



S2-HETER vial uninoculated (left) and inoculated vial (right).

The Heterotrophic (S2-HETER) Vial is designed to detect aerobic and facultative anaerobic heterotrophic bacteria in water, with a low nutrient requirement. The vial has broad inclusivity and an assay time of 48 hours for most applications. As organisms grow in the broth medium, the carbon dioxide (CO₂) produced diffuses through a membrane layer into a soft agar plug containing a dye indicator. The color change in the dye is read by the Soleris instrument. The

membrane layer also serves as a barrier, eliminating product interference with the reading frame.

Materials Required:

1. S2-HETER, Heterotrophic vial
2. Butterfield's Phosphate Buffer (BPB-99)

Vial Specifications

1. Vial pH is 7.2 ± 0.2
2. Vial sample capacity: 0.1–1.0 mL

Sample Preparation

1. Add the sample directly or prepare a 1:10 dilution by adding 11 mL of sample to 99 mL of sterile Butterfield's Phosphate Buffer.
 - a. Do not use Tryptic Soy Broth to prepare the sample
2. If using the dilute-to-specification method, complete the dilution required.

Vial Preparation

1. Remove S2-HETER vials from the refrigerator and allow to equilibrate to room temperature.
2. Add 150 µL of 1 N NaOH to the vial before adding sample.

Inoculation of Vial

1. Inoculate the vial with no more than 1.0 mL and no less than 0.10 mL of the sample to be tested. If using dilute-to-specification method, add the volume of the appropriate dilution required.
2. Cap the vial and gently invert 3 times to mix sample. Keep cap tight.
3. Insert the vial into the Soleris instrument set at 35°C or as indicated by trainer. The incubation temperature and test duration can be optimized if required. It is not recommended to adjust parameters without consulting Neogen Technical Services.

Algorithm Utilized:

| Test | Threshold | Skip | Shuteye | Test Duration | Temperature |
|----------|-----------|------|---------|---------------|-------------|
| S2-HETER | 7 | 2 | 10 | 48 Hours | 35°C |

Disclaimers:

Information provided is based on validation procedures that Neogen performed in Neogen Laboratories, deviation from procedures are possible, but should be discussed with Neogen Technical Services.

Appearance of the vials should be inspected prior to use.

Certain product matrices may require new parameters. For more information, contact Neogen Technical Services.