

BACGro™ ULTRA Listeria Broth - Instructions for Use

Intended Use

BACGro™ ULTRA Listeria Broth (BULB), when prepared as directed, is intended for use as a selective enrichment medium for *Listeria* spp. from food and environmental samples. BULB is not intended for use in diagnosis, treatment, or prevention of disease in humans.

Product Summary

The *Listeria* genus is ubiquitous in our environment, and while most species do not cause disease in humans, *L. monocytogenes* does pose a human health threat, especially in immunocompromised individuals and pregnant women. *Listeria* is commonly found in food manufacturing environments and outbreaks have been reported from many different food sources, including meats and dairy products. *Listeria* presents a challenge in food production environments because is able to grow in environments ranging from pH of 5.0 – 9.6 and at refrigerated temperatures.

BULB is a selective enrichment media for the growth of *Listeria* spp. from food goods and other environmental samples. Peptones provide the nitrogen sources needed for growth, along with vitamins and minerals to support cellular function. Salts act as buffering agents. Inhibitory agents provide the selectivity needed to grow *Listeria*.

Formulation* (per Liter)

Peptones	21.0 g
Salts	30.1 g
Inhibitory Agents	0.1 g
Total	51.2 g/L

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

Directions

1. Dissolve 51.2 g of BACGro™ ULTRA Listeria Broth powder into 1L of purified water
2. Mix and dissolve completely.
3. Autoclave at 121 degrees Celsius for 15 minutes.
4. Cool to room temperature 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. BACGro™ ULTRA Listeria Broth is HARMFUL if swallowed, inhaled, or absorbed through the skin. May cause central nervous system damage.

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): Light beige, homogenous, free flowing powder, free of debris.

Appearance (prepared): Yellow to light amber, with no precipitate.

pH (prepared): 7.0 – 7.4 at 25°C

Organism Performance:

Strain ID	Inoculum	Incubation			Growth
		Time	Temp.	Environment	
<i>L. monocytogenes</i> (ATCC® 13932) + <i>E. faecalis</i> (ATCC® 29212) + <i>E. coli</i> (ATCC® 25922)	10-100 CFU + 10 ⁴ CFU + 10 ⁴ CFU	22-26 hr.	37° C	Aerobic	Growth
<i>L. monocytogenes</i> (ATCC® 35152) + <i>E. faecalis</i> (ATCC® 29212) + <i>E. coli</i> (ATCC® 25922)	10-100 CFU + 10 ⁴ CFU + 10 ⁴ CFU	22-26 hr.	37° C	Aerobic	Growth

<i>L. grayi</i> (ATCC® 25401) + <i>E. faecalis</i> (ATCC® 29212) + <i>E. coli</i> (ATCC® 25922)	10-100 CFU + 10 ⁴ CFU + 10 ⁴ CFU	22-26 hr.	37° C	Aerobic	Growth
<i>L. monocytogenes</i> (ATCC® 13932)	10-100 CFU	22-26 hr.	37° C	Aerobic	Growth
<i>L. monocytogenes</i> (ATCC® 35152)	10-100 CFU	22-26 hr.	37° C	Aerobic	Growth
<i>L. grayi</i> (ATCC® 25401)	10-100 CFU	22-26 hr.	37° C	Aerobic	Growth
<i>E. faecalis</i> (ATCC® 29212)	10 ⁴ CFU	22-26 hr.	37° C	Aerobic	Inhibited
<i>E. coli</i> (ATCC® 25922)	10 ⁴ CFU	22-26 hr.	37° C	Aerobic	Inhibited

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 strains may be encountered that grow poorly in this medium. Competing flora in the test sample may outgrow *Listeria* and affect recovery.

Further testing is required for the identification and confirmation of *Listeria*.

Storage and Expiration

BACGro™ ULTRA Listeria Broth 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.

The shelf life of prepared media is dependent upon many factors in media preparation and storage. Gold Standard Diagnostics recommends storing at 2°C – 25°C, **protected from light** for no longer than one year.

Catalog Numbers

DCM1701 – BACGro™ ULTRA Listeria Broth, 500g

DCM1705 – BACGro™ ULTRA Listeria Broth, 5kg

DCM1710- BACGro™ ULTRA Listeria Broth, 10kg

Revision History:

Revision	Description	Effective Date
06	Adding the inoculum of inhibitory organisms within co-culture test.	23-FEB-2024
05	Added DCM1701 as a part number	04-JAN-2024
04	Update shelf life of prepared media from six weeks to one year	19-DEC-2023
03	Added co/pure culture growth promotion performance.	16-JAN-2023
02	Changed specification of inhibited organisms to ~1000 CFU	16-JUN-2022
01	Document creation	08-MAR-2022