Product :
RAPPAPORT VASSILIADIS BROTH

Also known as
Rappaport Vassiliadis R10 Broth; RVS Broth.

Specification
Liquid medium for the selective enrichment of *Salmonella* in foodstuffs and other samples, according to ISO and FIL-IDF standards.

Formula * in g/L
Soy peptone 4.500
Sodium chloride 7.200
Monopotassium phosphate 1.260
Dipotassium phosphate 0.180
Magnesium chloride (anhydrous) 13.40
Malachite green 0.036

Final pH 5.2 ±0.2 at 25 °C
* Adjusted and /or supplemented as required to meet performance criteria

Directions
Dissolve 26,8 g of powder in 1 L of distilled water, heating if necessary to help dissolve the powder. Dispense into test tubes or flasks and sterilize in the autoclave at 115ºC for 15 minutes.

Description
The Rappaport Vassiliadis medium complies with the recommendations of the APHA for the examination of food.
This culture medium is a modification of the R10 Medium (from Rappaport *et al.*) or RV Broth (from Vassiliadis *et al.*) by van Schothorst & Renaud. The modifications are an adjustment in the magnesium chloride concentration and the buffering capacity of the medium to aid pH maintenance during storage. It shows a higher selectivity towards *Salmonella* and produces better yields than other similar media, especially after preliminary enrichment and at an incubation temperature of 41.5 ± 1ºC.
Malachite green, low pH and magnesium chloride inhibit the growth of microorganisms normally found in the intestine but do not affect the proliferation of most salmonellae. As malachite green inhibits the growth of *Shigella*, other culture methods may need to be used to isolate this organism. The addition of soy peptone enhances the growth of *Salmonella*.

Technique
Inoculate the culture medium with the sample or material from a pre-enriched culture in buffered Peptone Water and incubate for up to 18-24 hours à 41.5 ±1 °C. Subculture from this broth onto selective culture media.

Quality control
Incubation temperature: 41.5 °C ± 1 **Incubation time:** 24 ± 3 h
Inoculum: Practical range 100±20 CFU. min. 50 CFU (productivity)/ 10^4 -10□ CFU (selectivity), according to ISO 11133:2014/Amd 1:2018.

Microorganism	Growth	Remarks
Enterococcus faecalis ATCC® 29212	Total inhibition	Recovery in TSA. 37ºC
Escherichia coli ATCC® 25922	Partial inhibition	Recovery in TSA. 37ºC
S. enteritidis ATCC® 13076 + 8739 + 27853	Good	Recovery in XLD (Mixed cultures). 37ºC
S. typhimurium ATCC® 14028+8739 +27853	Good	Recovery in XLD (Mixed cultures).37 ºC

References

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· FIL-IDF 93:2001 Standard. Milk and Milk Products. Detection of Salmonella. Brussels.
· HORWITZ, W. (2000) Oficial Methods of Analysis of AOAC International. Gaithersburg. MD. USA.
· ISO Standard 6579-1 (2017) Microbiology of food chain - Horizontal method for the detection, enumeration and serotyping of Salmonella - Part 1 : Detection of Salmonella spp.
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. ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
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· VASSILIADIS, P. (1983) The Rappaport Vassiliadis (RV) enrichment medium for the isolation of salmonellas: An overview. J. Appl. Bact. 54:69-76.
· VASSILIADIS, P., PATERAKI, EPAPAICONOMOU, N., PAPADAKIS, J.A.A., TICHOPOULOS, D. (1976) Noveau procédé d'enrichissement de Salmonella. Ann. Microbiol. (Inst. Pasteur) 127B (195-200).

Storage

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+4 ºC to 30 ºC).