

## 9818 ANSR for *Campylobacter* Enrichment Broth

### Intended Use

ANSR for *Campylobacter* Enrichment Broth is used in the Neogen ANSR for *Campylobacter* test method for the presumptive identification of *Campylobacter jejuni*, *C. coli* and *C. lari* from poultry rinse samples and carcass swabs.

### Product Summary and Explanation

Many experts consider *Campylobacter* to be the leading cause of enteric illness in the US.<sup>1</sup> *Campylobacter* spp. can cause mild to severe diarrhea, with loose, watery stools often followed by bloody diarrhea.<sup>1</sup> This pathogen is highly infective and transmitted by contaminated food or water. Poultry is a primary reservoir of *Campylobacter* spp. and may cause contamination of more than 80% of chicken carcasses.

### Principles of the Procedure

ANSR for *Campylobacter* is an isothermal, amplified nucleic acid assay. The ANSR for *Campylobacter* method is based on nicking enzyme amplification reaction (NEAR<sup>™</sup>) technology preceded by the reverse transcription of 23s ribosomal RNA. The samples are enriched in ANSR for *Campylobacter* Enrichment Broth aerobically or under microaerophilic atmosphere at  $42 \pm 1^\circ\text{C}$  for 20-24 hours. A 2-stage lysis reaction is performed, first at  $37^\circ\text{C}$  for 10 minutes, then at  $80^\circ\text{C}$  for 20 minutes. Next, a portion of the lysed sample is transferred to a strip tube containing lyophilized ANSR reagents. The tubes are sealed and incubated at  $56^\circ\text{C}$  on the ANSR reader. Results are generated by the reader and displayed in the ANSR software within 18 minutes. Positive results may be confirmed from the enrichment cultures following standard procedures. Each tube of ANSR reagents contains an internal positive control, ensuring that the reagents are functioning properly.

### 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<sup>™</sup> for *Campylobacter* test system package insert for complete instructions.

### **ANSR for *Campylobacter* Enrichment Broth**

Aseptically rehydrate 56 grams of ANSR for *Campylobacter* Enrichment Broth with 1 L sterile water pre-warmed to  $42^\circ\text{C}$ . **This is a 2X formula weight solution.**

### **SAMPLE ENRICHMENT**

#### **Poultry rinse**

1. Weigh out 30 mL of sample in a 4 oz. Whirl-Pak<sup>®</sup> bag.
2. Add 30 mL 2X ANSR for *Campylobacter* Enrichment Broth prewarmed to  $42^\circ\text{C}$  to the bag. Swirl briefly to mix.
3. NOTE: Attempt to minimize airspace in the bag as well as exposure to oxygen with gentle, brief mixing.
4. Incubate the culture aerobically or microaerobically at  $42 \pm 1^\circ\text{C}$  for 20–24 hours.

**Carcass sponge**

1. Place the sponge in a Stomacher-type bag.
2. Add 25 mL of sterile Buffered Peptone Water and 25 mL of 2X ANSR for *Campylobacter* Enrichment Broth to the bag.
3. Grasp bag tightly at top and shake bag vigorously using a side-to-side motion or squeeze sponge several times to ensure complete mixing.
4. Incubate the culture aerobically or microaerobically at 42 ± 1°C for 20–24 hours.

**Quality Control Specifications**

**Dehydrated**

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

**Re-hydrated**

**Appearance:** Light to medium amber, moderately hazy to hazy, none to light precipitate with fine black particles.

**Solubility:** 1X: 28 grams dissolves in 1L of processed water; 2X: 56 grams dissolves in 1L of processed water.

**pH:** pH of the re-hydrated medium should be 6.9 ± 0.2.

**Performance:** 10ml sterile tubes of ANSR for *Campylobacter* Enrichment Broth were inoculated with the following test strains and incubated aerobically at 41 to 43°C for 20-24 and up to 40-48 hours. Growth or inhibition was confirmed by plating on a nonselective growth medium and incubated in the appropriate atmosphere and at the appropriate temperature.

Microorganism	ANSR for <i>Campylobacter</i> growth confirmation
<i>Campylobacter jejuni</i> ATCC 29428	<b>Growth</b>
<i>Campylobacter jejuni</i> ATCC 33291	<b>Growth</b>
<i>Campylobacter coli</i> ATCC 33559	<b>Growth</b>
<i>Campylobacter lari</i> ATCC 35221	<b>Growth</b>
<i>Enterococcus faecalis</i> ATCC 29212	<b>Inhibited</b>
<i>Escherichia coli</i> ATCC 25922	<b>Inhibited</b>
<i>Proteua mirabilis</i> ATCC 12453	<b>Inhibited</b>

**Test Procedure**

Refer to the ANSR for *Campylobacter* package inserts for complete details.

**Results**

Refer to ANSR for *Campylobacter* package inserts for complete details. The presumptive identification of *Campylobacter* spp. must be confirmed with biochemical and serological procedures.<sup>1</sup>

**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**

Revision: 0 Effective Date: 7/12/2022

1. Use re-hydrated medium within the same day of preparation.
2. Do not autoclave ANSR media or use expired media.
3. Sterile water should be brought to 42°C before use when using this ANSR medium.
4. The presumptive identification of *Campylobacter* spp. must be confirmed by further testing.<sup>1,2</sup>

#### **Packaging**

**ANSR for *Campylobacter* Enrichment Broth      Code No. 9818    500 g**

#### **References**

1. **U.S. Food and Drug Administration.** 1998. Bacteriological analytical manual, 8<sup>th</sup> ed., Rev A., AOAC International, Gaithersburg, MD.
2. **USDA-FSIS (2015) Microbiology Laboratory Guidebook, chapter 41.04**  
<http://www.fsis.usda.gov/wps/wcm/connect/0273bc3d-2363-45b3-befb-1190c25f3c8b/MLG-41.pdf?MOD=AJPERES>

#### **Technical Information**

Contact Neogen Corporation for Technical Service at (800)234-5333, (517)372-9200 or fax us at (517)372-2006.

Revision: 0 Effective Date: 7/12/2022