soleris®

Direct Lactic Acid Vial

Product No. DLA-109

Instructions for use in Soleris Instrument

Soleris® vial uninoculated (left) and inoculated vial (right).

The Direct Lactic Acid (DLA) Vial (9 mL) rapidly detects lactic acid microorganism contamination in food products. As Lactic Acid Bacteria grow in the broth medium, the carbon dioxide (CO_2) 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. DLA-109, Direct Lactic Acid Medium Vial
2. Syringe filter (Fisher 05-713-387)
3. 10 mL syringe (Fisher 03-377-23)
4. Butterfield's Phosphate Buffer, 99 mL (BPB-99)
5. Vancomyin hydrochloride (Sigma V2002)
6. Amphotericin B solubilized (Sigma A9528) or cycloheximide (Sigma C7698) and EtOH-25, Ethanol Yeast and Mold Reagent
7. Sterile deionized/distilled water

Vial Specifications

1. Vial pH is 4.0 ± 0.2
2. Vial sample capacity up to 1.0 mL

Vial Preparation

1. Remove DLA-109 vials from the refrigerator and allow to equilibrate to room temperature.

Amphotericin B Preparation:

1. Weigh 0.01 g of amphotericin B into a sterile test tube containing 10 mL of sterile water.
2. Vortex until the amphotericin B is dissolved.
3. If the supplement is used the same day it is prepared, store in the refrigerator at 2–8°C in the dark until added to the Soleris vial. Any supplement not used on the same day it is prepared should be stored at 2–8°C for up to 3 weeks or frozen at -20°C for up to 3 months.

Cycloheximide Preparation:

1. Weigh out 0.05 g of cycloheximide into a sterile test tube containing 2 mL of ethanol. Vortex until the cycloheximide is dissolved.
2. Add 3 mL of sterile deionized water. Vortex again.
3. Any supplement not used on the same day it is prepared should be stored at 2–8°C for up to 3 weeks. If crystals form during storage, warm the solution in a 45°C water bath until dissolved.

Antibacterial Supplement – Vancomycin:

1. Weigh 0.1 g of vancomycin hydrochloride into a sterile test tube containing 10 mL of sterile water
2. Filter-sterilize through a 0.45 µm filter.
3. Using the sterile 0.01 g/mL solution, aseptically add 0.1 mL (100 µL) to 9.9 mL of sterile water.
4. Any supplement not used on the same day it is prepared should be stored at 2–8°C for up to 7 days.

Vial Preparation

1. Remove DLA-109 vials from the refrigerator and allow to equilibrate to room temperature.
2. To prevent mold and yeast growth, add 0.12 mL (120 µL) of prepared amphotericin B Supplement or 0.1 mL (100 µL) of prepared cycloheximide supplement to each DLA-109 vial.
   a. Cap the vial tight and invert three times to mix.
   b. Add the sample to the vial within 2 hours of the addition of the supplement.
3. To prevent *Bacillus* growth, add 0.1 mL (100 µL) of the vancomycin supplement to each DLA-109 vial.
   a. Cap the vial tight and invert three times to mix.
   b. Add sample within 1 hour of addition of the supplement.

Sample Preparation

1. 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.
2. If using dilute-to-specification testing, complete the dilution required. See Soleris Manual, section 1.7 for more information.

Inoculation of Vial

1. Inoculate the vial with no more than 1.0 mL and no less than 0.1 mL of the sample to be tested. If using specification monitoring, 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 30–35°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	Duration	Temperature
DLA-109	8	2	50	48 Hours	30–35°C

Disclaimers:

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

Samples may need to be pH adjusted for all vials.

Appearance of the vials should be inspected prior to use.

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

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