EGG YOLK EMULSION 50%

Emulsion of egg yolk in sterile saline solution

1 – INTENDED USE

Emulsion of egg yolk recommended for use as liquid enrichment in various microbiological media formulations.

2 - COMPOSITION - BOTTLE CONTENTS

50 mL bottle, REF 42111601

Egg yolk	25 mL
Physiological saline solution	25 mL

100 mL bottle, REF 42111605

Egg yolk	50 mL
Physiological saline solution	50 mL

200 mL bottle, REF 42111600

Egg yolk	100 mL
Physiological saline solution	100 mL

3 - PRINCIPLE OF THE METHOD AND EXPLANATION OF THE PROCEDURE

Egg Yolk Emulsion 50% is recommended for use in a variety of culture media for the isolation and identification of *Bacillus cereus* or *Clostridium* species on the basis of their lecithinase activity.
The egg yolk is a good source of lecithin and it contains a significant amount of lecithovitellin. Microorganisms that possess the enzyme lecithinase break down lecithovitellin to phosphorylcholine and an insoluble diglyceride, which results in an opaque zone of precipitation that spreads beyond the edge of the colony. Such an opaque halo, surrounding the colony indicates positive lecithinase activity.
Egg Yolk Emulsion 50% is prepared from fresh eggs, stabilised and sterilised by special treatments.

4 - DIRECTIONS

The emulsion is ready to use. Shake the bottle well before use to suspend any sediment.
Examples of culture media that can be prepared with Egg Yolk Emulsion 50%:

- Mannitol Yolk Polymyxin (MYP) Agar according to USDA[1]: 50 mL Egg Yolk Emulsion 50% + 450 mL Bacillus Cereus Agar Base MYP (REF 401111) autoclaved and cooled to 45-50°C and supplemented with Bacillus Cereus Antimicrobic Supplement (4240001).
- Mannitol Yolk Polymyxin (MYP) Agar according to FDA-BAM[2]: 12.5 mL Egg Yolk Emulsion 50% + 225 mL Bacillus Cereus Agar Base MYP (REF 401111) autoclaved and cooled to 45-50°C and supplemented with Bacillus Cereus Antimicrobic Supplement (4240001).
- Shahidi-Ferguson-perfringens (SFP) Agar[3]: 50 mL Egg Yolk Emulsion 50% + 450 mL Clostridium Perfringens Agar Base (REF 401307) autoclaved and cooled to 45-50°C and supplemented with Kanamycin Polymyxin B Antimicrobic Supplement (REF 4240005).
- Tryptose Sulfite Cycloserine (TSC) Yolk Agar[1]: 25 mL of Egg Yolk Emulsion 50% + 475 mL Clostridium Perfringens Agar Base (REF 401307) autoclaved and cooled to 45-50°C and supplemented with D-Cycloserine Antimicrobic Supplement (REF 4240002).
- Clostridium Botulinum Agar[4]: 50 mL Egg Yolk Emulsion 50% + 450 mL Clostridium Botulinum Agar Base (REF 401306) autoclaved and cooled to 45-50°C and supplemented with Clostridium Botulinum Antimicrobic Supplement (REF 4240066).

For details on the preparation method, please refer to the Instructions for Use of the above-mentioned culture media.
By adjusting the amounts of Egg Yolk Emulsion 50% and the base medium, it is possible to prepare MYP with a final concentration of Egg Yolk in the medium of 2% or PEMBA with a final concentration of 1% as recommended by ISO Standards [4-5]

5 – PHYSICAL CHARACTERISTICS

Appearance of the emulsion	yellow, opaque

6 - MATERIALS PROVIDED - PACKAGING

Product	Type	REF	Pack
Egg Yolk Emulsion 50%	Liquid supplement	42111601 42111605 42111600	50 mL 100 mL 200 mL

7 - MATERIALS REQUIRED BUT NOT PROVIDED

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

8 - SPECIMENS

Products intended for human consumption and the feeding of animals, and environmental samples in the area of food production and food handling.

9 - TEST PROCEDURE

For inoculation, incubation and reading procedures, please refer to the Instructions for Use of culture media mentioned above.

10 - 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 testing in accordance with the prepared culture medium, the local applicable regulations, in compliance with accreditation requirements and the experience of the Laboratory. Refer to the Instructions for Use of culture media mentioned above for suggested quality control strains.

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11 - LIMITATIONS OF THE METHOD

For limitations of the method, please refer to the Instructions for Use of culture media mentioned above.

12 - PRECAUTIONS AND WARNINGS

- Egg Yolk Emulsion 50% is for microbiological control and for professional use only; it must be used by adequately trained and qualified laboratory personnel, observing approved biohazard precautions and aseptic techniques.
- The supplement and the basic media shall be used in association according to the directions described above. Apply Good Manufacturing Practice in the preparation process of plated media.
- All laboratory specimens should be considered infectious.
- The laboratory area must be controlled to avoid contaminants such as medium powder and supplements or microbial agents.
- Sterilize all biohazard waste before disposal. Dispose the unused supplements and the sterilized media inoculated with samples or microbial strains in accordance with current local legislation.
- Do not use Egg Yolk Emulsion 50% as active ingredients for pharmaceutical preparations or as production materials intended for human and animal consumption.
- The Certificates of Analysis and the Safety Data Sheets of the products 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.

13 - STORAGE CONDITIONS AND SHELF LIFE

Upon receipt, store the product in the original package at 2-8°C away from direct light. If properly stored, the product may be used up to the expiry date printed on the label; do not use beyond this date. Before use, examine the emulsion and discard if there are obvious signs of deterioration (e.g., contamination, coagulation, atypical colour or other abnormal characteristics). A phase separation may be observed during storage of the product; this phenomenon is to be considered normal and does not affect the quality of the product. Shake well before use.

14 – REFERENCES

1. United States Department of Agriculture, Food Safety and Inspection Service, Office of Public Health Science. Laboratory Guidebook Notice of Change. MLG Appendix 1.13. Effective Date: 09/16/2024
2. US Food and Drug Administration. Bacteriological Analytical Manual (BAM) Chapter 14: Bacillus cereus. Content current as of: 06/29/2021
3. Shahidi SA, Ferguson AR. New quantitative, qualitative, and confirmatory media for rapid analysis of food for Clostridium perfringens. Appl. Microbiol. 1971; 21:500-506
4. Dezfulian M, McCroskey LM, Hatheway CL, Dowell Jr VR. Selective medium for isolation of Clostridium botulinum from human feces. J Clin Microbiol 1981; Mar;13(3):526-31
5. ISO 7932:2004/AMD 1:2020 Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of presumptive Bacillus cereus — Colony-count technique at 30 degrees C — Amendment 1: Inclusion of optional tests
6. ISO 21871:2006 - Microbiology of food and animal feeding stuffs -- Horizontal method for the determination of low numbers of presumptive Bacillus cereus -- Most probable number technique and detection method

TABLE OF APPLICABLE SYMBOLS

REF or REF Catalogue number	LOT Batch code	Manufacturer	This side up	Fragile
Temperature limitation	Content sufficient for <n> tests	Consult Instructions for Use	Use by	Keep away from direct light

REVISION HISTORY

Version	Description of changes	Date
Revision 1	Updated layout and content	2024/09

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