



GELATIN PEPTONE BIOS AGAR

Dehydrated culture medium

1 - INTENDED USE

For the enumeration of microorganisms in ice-cream, ice-cream related products, fresh pasta.

2 - COMPOSITION - TYPICAL FORMULA *

(AFTER RECONSTITUTION WITH 1 L OF WATER)

Gelatin peptone	5 g
Agar	15.0 g

*The formula may be adjusted and/or supplemented to meet the required performances criteria.

3 - PRINCIPLE OF THE METHOD AND EXPLANATION OF THE PROCEDURE

Gelatin Peptone Bios Agar is free of fermentable carbohydrates, has low nutritive characteristics and is particularly useful for growing non-fastidious organisms.

Gelatin Peptone Bios Agar may be used for the total microbial count of ice-cream and ice-cream related products¹ and fresh pasta²

The medium contains a gelatin peptone which provide the essential growth factors for microbial growth, substantially reducing the growth of microorganisms related to production process, in particular lactobacilli, thus favouring the growth of spoiling microorganisms. Agar is the solidifying agent.

4 - DIRECTIONS FOR MEDIUM PREPARATION

Suspend 20 g in 1000 ml of cold purified water, heat to boiling with frequent agitation and sterilise by autoclaving at 121°C for 15 minutes. Mix well and pour into sterile Petri dishes.

5 - PHYSICAL CHARACTERISTICS

Dehydrated medium appearance	whitish, fine, homogeneous, free-flowing powder
Solution and prepared plates appearance	nearly colourless, limpid
Final pH at 20-25 °C	7.0 ± 0.1

6 - MATERIALS PROVIDED - PACKAGING

Product	Type	REF	Pack
Gelatin Peptone Bios Agar	Dehydrated medium	4015102	500 g (25 L)

7 - MATERIALS REQUIRED BUT NOT PROVIDED

Autoclave, water-bath, sterile loops and pipettes, incubator and laboratory equipment as required, Erlenmeyer flasks, sterile Petri dishes, ancillary culture media and reagents.

8 - SPECIMENS

Ice cream, ice cream related products, fresh pasta. Refer to applicable regulations for the collection of food samples.^{1,2} Operate in accordance with good laboratory practice for sample collection, storage and transport to the laboratory.

9 - TEST PROCEDURE

1. Prepare the initial suspension of the sample and the decimal dilutions with the suitable diluent.
2. Transfer by means of sterile pipettes 1 mL of the initial suspension and 1 mL of each decimal dilution in duplicate to the centre of each empty Petri dish.
3. Pour approximately 15 mL of Gelatin Peptone Bios Agar, cooled to approximately 45°C, into each dish.
4. Mix well the inoculum with the medium and allow the mixture to solidify.
5. Incubate at 32°C ± 1°C for 48h ± 3h (ice cream)¹ or at 30°C for 72 hours (fresh pasta)².

10 - READING AND INTERPRETATION

Enumerate the number of colonies per plate and calculate the microbial count. Do not count pin-point colonies.

11 - USER QUALITY CONTROL

All manufactured lots of the product are released for sale after the Quality Control has been performed to check the compliance with the specifications. However, the end user can perform its own Quality Control in accordance with the local applicable regulations, in compliance with accreditation requirements and the experience of the Laboratory. Here below are listed some test strains useful for the quality control.

CONTROL STRAINS	INCUBATION T° / T - ATM	EXPECTED RESULTS
<i>E.coli</i> ATCC 25922	32°C / 48 H-A	good growth
<i>L.delbrueckii</i> subsp. <i>bulgaricus</i> DSM 20081	32°C / 48 H-A	very poor growth, pin-point colonies

A: aerobic incubation; ATCC is a trademark of American Type Culture Collection

12 - PERFORMANCES CHARACTERISTICS

Prior to release for sale, a representative sample of all lots of dehydrated Gelatin Peptone Bios Agar is tested for productivity and selectivity by comparing the results with a previously approved Reference Batch.

Productivity is evaluated by a quantitative test with the following strains: *E.coli* ATCC 25922, *S.aureus* ATCC 25923, *E.faecalis* ATCC 19433. The plates are inoculated with decimal dilutions in saline of a colonies' suspension and incubated at 32°C for 48 hours. The colonies are enumerated on both batches and the productivity ratio (Pr) is calculated. If Pr is ≥ 0.7 the results are considered acceptable and conform to the specifications. Selectivity is tested by a quantitative test inoculating the plates with suitable decimal dilutions in saline of a 0.5 McFarland suspension of *L.delbrueckii* subsp. *bulgaricus* DSM 20081. The growth of the non-target strain is very poor with pin-point colonies.



13 – LIMITATIONS OF THE METHOD

- The isolated colonies on the plates should be identified with suitable tests.

14 - PRECAUTIONS AND WARNINGS

- This product is for microbiological control and for professional use only; it is to be used by adequately trained and qualified laboratory personnel, observing approved biohazard precautions and aseptic techniques.
- Dehydrated media must be handled with suitable protection. Before use, consult the Safety Data Sheet.
- This culture medium contains raw materials of animal origin. The *ante* and *post mortem* controls of the animals and those during the production and distribution cycle of the raw materials, cannot completely guarantee that this product doesn't contain any transmissible pathogen. Therefore, it is recommended that the culture medium be treated as potentially infectious, and handled observing the usual specific precautions: do not ingest, inhale, or allow to come into contact with skin, eyes, mucous membranes. Download the TSE Statement from the website www.biolifeitaliana.it, describing the measures implemented by Biolife Italiana for the risk reduction linked to infectious animal diseases.
- Apply Good Manufacturing Practice in the production process of prepared media.
- All laboratory specimens should be considered infectious.
- The laboratory area must be controlled to avoid contaminants such as culture medium or microbial agents.
- Sterilize all biohazard waste before disposal. Dispose the unused medium and the sterilized plates inoculated with samples or microbial strains in accordance with current local legislation.
- Do not use the culture medium as active ingredient for pharmaceutical preparations or as production material intended for human and animal consumption
- The Certificates of Analysis and the Safety Data Sheet of the product are available on the website www.biolifeitaliana.it.
- The information provided in this document has been defined to the best of our knowledge and ability and represents a guideline for the proper use of the product but without obligation or liability. In all cases existing local laws, regulations and standard procedures must be observed for the examination of samples collected from human and animal organic districts, for environmental samples and for products intended for human or animal consumption. Our information does not relieve our customers from their responsibility for checking the suitability of our product for the intended purpose.

15 - STORAGE CONDITIONS AND SHELF LIFE











Upon receipt, store at +10°C /+30°C away from direct light in a dry place. If properly stored, it may be used up to the expiration date. Do not use beyond this date. Avoid opening the bottle in humid places. After use, the container must be tightly closed. Discard the product if the container and/or the cap are damaged, or if the container is not well closed, or in case of evident deterioration of the powder (colour changes, hardening, large lumps).

The user is responsible for the manufacturing and quality control processes of prepared media and the validation of their shelf life, according to the type (plates/tubes/bottles) and the applied storage conditions (temperature and packaging).

16 – REFERENCES

- O.M. 11/10178: Limiti di cariche microbiche tollerabili in determinate sostanze alimentari e bevande. G.U. Supp. ord. n. 346 del 13/12178.
- Rapporto ISTISAN 96/35. ISSN 1123-3117. Metodi di analisi per il controllo microbiologico degli alimenti. Raccolta a cura di D.De Medici, L.Fenicia, L.Orefice e A.Stacchini.

TABLE OF APPLICABLE SYMBOLS

 or  Catalogue number	 Batch code	 Manufacturer	 Store in a dry place	 Use by
 Temperature limitation	 Contents sufficient for <n> tests	 Consult Instructions for Use	 Keep away from direct light	

REVISION HISTORY

Version	Description of changes	Date
Revision 1	Updated layout and content	2022/08

Note: minor typographical, grammatical, and formatting changes are not included in the revision history.

