

2.1% Nutrient/Agar (without NaCl)

356-4485

DEFINITION

This nutrient agar is suitable for the culture of non-fastidious bacteria.

This medium is recommended by the American Health Association for the enumeration of bacteria in water.

STANDARDS

FOOD MICROBIOLOGY

- **NF ISO 10273 (May 1995):** Microbiology - General guidelines for the detection of presumed pathogenic *Yersinia enterocolitica*. (IC: V 08-027)

- **NF ISO 7402 (December 1993):** Microbiology - General guidelines for the counting of *Enterobacteriaceae* without revivification (IC: V 08-021)

- **NF ISO 8523 (February 1992):** Microbiology - General guidelines for the detection of *Enterobacteriaceae* with pre-enrichment. (IC: V 08-025)

- **FIL 93 B (1995):** Milk and dairy products - Detection of *Salmonella*.

- **ISO 6579 (July 2002):** Food microbiology - Horizontal method for detection of *Salmonella* spp.

WATER

- **ISO 19250 (July 2010):** Water quality - Detection and enumeration of *Salmonella*

- Bacteriological analysis technique for testing shellfish (DGAL/SVHA/C 88 Circular N°8003 dated 28 April 1988)

PRINCIPLE

The nutrient substances provided by peptone, meat extract and vitamin factors of yeast extract favor the growth of most bacteria.

PRESENTATION

Dehydrated

500 g

code 356-4485

STORAGE

- Dehydrated: +15-25°C, in carefully-sealed bottles in a cool, dry place
- Expiration date and batch number are shown on the package.

THEORETICAL FORMULA

Peptone	5 g
Meat extract	3 g
Agar	13 g
Distilled water	1,000 ml
Final pH (25°C) = 6.8 ± 0.2	

OTHER PRODUCTS REQUIRED (NOT SUPPLIED)

- Distilled water

EQUIPMENT REQUIRED (NOT SUPPLIED) (non-exhaustive)

- Scales
- Sterile weighing bags
- Grinder
- Hotplate
- Mixer-homogenizer
- Test tubes (16 x 160 mm) with autoclave-proof stoppers
- 225 ml Pyrex bottles with autoclave-proof stoppers
- Sterile Petri dishes (Ø= 90 mm)
- Sterile pipettes (0.1 ml, etc)
- Sterile Pasteur pipettes (code 355-0751) or inoculating loop
- Sterile spreaders
- Water-bath precise to ±1°C
- Thermostatically-controlled incubation area, precise to ±1°C
- Autoclave
- All usual laboratory equipment

PREPARATION OF DEHYDRATED MEDIUM

Always shake well before use.

Dissolve 21 g of powder in 1 liter of distilled water. Wait for 5 minutes, then mix until a homogenous suspension is obtained. Heat gently, stirring frequently, then bring to the boil until completely dissolved. If necessary, adjust the pH to 6.8 ± 0.2. Dispense in containers, then sterilize in autoclave at 121°C ± 1°C for 15 minutes.

Reconstitution ratio: 21 g/l

500 g of powder makes 23.80 liters of medium.

PROTOCOL

Depending on the objective, this medium can be inoculated by:

- spreading 0.1 ml of sample on the surface,
- isolation by means of an inoculation loop or a Pasteur pipette (previously flame-sterilized).

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PRECAUTION

Comply with Good Laboratory Practice.

PERFORMANCES/QUALITY CONTROL OF THE TEST

The growth performances of the media are verified with the following strains:

STRAINS	Results after 24 hr culture at 37°C
<i>Escherichia coli</i> ATCC 25922	Good growth
<i>Staphylococcus aureus</i> ATCC 25923	Good growth
<i>Staphylococcus epidermidis</i> ATCC 14990	Good growth
<i>Streptococcus bovis</i> ATCC 5623	Good growth
<i>Enterococcus faecalis</i> var <i>zymogenes</i> ATCC 29212	Good growth

QUALITY CONTROL OF MANUFACTURER

Every product manufactured and marketed by Bio-Rad is subject to a quality-assurance procedure at all stages, from the reception of raw materials to the marketing of the end-product. Each batch of finished product undergoes quality control and is marketed only if it satisfies the acceptability criteria.

Documentation relative to the production and control of each batch is kept on file.

KEY WORDS

2.1% Nutrient without NaCl/Non-fastidious bacteria/Nutrient substances/Medium/Waters.