

PRODUCT SPECIFICATION SHEET



Modified Rappaport Vassiliadis Medium (DM362)

Intended Use

Modified Rappaport Vassiliadis Medium (DM362) is recommended for selective enrichment of *Salmonellae* from food and environmental specimens.

Product Summary and Explanation

Salmonella infection leads to *Salmonellosis*, one of the most important and most frequently reported human foodborne diseases worldwide.⁽¹⁾ It ranges clinically from self-limited gastroenteritis (diarrhea, abdominal cramps and fever) to enteric fevers (including typhoid fever). Modified Rappaport Vassiliadis Medium is a selective broth for the enrichment of *Salmonella* from foodstuffs, environment and clinical specimens. Vassiliadis et al⁽²⁾ modified the original formulation described by Rappaport et al⁽³⁾ with magnesium chloride hexahydrate, by lowering the concentration of malachite green and raising the incubation temperature to 43°C. This medium is recommended as the selective enrichment medium for isolation of *Salmonella* from food and environmental specimens.

Principles of the Procedure

Modified Rappaport Vassiliadis Medium contains peptone from soyabean which provides essential growth nutrients and enhance bacterial growth. Sodium chloride maintains the osmotic balance of the medium. Monopotassium phosphate buffers the medium. Magnesium chloride present in the medium raises the osmotic pressure. Malachite green inhibits many gram-positive bacteria, while selectively enriches *Salmonella*. The relatively lower concentration of nutrition, also aids selective enrichment of *Salmonella*.

Formula / Liter

Ingredients	Gms / Liter
Part A	
Peptone from soyabean	5.00
Sodium chloride	8.00
Monopotassium phosphate	1.60
Malachite green	0.04
Part B	
Magnesium chloride, hexahydrate	29.00
Final pH: 5.2 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

Precautions

1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

Directions

1. Suspend 30.07 grams of dehydrated medium in one liter distilled water.
2. Heat gently, if necessary to dissolve the medium completely.
3. Dispense as desired into tubes.
4. Autoclave at 115°C, for 15 minutes / validated cycle.

Quality Control Specifications

Dehydrated Appearance	Light yellow to light blue homogeneous free flowing powder
Prepared Medium	Blue coloured clear solution without any precipitate
Reaction of 3.0% Solution	pH : 5.2 ± 0.2 at 25°C
Gel Strength	Not Applicable



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Expected Cultural Response: Cultural characteristics observed after an incubation at different temperatures for 24-48 hours, when subcultured on Brilliant Green Agar Base (DM044) and then incubated at 35-37°C for 18-24 hours.

Sr. No.	Organisms	Results to be achieved			
		Inoculum (CFU)	Recovery at 37°C	Recovery at 42±1°C	Colour of colony
1.	<i>Escherichia coli</i> ATCC 25922	50 -100	fair	poor	yellowish green
2.	<i>Salmonella Paratyphi B</i> ATCC 8759	50 -100	good	good	pink white
3.	<i>Salmonella Enteritidis</i> ATCC 13076	50 -100	luxuriant	luxuriant	pink white
4.	<i>Salmonella Typhi</i> ATCC 6539	50 -100	fair-good	fair	pink red
5.	<i>Salmonella Typhimurium</i> ATCC 14028	50 -100	luxuriant	luxuriant	pink white

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure

1. The test specimen is added to Buffered Peptone Water (DM049) and incubated at 35°C for 16 - 20 hours. This pre-enriched peptone water culture is inoculated into Modified Rappaport Vassiliadis Medium and incubated at 42 ± 1°C for 24 - 48 hours and further subcultured on Brilliant Green Agar (DM044).
2. Refer to appropriate references for standard test procedures.

Results

Refer to appropriate references and test procedures for interpretation of results.

Storage

Store the sealed bottle containing the dehydrated medium at 10 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

Expiration

Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedure

1. The combined inhibitory factors of this medium (malachite green, magnesium chloride, low pH) may inhibit certain *Salmonella*, such as *S. Typhi* and *S. Paratyphi A*. Isolation techniques should include a variety of enrichment broths and isolation media.
2. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
3. Consult appropriate texts for detailed information and recommended procedures.

Packaging

Product Name : Modified Rappaport Vassiliadis Medium

Product Code : DM362

Available Pack sizes : 500gm

References

1. Baird Parker. 1990. The Lancet. 336:1231.
2. Vassiliadis P. Pateraki E., Papaiconomou N., Papadaicis J. A., Trichopoulos D., 1976, Annales de Microbiologie (Institute Pasteur), 127B:195.
3. Rappaport F., Konforti N. and Navon B., 1956, J. Clin. Path., 9:261.



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Further Information

For further information please contact your local MICROMASTER Representative.



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DM362PSS,QAD/FR/024,Rev.00

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