**Muller-Kauffmann Tetrathionate-Novobiocin (MKTTn) Broth**

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| **Product No.** | **Product Category** | **Specification** |
| HCM013 | Dehydrated Culture Medium | 500g/bottle |

**Intended Use**

For the detection of Salmonella spp. in food, animal feed and in environmental samples from the food production area as described in ISO 6579-1:2017.

**Principle and Interpretation**

Meat extract and casein provide a source of nitrogen and amino acids and sodium chloride maintain theosmotic balance. Ox bile and brilliant green act as selective agents against non-target microorganisms. Tetrathionate is generated from the sodium thiosulfate. Iodine and calcium carbonate buffer the sulfuric acid generated from tetrathionate reduction.

**Formulation**

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| **Ingredients** | **/liter** |
| Meat extract | 4.3g |
| Enzymatic digest of casein | 8.6g |
| Sodium chloride | 2.6g |
| Calcium carbonate | 38.7g |
| Sodium Thiosulfate (anhydrous) | 30.4g |
| Ox bile | 4.78g |
| pH8.0±0.2 at 25°C | |

**Preparation**

Suspend 89.4g in 1 L of purified water. Heat with frequent agitation and boil to completely dissolve the powder. Distribute into flasks，and then cool to below 45°C. Add a vial of novobiocin sodium salt (SR0640), a vial of iodine solution and a vial of brilliant green (SR0040) into 100 mL of base medium. Mix thoroughly.

**Quality Control**

Cultural characteristics observed after incubation at 35-37°C for 24 hours

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| **Quality control strains** | **Approx. Inoculum(CFU)** | **Expected Results** |
| *Salmonella typhimurium* ATCC14028 | 10 – 100 | ≥ 10 cfu on XLD |
| *Escherichia coli*  ATCC25922 | > 104 | ≤100 cfu on TSA |
| *Enterococcus faecalis* ATCC29212 | > 104 | <10 cfu on TSA |

**Storage and Shelf Life**

2-30℃，Keep container tightly closed, avoid direct sunlight.

Use before expiry date on the label.

**Precautions**

1. When weighing the dehydrated medium, please wear masks to avoid causing respiratory system discomfort

2. Keep container tightly closed after using to prevent clumping.

**Waste Disposal**

Microbiological contamination was disposed by autoclaving at 121°C for 30 minutes.

**Revision**

On June 14, 2024

**References**

ISO 6579:2017 Microbiology of food and animal feeding stuffs – Horizontal method for the detection, enumeration and serotyping of Salmonella spp.