Organisms	Reaction
Clostridium sporogenes ATCC 19404	Purple colour gas production, soft curd
Bacillus cereus ATCC 10876	Yellow colour, acid and clot
Salmonella Typhimurium ATCC 14028	Alkaline reaction (either green/blue)

QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control values are found outside the defined range, check the system performance. If control still out of range please contact ***BioScien*** technical support.

REFERENCES

1.Cantarow A., Schepartz B., Biochemistry, 3rd Ed., Philadelphia: W B Saunders, 1962:273,792-793
2.Crossley E.L. (1941) J. Soc. Chem. Ind. 60 131-136
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition
4. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
5. MacFaddin J. F., 2000, Biochemical tests for Identification of Medical Bacteria, 3rd Ed., Lippincott, Williams and Wilkins, Baltimore.

SYMBOLS IN PRODUCT LABELLING			
IVD	For in-vitro diagnostic use	Σ	Number of <n> test in the pack
LOT	Batch Code/Lot number	⚠	Caution
REF	Catalogue Number		Do not use if package is damaged
	Temperature Limitation		Consult Instruction for use
	Expiration Date		
	Manufactured by		