RVS/Broth
(Rappaport Vassiliadis Soy)

355-5773
356-4324

DEFINITION
Selective enrichment broth used for the detection of *Salmonella* in food products and in water.

STANDARDS
FOOD MICROBIOLOGY
- **NF EN ISO 6579 (December 2002):** Food microbiology - Horizontal method for the detection of *Salmonella* spp.

- **FIL 93B (1995)**: Milk and dairy products - Detection of Salmonella.

- **Bacteriological analytical methods for testing shellfish** (Circular DGAL/SVHA/C 88/N°8003 of 28 April 1988).

WATER
- **ISO 6340 (1995):** Water quality - Detection of *Salmonella*.

- **NF EN ISO/DIS 19250 (October 2003):** Water quality - Detection and enumeration of *Salmonella.*

- **NF T90-461/A2 (May 2007)**: Water quality - Microbiology - Quality control for culture media.

PRINCIPLE
The nutrient substances provided by soy peptone favor the growth of *Salmonella*.
Due to the strong concentration of magnesium and the malachite green, the high incubation temperature and the low pH, the medium inhibits other bacteria.

PRESENTATION
- **Ready-to-use**
  10 ml x 25 tubes **code 355-5773**

- **Dehydrated**
  500 g **code 356-4324**

STORAGE
- Ready-to-use: + 2°C to 8°C.
- Dehydrated: +15°C to 25°C, in carefully-sealed bottles in a cool, dry place.
- Expiration date and batch number are shown on the package.

THEORETICAL FORMULA

Soy peptone	4.50 g
Sodium chloride	7.20 g
Potassium dihydrogen phosphate	1.26 g
Dipotassium hydrogen phosphate	0.18 g
Anhydrous magnesium chloride	13.40 g
Malachite green oxalate	36 mg
Distilled water	1,000 ml

Final pH (25°C) = 5.2 ± 0.2

OTHER PRODUCTS REQUIRED (NOT SUPPLIED)
- Distilled water

EQUIPMENT REQUIRED (NOT SUPPLIED)
(non-exhaustive)
- Scales
- Sterile weighing bags
- Grinder
- Hotplate
- Mixer-homogenizer
- Test tubes (16 x 160 mm) with autoclave-proof stoppers
- Sterile pipettes (0.1 ml, etc)
- Thermostatically-controlled incubator or incubation room, precise to ± 1°C
- Autoclave
- All usual laboratory equipment.

PREPARATION OF DEHYDRATED MEDIUM
Always shake before use.
Dissolve 26.8 g of powder in 1 liter of distilled water. Wait for 5 minutes, then mix until a homogenous suspension is obtained. Heat gently, swirling frequently, then bring to boiling point until completely dissolved. Dispense 10 ml per tube and sterilize in autoclave at 115°C (± 1°C) for 15 minutes.

Reconstitution ratio: 26.8 g/l
500g of powder makes 18.6 liters of RVS medium.

PROTOCOL
• Preparation of samples
According to the standards applicable to the product concerned.

• Non-selective pre-enrichment
According to the standards applicable to the product concerned.

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• **Inoculation and incubation**
Transfer 0.1 ml of pre-enrichment broth to a tube containing 10 ml of Rappaport Vassiliadis Soya (RVS) broth.
Incubate at 41.5°C ± 0.5°C for 24 hours.
Prolong incubation for a further 24 hours if necessary.

• **Isolation and incubation**
After incubation, isolate on appropriate selective media, then proceed with identification (according to the procedure described in the standard) if suspected *Salmonella* colonies are present.

PRECAUTIONS

- The medium is highly hygroscopic and must be protected from humidity.
- Comply with Good Laboratory Practice.

PERFORMANCES / QUALITY CONTROL OF THE TEST

The growth performances of the media are verified with the following strains:

STRAINS	Enrichment over 24h at 41.5°C
Salmonella Typhimurium ATCC 14028	> 10 characteristic colonies of *Salmonella* on XLD medium
Escherichia coli ATCC 25922	
Pseudomonas aeruginosa ATCC 27853	
Escherichia coli ATCC 25922	Total inhibition on TSA medium
Enterococcus faecalis ATCC 19433	Isolation on TSA medium < 10 colonies

QUALITY CONTROL OF MANUFACTURER

Every product manufactured and marketed by Bio-Rad is subject to a quality-assurance procedure at all stages, from the reception of raw materials to the marketing of the end-product. Each batch of finished product undergoes quality control and is marketed only if it satisfies the acceptability criteria.

Documentation relative to the production and control of each batch is kept on file.

KEY WORDS

Rappaport Vassiliadis Soy / *Salmonella* / Food products / Water / Detection / Magnesium chloride / Malachite green / Enrichment broth / Medium.

BIBLIOGRAPHY

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