# *MSRV*

***(Semi-solid Rappaport Medium)***

**LAB 150**

**Description**
MSRV was developed in 1986 by De Smedt, Bolderdijk and Rappold as a rapid means of *Salmonella* detection. The medium, based upon Rappaport Vassiliadis broth, is inoculated directly from the preenrichment medium, in the centre of the plate. Motile organisms spread from the centre in the semi-solid agar, but non-salmonellas are inhibited by the selective agents. After overnight incubation the use of polyvalent salmonella antisera or a latex kit can confirm the presence of a *Salmonella*. Alternatively, a paper disc wetted with polyvalent H antiserum can be placed 1/3 of the way from the edge of the dish, and will signal the presence of a *Salmonella* by inhibiting the mobility of the organism around the disc. Using this medium De Smedt and Bolderdijk have reported the possibility of detecting *Salmonella* in 24hrs (1987)

| Typical Formula | g/litre |
|---|---|
| Tryptone | 2.3 |
| Meat Peptone | 2.3 |
| Acid Hydrolysed Casein | 4.7 |
| Sodium chloride | 7.3 |
| Potassium dihydrogen phosphate | 1.5 |
| Magnesium chloride | 10.9 |
| Malachite green | 0.037 |
| Agar No. 1 | 2.5 |

**Method for reconstitution**
Weigh 31.5 grams of powder and disperse in 1 litre of deionised water. Soak for 10 minutes, swirl to mix and bring to the boil. Cool to 47°C. and add 2 vials of X150 novobiocin supplement (10mg/vial). Mix well before dispensing.

**Appearance:** Turquoise/blue, clear, soft gel.

**pH:** 5.2 0.2

Minimum Q.C organisms: *Salmonella typhimurium* WDCM 00031
*E. coli* (inhibition) WDCM 00013

**Storage of prepared medium:** Plates – up to 7 days at 4°C.

**Inoculation:** From pre-enrichment broth (6-24hrs) adding 0.1ml to the centre of the plate.

**Incubation:** 37°C. or 42 ±0.5°C. for 18-24 hours. Keep lid uppermost at all times.

**Interpretation:** A spreading growth indicates a *Salmonella* may be present, substantiated if a disc with polyvalent H antiserum has been added and is inhibiting the zone. This should be confirmed by subculturing from the edge of the mobility zone onto XLD and brilliant green agar and performing biochemical and serological tests. Direct latex agglutination may be carried out from the edge of the mobility zone.

**References**
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