

Direct Yeast and Mold Vial

Product No. DYM-109C

Instructions for use in Soleris Instrument



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

The Direct Yeast and Mold (DYM-109C) Vial (9 mL) allows for a rapid detection of yeast and mold in a variety of matrices. The vial has broad inclusivity and an assay time of 48 hours for most applications. As yeast and molds 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.

In an AOAC Research Institute Performance Tested Method study (License #051301), the Soleris DYM-19C vial was found to be an effective procedure for semi-quantitative determination of yeast and mold in the following sample types: nonfat dry milk, ice cream mix, salad dressing, yogurt, dried fruit, orange juice concentrate, tomato juice, saw palmetto powder, corn flour, cocoa powder, cocoa liquor, cocoa butter, dry pet food and black pepper.

Materials Required:

1. Direct Yeast and Mold vial (DYM-109C)
2. Yeast and Mold Supplement (YI-110C)
3. Sterile water
4. Butterfield's Phosphate Buffer (BPB-99)

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. 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 Lethen Broth, etc.

Vial Specifications

1. Vial pH is 5.6 ± 0.2
2. Vial sample capacity up to 0.1–1.0 mL

Yeast and Mold Supplement Preparation

1. Add 10 mL of sterile deionized water, mix well. Store in the refrigerator up to 7 days after rehydration. For more information, please see the YI-110C product insert.

Vial Preparation

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

2. Add supplement to the DYM-109C.
 - a. Sample without starter culture: Add 0.15 mL of YI-110C directly to the DYM-109C vial, mix well. Add sample to vial within 2 hours after the addition of supplement. Refer to insert.
 - b. Sample with starter culture: Add 0.6 mL of YI-110C directly to the DYM-109C vial, mix well. Add sample to vial within 2 hours after the addition of supplement. Refer to insert.

Sample Preparation

1. Add sample directly or, if using dilute-to-specification, complete the dilution required (See Soleris Manual, section 1.7).
 - a. For USP testing, perform 1:10 dilution by adding 10 g of sample in 90 mL of Tryptic Soy Broth or designated neutralization broth.
 - i. Check pH and adjust, if necessary, to 7.0 ± 1.0.
 - b. For all other testing, perform 1:10 dilution by adding 11 g of sample in 99 mL of Butterfield's Phosphate Buffer
 - i. Check pH and adjust, if necessary, to 7.0 ± 1.0.
2. If necessary, use Butterfield's Phosphate Buffer to create the dilutions to the appropriate specification.

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 28°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
DYM-109C	8	2	50	48–72 hours	28°C

CAUTION: Products containing CO₂-releasing compounds (e.g., ascorbic acid, calcium carbonate, or calcium ascorbate) need to be carefully validated, as reactions with the vial chemistry may occur, causing false positive results.

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 new parameters. For more information, contact Neogen Technical Services.