

Crossley Milk Medium

Recommended for examination of meat and meat products for sporing anaerobes

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

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| Item | Formula perliter of medium |
| * Skimmed Milk Powder
* Peptone
* Bromocresol purple
 | 100.0 gm.10.00 gm.0.100 gm. |

**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

**Lab.Vie**. 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.

***Final pH 6.0 ± 0.2 at 25°C***

# 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 **Lab.Vie**. Crossley Milk medium is Light yellow to pale blue homogeneous free flowing powder. If there are any physical changes, discard the medium.

The hydrated medium is Pale blue coloured opaque milky solution, media 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

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| 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 **Lab.Vie**. 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.

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| SYMBOLS IN PRODUCT LABELLING |
| IVD | For in-vitro diagnostic use | 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 |  |

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