

# Direct Coliform Buffered Vial (DC-109B), 9 mL

700002928 | DC-109B

The Direct Coliform – Buffered Vial, 9 mL (DC-109B) is a screening vial specific for coliform organisms in products that contain strong dyes or darker colors. The vial has broad inclusivity and an assay time of 18–24 hours for most applications. The vial contains a peptone yeast extract base with lactose as a carbon source. The selective agents include bile salts, sodium lauryl sulfate and other gram-positive inhibitors. As organisms grow in the broth medium, the carbon dioxide (CO<sub>2</sub>) 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.



Pictured: DC-109B vial uninoculated (left) and inoculated vial (right).

## Materials Required

DC-109B, Direct Coliform – Buffered Vial (9 mL)

### Dependent on Sample Tested

1. Sterile 1 N to 5 N sodium hydroxide (NaOH) and/or hydrochloric acid (HCl)
2. pH meter or pH paper
3. Butterfield's Phosphate Buffer, 99 mL (BPB-99)
4. For USP Testing: Tryptic Soy Broth, 90 mL (BLX-TSB90) or Butterfield's Phosphate Buffer, 90 mL (6654)
  - a. If required use a designated neutralization broth, such as D/E Neutralizer, TAT Broth, Modified Letheen Broth, etc.

### Only for Confirmation

Soleris Brilliant Green Broth tubes (BGB-127)

## Vial Specifications

1. Vial pH is  $7.2 \pm 0.2$ 
  - a. This vial is designed with increased buffering capacity to accommodate samples in the pH range of 4.6–6.0 without a pH adjustment. A pH adjustment may be required in certain product matrices.

**Notes:** If testing yogurt add 1 g to the vial; this typically causes pH to fall between  $6.7 \pm 0.2$ . This vial is designed with increased buffering capacity to accommodate samples in the range of 4.6–6.0 without a pH adjustment. However, if the pH of the vial is outside of recommended pH parameters after adding sample, a pH adjustment is required.

2. Vial sample capacity up to 1.0 mL/g.

## Sample Preparation

1. For non-USP Testing, add the sample directly or prepare a 1:10 dilution by adding 11 g of sample to 99 mL of sterile Butterfield's Phosphate Buffer. Product number: DC-109B

Pictured: DC-109B vial uninoculated (left) and inoculated vial (right). Instructions for use in Soleris Instrument.

2. For USP testing, perform 1:10 dilution by adding 10 g of sample in 90 mL of Tryptic Soy Broth or designated neutralization broth.
  - a. Check pH and adjust if necessary, to  $7.0 \pm 1.0$ .
3. If using the dilute-to-specification method, complete the dilution required.

**Note:** This vial is designed with increased buffering capacity to accommodate samples in the pH range of 4.6–6.0 without a pH adjustment. A pH adjustment may be required in certain product matrices.

Vial Preparation

- 1. Remove DC-109B 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 three 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.

Incubation Temperatures

35°C or as indicated by Neogen Technical Services.

Algorithm Utilized

For Soleris

Test	Threshold	Skip	Shuteye	Test Duration	Temperature
DC-109B	8	2	30	24	35°C

Coliform Confirmation Step (Optional)

Material Required

- 1. BGB-127 Brilliant Green Bile Broth

Test Method

- 1. From a positive DC-109B vial, invert to mix and inoculate 0.1 mL of the broth medium into a Soleris Brilliant Green Broth tube (BGB-127) with the inverted Durham tube.
- 2. Incubate for 18–24 hours at 35°C. Gas production inside the Durham tube and yellow color due to the acid production indicates a positive result

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.

If shuteye detections are observed the threshold may need to be adjusted based on the product matrix. Certain product matrices may require new parameter adjustments, including increased test duration. For more information, contact Neogen Technical Services.

