

Violet Red Bile Agar w. X-GLN - Instructions for Use

Intended Use

BACGro™ Violet Red Bile Agar w. X-GLN (VRBX), when prepared as directed, is intended for the detection and enumeration of *Escherichia coli* and other coliforms from food and dairy products.

Product Summary

Violet Red Bile Agar with X-GLN contains peptone to provide vitamins and minerals, as well as a carbon and nitrogen source. Yeast extract promotes bacterial growth by supplying B-complex vitamins. Lactose provides a carbohydrate source. Bile salts and crystal violet aid in the inhibition of Gram-positive bacteria. Neutral red is a pH indicator in which lactose-fermenters will produce red colonies and halos (due to bile precipitation). Sodium chloride conserves osmotic balance. X-glucuronide is a chromogenic substrate for β -glucuronidase. Agar is a solidifying agent.

The presence of β -glucuronidase differentiates most *E. coli* from other coliforms. The formed *E. coli* colonies are colored blue.

Formulation (per Liter)*

Peptone	7.0 g
Yeast Extract	3.0 g
Lactose	10.0 g
Bile Salts No. 3	1.5 g
Sodium Chloride	5.0 g
Neutral Red	0.03 g
Crystal Violet	0.002 g
X-Glucuronide	0.1 g
Agar	15.0 g
Total	41.6 g/L

*Formula may be supplemented and/or adjusted as required to meet performance criteria

Directions

1. Add 41.6 g of VRBX powder to 1 L of deionized water.
2. Stir while heating. Bring to a brief boil to dissolve completely.
3. **Do Not Autoclave.**
4. Aliquot media into sterile bottles for storage.
5. Store prepared media at room temperature, protected from direct light.
6. Re-melt agar using an autoclave at maximum of 105°C for and no more than 30 min.
7. Allow media to cool to 50°C prior to use.

Precautions

This product is for laboratory use only and should only be used by qualified, trained laboratory personnel. Personnel should always use proper aseptic technique and observe all biohazardous precautions. All microbiological cultures should be presumed to be infectious.

Avoid ingestion, inhalation, or contact with skin and mucous membranes. If contact occurs, flush the area with clean water.

Quality Control Specifications

Gold Standard Diagnostics tests each lot of manufactured BACGro™ culture media utilizing appropriate control organisms and specifications as documented on the Certificate of Analysis. End users should perform quality control testing in accordance with government regulatory requirements and accreditation guidelines. The following specifications are routinely used for testing:

Appearance (dehydrated): Pink-beige, free-flowing, homogenous. May contain dark particles.

Appearance (prepared): Red-purple, slightly opalescent.

pH (prepared): 7.2 – 7.6 at 25°C

Organism Performance:

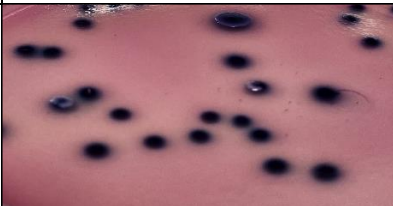
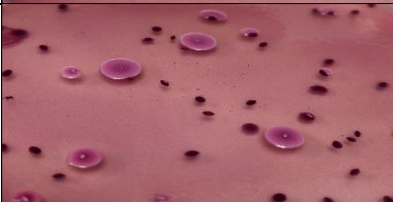
Strain ID	Inoculum	Incubation			Result
		Time	Temp.	Environment	
<i>E. coli</i> (ATCC® 25922)	<100 CFU	22 - 26 hr.	35° C	Aerobic	Growth, Blue colonies.*
<i>C. freundii</i> (ATCC® 8090)	<100 CFU	22 - 26 hr.	35° C	Aerobic	Growth, pink-red colonies.*
<i>P. aeruginosa</i> (ATCC® 9027)	>1000 CFU	22 - 26 hr.	35° C	Aerobic	Growth, colorless colonies.

*Strains of *E. coli* and *C. freundii* may produce halos of precipitate around the colonies.

<i>E. faecalis</i> (ATCC® 19433)	>1000 CFU	22 - 26 hr.	35° C	Aerobic	No growth
<i>E. faecalis</i> (ATCC® 29212)	>1000 CFU	22 - 26 hr.	35° C	Aerobic	No growth

Interpretation of Results

Total coliform counts are red and blue colonies. *E. coli* counts are blue colonies.

Organism	Description	Photo	Color
<i>E. coli</i>	Blue colonies w./w.o. halos		Blue
Coliforms, other than <i>E. coli</i>	Pink-red colonies w./w.o. halos		Purple

Limitations of the Procedure

This product is not labeled for use as a medical device, and is not intended to diagnose, treat, or prevent disease.

Due to variation in nutritional requirements, some species or strains may be encountered that grow poorly in this medium.

Further biochemical or serological testing is required for the identification of organisms grown in this medium.

Some *E. coli*, most notably isolates of *E. coli* O157:H7, are β -glucuronidase negative and appear pink-red colonies.

Not recommended for testing food matrices that contain endogenous glucuronidase (such as mollusks).

Not recommended for testing food matrices that are dark in color and may obscure color interpretation.

Color blind individuals may have difficulty interpreting results.

Storage and Expiration

BACGro™ VRBX should be stored at 2 – 30 degrees Celsius. Because of the hygroscopic nature of dehydrated culture media, it should be stored in a dry place and the lid should remain tightly sealed. Media should be discarded if it is not free flowing or shows discoloration.

The expiration date printed on the label is applicable to media stored as directed.

Media can be prepared in advance. Solidified, prepared agar can last up to 8 weeks at room temperature, protected from direct light.

Catalog Numbers

DCM8001- Violet Red Bile Agar w. X-GLN, 500g

DCM8005- Violet Red Bile Agar w. X-GLN, 5 kg

Revision History:

Revision	Description	Effective Date
02	Added additional instruction in Directions, and Storage and Expiration in regards to prepared media. Added pictures to distinguish between <i>E.coli</i> and other coliforms	29-JUN-2023
01	Document creation	19-MAY-2023