



Department of Anesthesia Techniques {Biology}

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Culture media also known as growth media, are specific mixtures of nutrients and other substances that support the growth of microorganisms such as bacteria and fungi (yeasts and molds).

Culture media are used for quality control tests of nonsterile raw materials and finished products as well as for microbial contamination (sterility) tests in applications such as hygiene monitoring, sterilization process validation and determination of the effectiveness of preservatives and antimicrobial agents.

Microbial culture media preparation

is the process of mixing nutrients, agents for buffering and maintaining the osmotic balance, as well as selective inhibitors or indicators to create an agar or broth that supports the growth and the differentiation of microorganisms.

Types of culture media used in microbiology

Media are of different types on consistency and chemical composition.

Routine laboratory media

These are classified into six types:

- (1) Basal media
- (2) Enriched media
- (3) Selective
- (4) Indicator media
- (5) Transport media
- (6) Storage media

COMMON MEDIA IN ROUTINE USE

1-Nutrient Broth. 500 g meat, e.g. ox heart is minced and mixed with 1 litre water. 10 g peptone and 5 g sodium chloride are added, pH is adjusted to 7.3. Uses: (1) As a basal media for the preparation of other media, (2) To study soluble products of bacteria.



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2-MacConkey Agar. Most commonly used for enterobacteriaceae. It contains agar, peptone, sodium chloride, bile salt, lactose and neutral red. It is a selective and indicator medium



↑
**Lactose
fermenting
colonies**
PINK

↑
**Non-lactose
fermenting
colonies**
COLORLESS

3-Mueller Hinton Agar. Disc diffusion sensitivity tests for antimicrobial drugs should be carried out on this media as per WHO recommendation to promote reproducibility and comparability of results.



4-Tellurite Blood Agar. It is used as a selective medium for isolation some of bacteria types



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5-Chocolate Agar or Heated Blood agar: Prepared by heating blood agar. It is used for culture of pneumococcus and Haemophilus.

