ANSR for *Listeria* Enrichment Broth 1
SKU: 700002837
9814

Intended Use

ANSR for *Listeria* Enrichment Broth 1 is used in the **Neogen ANSR for *Listeria*** test method for the presumptive identification of ***Listeria* spp.** from a wide variety of environmental samples.

Product Summary and Explanation

Listeria monocytogenes, described in 1926 by Murray, Webb, and Swann, is a widespread problem in public health and food industries.[1] This organism has the ability to cause human illness and death, particularly in immunocompromised individuals and susceptible pregnant women.[2] Epidemiological evidence from outbreaks of listeriosis indicate the principle route of transmission is via the consumption of foodstuffs contaminated with *Listeria monocytogenes*.[3] Implicated vehicles of transmission include turkey frankfurters, coleslaw, pasteurized milk, Mexican style cheese and pate′.[4] *Listeria* species are ubiquitous in nature, present in a wide range of unprocessed foods and in soil, sewage, and river waste.[5]

Principles of the Procedure

The ANSR for *Listeria* method provides for rapid and accurate detection of *Listeria* spp.in a wide variety of environmental samples. In an AOAC Research Institute Performance Tested Method™ study, ANSR for *Listeria* was found to be an effective method for detection of *Listeria* spp. in sponge or swab samples taken from stainless steel, plastic, ceramic, tile, sealed concrete and rubber environmental surfaces.

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Precautions

1. For laboratory use.
2. **IRRITANT**. Irritating to eyes, respiratory system, and skin.

Directions

Preparation directions are dependent upon the type of sample tested. Refer to the ANSR™ for Listeria test system package insert for complete instructions.

ANSR for *Listeria* Enrichment Broth 1

Rehydrate 55 g of ANSR for *Listeria* Enrichment Broth 1 with 1 L sterile water pre-warmed to 36°C.

SAMPLE ENRICHMENT
For environmental samples:

1. Place the sponge or swab sample in a Stomacher-type bag.
2. Add an appropriate amount of **ANSR for *Listeria* Enrichment Broth 1** (Neogen item 9814 or 700002837) pre-warmed to 36°C to the bag.
    a. For sponge samples, an appropriate amount is usually 100-200ml.
    b. For swab samples, an appropriate amount is usually 10ml.
3. Homogenize (Stomacher, etc.) the sample as appropriate for the sample type.
4. Incubate the sample at 36 + 1°C for **16–24 hours**.

Quality Control Specifications

Dehydrated

Appearance: Medium is homogenous, free-flowing and light to medium beige.

Re-hydrated

Appearance: Golden yellow with an amber opalescent top, clear to light haze with a trace to moderate precipitate.

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Solubility: 55 grams dissolves in 1L of water.
pH: pH of the re-hydrated medium should be 7.2 ± 0.2.

Performance: Stomacher-type bags were inoculated with the following organisms and the procedure was followed using the package insert:

Microorganism	ANSR for *Listeria* test results
L. monocytogenes spp.	Positive
E. faecium ATCC 19434	Negative
S. aureus ATCC 33591	Negative

Test Procedure
Refer to the ANSR for *Listeria* package inserts for complete details.

Results
Refer to ANSR for *Listeria* package inserts for complete details. The presumptive identification of *Listeria* spp. must be confirmed with biochemical and serological procedures.

Storage
Store ANSR media in a sealed container at 15 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Keep container tightly closed; protect from moisture.

Expiration
Refer to 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.

Limitations of the Procedure
1. Use re-hydrated medium within 6 hours of preparation.
2. Do not autoclave ANSR media or use expired media.
3. Sterile water should be brought to 36°C before use when using ANSR media.
4. The presumptive identification of *Listeria* spp. must be confirmed by further testing.
5. Although the ANSR test chemistry detects *L. grayi*, detection of this species in enriched samples will be variable depending on the ability of individual strains to growth under the enrichment conditions used in the method.

Packaging
ANSR for *Listeria* Enrichment Broth 1 **Code No. 9814 or 700002837 500 g**

References

1. **Murray, E. G. D., R. A. Webb, and M. B. R. Swann.** 1926. A disease of rabbits characterized by large mononuclear leucocytosis caused by a hitherto undescribed bacillus *Bacterium monocytogenes*. J. Path. Bacteriol. **29:**407-439.
2. **Monk, J. D., R. S. Clavero, L. R. Beuchat, M. P. Doyle, and R. E. Brackett.** 1994. Irradiation inactivation of *Listeria monocytogenes* and *Staphylococcus aureus* in low and high fat, frozen and refrigerated ground beef. J. Food Prot. **57:**969-974.
3. **Bremer, P. J., and C. M. Osborne.** 1995. Thermal-death times of *Listeria monocytogenes* in green shell mussels prepared for hot smoking. J. Food Prot. **58:**604-608.
4. **Grau, F. H., and P. B. Vanderlinde.** 1992. Occurrence, numbers, and growth of *Listeria monocytogenes* on some vacuum-packaged processed meats. J. Food Prot. **55:**4-7.
5. **Patel, J. R., C. A. Hwang, L. R. Beuchat, M. P. Doyle, and R. E. Brackett.** 1995. Comparison of oxygen scavengers for their ability to enhance resuscitation of heat-injured *Listeria monoytogenes*. J. Food Prot. **58:**244-250.

Technical Information
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