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NUTRIENT AGAR

Medical laboratories media is used as a general purpose medium for the cultivation of less fastidious microorganisms.

REF: BS.1/NA01.100.0100	100 Gram	REF: BS.1/NA01.250.01250	250 Gram
REF: BS.1/NA01.500.0500	500 Gram		

CLINICAL SIGNIFICANCE

Nutrient Agar medium used for the cultivation of microbes supporting growth of a wide range of non-fastidious organisms. Nutrient agar is popular because it can grow a variety of types of bacteria and fungi, and contains many nutrients needed for the bacterial growth.

METHOD PRINCIPLE

Nutrient media are basic culture media used for maintaining microorganisms, cultivating fastidious organisms by enriching with serum or blood and are also used for purity checking prior to biochemical or serological testing. Nutrient Agar is ideal for demonstration and teaching purposes where a more prolonged survival of cultures at ambient temperature is often required without risk of overgrowth that can occur with more nutritious substrate. This relatively simple formula has been retained and is still widely used in the microbiological examination of variety of materials and is also recommended by standard methods. It is one of the several non-selective media useful in routine cultivation of microorganisms. It can be used for the cultivation and enumeration of bacteria which are not particularly fastidious. Addition of different biological fluids such as horse or sheep blood, serum, egg yolk etc. makes it suitable for the cultivation of related fastidious organisms. Peptone, HM peptone B and yeast extract provide the necessary nitrogen compounds, carbon, vitamins and also some trace ingredients necessary for the growth of bacteria. Sodium chloride maintains the osmotic equilibrium of the medium.

MEDIA COMPOSITION

Item	Concentration
Yeast Extract	1.5 g/L
Peptone	5 g/L
HM Peptone	1.5 g/L
Sodium Chloride	5 g/L
Agar	15 g/L
Final pH (at 25°C)	7.4±0.2

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 Nutrient agar material safety data sheet.

MEDIA PREPARATION, STORAGE AND STABILITY

BioScien Nutrient Agar media are stable until expiration date stated on label when properly stored at 10-30°C. Nutrient Base Agar media is prepared by suspend 28 grams of the medium in one liter of distilled water. Mix well and dissolve by heating. Boil for one minute until complete dissolution. Sterilize in autoclave at 121°C for 15 minutes. Cool to 45-50°C, mix well and dispense into plates.

Deterioration

BioScien Nutrient Agar medium is cream to yellow homogeneous free flowing powder. If there are any physical changes, discard the medium.

Media should not be used if there are any signs of deterioration (shrinking, cracking, or discoloration), and contaminations.

SPECIMEN COLLECTION AND PRESERVATION

A big variety of clinical specimens were bacteriologically analyzed by Nutrient Agar including Blood; Food and dairy samples; Water samples

EQUIPMENT REQUIRED NOT PROVIDED

- Sterile cups
- Sterile petri-dishes
- Incubator
- Autoclave

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.

BHI Agar	Expected results
Escherichia coli ATCC 25922	Good growth
Pseudomonas aeruginosa ATCC 27853	Good growth
Salmonella Typhi ATCC 6539	Good growth
Staphylococcus aureus subsp.aureus ATCC 25923	Good growth
Streptococcus pyogenes ATCC 19615	Good growth
Salmonella Enteritidis ATCC 13067	Good growth
Salmonella Typhimurium ATCC 14028	Good growth
Yersinia enterocolitica ATCC 9610	Good growth
Yersinia enterocolitica ATCC 23715	Good growth

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.

REFERENCES

1. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C
2. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.
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.
6. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

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		

EC REP

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CE