

## MRD + Tween + Lecithin modified

Diluent with neutralizing agents for the microbiological examination of nonsterile products.

TYPICAL FORMULA	(g/l)
Enzymatic Digest of Casein	1.0
Sodium Chloride	8.5
Lecithin	5.0
Potassium Dihydrogen Phosphate	3.6
Disodium Hydrogen Phosphate, anhydrous	5.8
Polysorbate (Tween) 80	50.0
Final pH 7.0 ± 0.2	

### DESCRIPTION

MRD + Tween + Lecithin modified is a protective and isotonic diluent used to maximize the recovery of microorganisms in the preparation of the initial suspension and decimal dilutions of samples containing preservatives

### PRINCIPLE

Enzymatic digest of casein provides amino acids, nitrogen, carbon and minerals. Sodium chloride maintains the osmotic balance of the medium. Lecithin neutralizes quaternary ammonium compounds. Polysorbate 80 is a nonionic surfactant effective against phenolic compounds and mercurial derivatives. Potassium and sodium phosphates are the buffering agents.

### PREPARATION

Verify that the contents of the bottle is homogeneous and clear, gently inverting the bottle few times (avoid foam formation). The medium can be used as such or divided, under aseptic conditions, in lower aliquots.

### TECHNIQUE

Homogenize the sample and/or prepare decimal dilutions of the sample using this diluent. Leave at room temperature for 30-60 minutes then inoculate the appropriate culture media.

Consult appropriate references for additional information.

### INTERPRETATION OF RESULTS

No marked increase or decrease in original colony forming unit count.

### STORAGE

10-25°C away from light, until the expiry date on the label or until signs of deterioration or contamination are evident.

### WARNING AND PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product is designed for professional use only and must be used by properly trained operators.

### DISPOSAL OF WASTE

Disposal of waste must be carried out according to the national and local regulations in force.

### REFERENCES

1. EN ISO 11133:2014. Microbiology of food, animal feed and water – Preparation, production, storage and performance testing of culture media.
2. United States Pharmacopeial Convention (2014) The United States Pharmacopeia 38/National Formulation 33, Supp. 2. Chapter <61> Microbiological examination of non-sterile products: Microbial enumeration tests and Chapter <62> Microbiological examination of non-sterile products: Test for specified products. Chapter <71> Sterility Tests. Rockville, Md., USA.
3. European Directorate for the Quality of Medicines and Healthcare (2014) The European Pharmacopoeia. 8th Ed. Chapter 2.6.12 Microbiological examination of non-sterile products: Microbial enumeration tests and Chapter 2.6.13 Microbiological examination of non-sterile products: Test for specified products. Strasbourg, France.
4. Japanese Ministry of Health, Labour and Welfare (2011) The Japanese Pharmacopoeia. 16th Ed. Chapter 4.05 Microbial Limit Test I. Microbiological examination of non-sterile products: Total viable aerobic count and II. Microbiological examination of non-sterile products: Test for specified products. Japanese Ministry of Health, Labour and Welfare. Tokyo, Japan.
5. ISO 6887-4:2003. Microbiology of food and animal feeding stuffs – Preparation of test samples, initial suspension and decimal dilutions for microbiological examination – Part 4: Specific rules for the preparation of products other than milk and milk products, meat and meat products, and fish and fishery products.
6. ISO 6887-3:2003. Microbiology of food and animal feeding stuffs – Preparation of test samples, initial suspension and decimal dilutions for microbiological examination – Part 3: Specific rules for the preparation of fish and fishery products.
7. ISO 6887-2:2003. Microbiology of food and animal feeding stuffs – Preparation of test samples, initial suspension and decimal dilutions for microbiological examination – Part 2: Specific rules for the preparation of meat and meat products.
8. ISO 6887-1:1999. Microbiology of food and animal feeding stuffs – Preparation of test samples, initial suspension and decimal dilutions for microbiological examination – Part 1: General rules for the preparation of the initial suspension and decimal dilutions.
9. Vanderzant, C., and D. F. Splittstoesser (eds.). Compendium of methods for the microbiological examination of foods, 3rd ed. American Public Health Association, Washington, D.C.
10. U.S. Food and Drug Administration. Bacteriological analytical manual, 8th ed., AOAC International, Gaithersburg, MD.



**LIOFILCHEM® S.r.l.**

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**PRODUCT SPECIFICATIONS**

**NAME**

MRD + Tween + Lecithin modified

**PRESENTATION**

Glass bottles containing liquid culture medium

**STORAGE**

10-25°C

**PACKAGING**

Ref.	Content	Packaging
495140	6 x 1000 ml bottles	6 bottles in cardboard box

**pH OF THE MEDIUM**

7.0 ± 0.2

**USE**

MRD + Tween + Lecithin modified is a protective and isotonic diluent used to maximize the recovery of microorganisms while neutralizing antimicrobial agents that might be present in the sample material

**TECHNIQUE**

Refer to technical sheet of the product

**APPEARANCE OF THE MEDIUM**

Clear, light amber

**SHELF LIFE**

2 years

**QUALITY CONTROL**

- Control of general characteristics, label and print
- Sterility control  
 14 days at 22.5 ± 2.5°C, in aerobiosis  
 14 days at 32.5 ± 2.5°C, in aerobiosis
- Microbiological control  
 Inoculum for productivity: 10<sup>3</sup>-10<sup>4</sup> CFU  
 Incubation Conditions: 45-60 min at 22.5 ± 2.5°C, in aerobiosis

**Microorganism**

<i>Escherichia coli</i>	ATCC® 8739
<i>Staphylococcus aureus</i>	ATCC® 6538
<i>Pseudomonas aeruginosa</i>	ATCC® 9027
<i>Bacillus subtilis</i>	ATCC® 6633
<i>Candida albicans</i>	ATCC® 10231

**Growth on Tryptic Soy Agar**

± 30% of original count

**TABLE OF SYMBOLS**

 <b>LOT</b> Batch code	 Do not reuse	 Manufacturer	 Use by	 Fragile, handle with care
 <b>REF</b> Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Caution, see instructions for use	



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