

**Edwards Medium Base**

Recommended for selective and rapid isolation of Streptococcus agalactiae and other Streptococci associated with bovine mastitis.

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| REF: V.1/ED01.100 100 Gram REF: V.1/ED01.500 500 Gram | REF: V.1/ED01.250 250 Gram |

# CLINICAL SIGNIFICANCE

Streptococci are gram-positive facultatively anaerobic bacteria, which constitute normal commensal flora of mouth, skin, intestine and upper respiratory tract of humans. Group B Streptococci are an important cause of systemic infections in infants and occasionally of bacterial endocarditis (1). Mastitis is a disease of cattle caused by the organisms Streptococcus agalactiae. It belongs to the Lancefield group B Streptococci.

**METHOD PRINCIPLE**

Peptone and Beef extract serve as sources of carbon, nitrogen and other essential nutrients. Esculin helps to differentiate esculin- positive (group D Streptococci) organisms from esculin- negative (S. agalactiae) organisms. Sodium chloride helps to maintain the osmotic equilibrium of the medium. Crystal violet and thallous sulphate serve as the selective agents for Streptococci. Supplementation with blood provides additional nutrients in addition to serving as an indicator of haemolysis. Mastitis Streptococci show alpha, beta or gamma type of haemolysis. Esculin differentiates esculin- positive group D Streptococci (black colonies) from esculin- negative Streptococcus agalactiae (blue to colourless colonies). Centrifuged test milk sample is directly inoculated on the surface of the medium plate. Esculin-negative (blue to colourless) S. agalactiae organisms are further subcultured for identification tests.

# MEDIA COMPOSITION

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| Item | Formula per liter ofmedium |
| * Peptone
* Beef extract
* Esculin
* Sodium chloride
* Crystal violet
* Thallous sulphate
* Agar
 | 10.00 gm10.00 gm1.00 gm5.00 gm0.0013 gm0.330 gm15.00 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 Edwards Medium Base material safety data sheet.

# STORAGE AND STABILITY

**Lab.Vie**. Edwards Medium Base are stable until expiration date stated on label when properly stored 10-30°C. The prepared medium should be stored at 20-30°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 7.4 ± 0.2 at 25°C

# MEDIA PREPARATION

41.33 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at115°C for 20 minutes. Cool to 45-50°C and aseptically add 5 to 7% v/v sterile sheep blood. Mix well and pour into sterile Petri plates.

**Deterioration**

The color of **Lab.Vie**. Edwards Medium Base is Cream to yellow homogeneous free flowing powder. If there are any physical changes, discard the medium.

Basal medium: Amber coloured, clear to slightly opalescent gel. After addition of 5-7% v/v sterile defibrinated sheep blood: Cherry red coloured opaque gel forms in Petri plates, media should not be used if there are any signs of deterioration (shrinking, cracking, or discoloration), and contaminations.

# SPECIMEN COLLECTION AND PRESERVATION

Clinical samples - faeces, vaginal swabs, ; Dairy samples.

# EQUIPMENT REQUIRED NOT PROVIDED

* Sterile cups
* Sterile petri-dishes
* Incubator

# PERFORMANCE CHARACTERISTICS

Cultural characteristics observed with added 5-7%v/v sterile defibrinated sheep blood after an incubation at 35-37°C for 24-48 hours

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| **Organism** | **Growth** | **Colour of Colony** |
| Enterococcus faecalis ATCC 29212 | good - luxuriant | greyish blue |
| Streptococcus agalactiae ATCC 13813 | good - luxuriant | greyish blue to colourless w/ haemolysis |
| Escherichia coli ATCC 25922 | inhibited |  |
| Staphylococcus aureus subsp. aureus ATCC 25923 | inhibited |  |

# 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

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6. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
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9. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.

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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 isdamaged |
|  |  | Temperature Limitation |  Consult Instruction for use |
|  |  | Expiration Date |  |
|  |  | Manufactured by |  |

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**Post code-4151**

 **E-mail :** **admin@labvielab.com**

 **Website:** [**www.labvielab.com**](http://www.labvielab.com)