

D-CYCLOSERINE ANTIMICROBIC SUPPLEMENT

Freeze-dried selective supplement

1 – INTENDED USE

Freeze-dried supplement for culture media to permit the selective isolation and enumeration of *Clostridium perfringens*.

2 - COMPOSITION - VIAL CONTENTS FOR 500 mL OF MEDIUM

D-Cycloserine 200 mg

3 - PRINCIPLE OF THE METHOD AND EXPLANATION OF THE PROCEDURE

The supplement contains D-Cycloserine in lyophilised form and is used as a selective additive for media for the isolation and counting of *Clostridium perfringens*. D-Cycloserine is an antibiotic inhibiting cell-wall biosynthesis in bacteria which helps in the selective isolation of Clostridia by inhibiting accompanying flora.

D-Cycloserine is used for the supplementation of Tryptose Sulfite Cycloserine (TSC) Agar Base for the preparation of a complete medium used for the enumeration of *Clostridium perfringens* in food according to ISO 15213-2¹ and in water according to ISO 14189². D-Cycloserine is used also as a selective additive of Clostridium Perfringens Agar Base for the enumeration of *C. perfringens* according to USDA method.³ On the above-mentioned media, supplemented with D-cycloserine, the growth of many not-target organisms is suppressed.

4 - DIRECTIONS

Dissolve the contents of one vial of D-Cycloserine Antimicrobial Supplement with 5 mL of sterile purified water, using aseptic conditions.

TSC Agar:^{1,2} suspend 21 g of TSC Agar Base (REF 402158) in 500 mL of cold purified water. Heat to boiling with frequent agitation and sterilize by autoclaving at 121°C for 15 minutes. Cool to 47-50°C and add the content of one vial of D-Cycloserine Antimicrobial Supplement. Mix well and pour into sterile Petri dishes.

TSC Egg Yolk Agar:³ suspend 22.5 g of Clostridium Perfringens Agar Base (REF 401307) in 475 mL of cold purified water, heat to boiling with frequent agitation and sterilize by autoclaving at 121°C for 15 minutes. Cool to 47-50°C and add 25 mL of Egg Yolk Emulsion Emulsion 50% (REF 42111601) and the contents of one vial of D-Cycloserine Antimicrobial Supplement. Mix well and pour into sterile Petri dishes.

5 – PHYSICAL CHARACTERISTICS

Appearance of lyophilised product short, dense, white pellet
Appearance of reconstituted product colourless, clear solution

6 - MATERIALS PROVIDED - PACKAGING

| Product | Type | REF | Pack |
|--|-------------------------|---------|-------------------------------------|
| D-Cycloserine Antimicrobial Supplement | Freeze-dried supplement | 4240002 | 10 vials, each for 500 mL of medium |

7 - MATERIALS REQUIRED BUT NOT PROVIDED

Suitable basal media, autoclave, water bath, incubator and other laboratory equipment. Flasks, sterile plates and tubes, loops and sterile swabs for microbiology.

8 - SPECIMENS

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

9 - TEST PROCEDURE

Refer to the Instructions for use of culture media (REF 402158 and 401307) for inoculation, incubation and reading procedures.

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 local applicable regulations, in compliance with accreditation requirements and the experience of the Laboratory. Refer to the Instructions for use of culture media (REF 402158 and 401307) for suggested quality control strains.

11 - LIMITATIONS OF THE METHOD

Refer to the Instructions for use of culture media (REF 402158 and 401307) for the limitations of the method.

12 - PRECAUTIONS AND WARNINGS

- D-Cycloserine Antimicrobial Supplement 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.
- Supplements containing antibiotics must be handled with appropriate protection. Consult the Safety Data Sheet before use.
- The supplement and the base media shall be used in association according to the directions described above. Apply Good Manufacturing Practice in the preparation process of plated media.
- D-Cycloserine Antimicrobial Supplement is sterilized by membrane filtration.
- Be careful when opening the metal ring to avoid injury.
- 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 D-Cycloserine Antimicrobial Supplement as active ingredients for pharmaceutical preparations or as production materials 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.











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. Once the vial has been opened and the lyophilized product has been reconstituted, the resulting solution should be used immediately. Before use, examine the lyophilized and reconstituted product and discard if there are obvious signs of deterioration (e.g., contamination, atypical colour or other abnormal characteristics).

14 – REFERENCES

- ISO 15213-2:2023. Microbiology of the food chain. Horizontal method for the detection and enumeration of Clostridium spp. Part 2: Enumeration of Clostridium perfringens by colony-count technique.
- ISO 14189:2013 Water quality — Enumeration of Clostridium perfringens — Method using membrane filtration
- United States Department of Agriculture, Food Safety and Inspection Service, Office of Public Health Science. Laboratory Guidebook Notice of Change. MLG Appendix 1.10. Effective Date: 03/07/22

TABLE OF APPLICABLE SYMBOLS

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|--|--|--|--|---|
|  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 9 | Updated layout and content | 2024/04 |

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

