



ACTERO™ Listeria Enrichment Media

Product Information

Intended Use:

ACTERO™ Listeria Enrichment Media (“ALEM”) is a selective media, specifically optimized for a 24-hour single-step recovery and enrichment of *Listeria* spp. from food contact surface samples (e.g., from stainless steel and plastic surfaces).

Principle of Operation:

ACTERO™ Listeria Enrichment Media, “ALEM”, combines nutritional components with additional ingredients that are necessary to selectively improve Listeria bacterial growth. The selective agents present in the ALEM have been optimized to efficiently target competing normal bacterial flora without affecting the growth of *Listeria* spp.

Contents:

Dehydrated ACTERO™ Listeria Enrichment Media is provided in **500 g Bottle** (Cat# FCM-011) Each bottle contains the correct amount of media powder to sufficiently prepare 9.29 L of liquid media.

Additional Materials Required:

1. Non-bactericidal 8×4×0.3 cm sterile cellulose sampling sponges pre-moistened with neutralizing Dey-Engley buffer. (D/E). (FoodChek Cat # FCLS-002)
2. Sterile stomacher bags.
3. Modified Oxford agar plates (MOX).
4. Rapid L.mono agar plates (RLM).
5. Horse blood overlay agar (HL).
6. Calibrated 10 µl plastic inoculating loops.
7. Regular laboratory equipment is also required.

Procedure:

General Preparation

Instruction to prepare 1 L of ACTERO™ Listeria Enrichment Media (Cat. # FCM-011)

Non- Autoclave Method

1. Prepare a sterile and clean bottle for each liter of media preparation.
2. Shake container of dry enrichment media before each use.



3. Measure 53.8 g of powder into the bottle and add to 1 L of **sterile** distilled water.
4. Constantly stir and heat solution to 100°C until powder dissolved (approximately 35 min).
5. Cool the prepared media to 29°C and use immediately.

Autoclave Method

1. Prepare a clean bottle for each liter of media preparation.
2. Shake container of dry enrichment media before each use.
3. Measure 53.8 g of powder into the bottle and add to 1 L of distilled water.
4. Constantly stir and heat solution to 100°C until powder dissolved (approximately 35 min).
5. Sterilize the bottle of prepared media by autoclaving at 110°C for 15 min.
6. Cool bottle to room temperature and store at 2–8°C for up to 45 days.
7. When ready to use, bring the bottle of prepared media to 29°C.

Food Contact Surface Sample Preparation

1. Use a non-bactericidal 8×4×0.3 cm sterile cellulose sampling sponge that has been pre-moistened with D/E buffer.
2. Swab the surface to be tested with one side of the swab(s) in a horizontal direction (approximately 10 cm), and with the other side in a vertical direction (approximately 10 cm) back and forth (one stroke back and one stroke forward) to swab the entire area of 100 cm².
3. Place each surface sampled sponge in a sterile sample bag, and keep at 4±2°C until it is ready for testing.

Analysis

1. Add 90 ml of the pre-warmed ACTERO™ Listeria Enrichment Media to each sponge sample in its sample bag.
2. Stomach/blend the sample for 30 sec at 265 rpm in a Stomacher® 400 circulator or similar lab blender. Hand blending, is an acceptable alternative for stomaching. To hand mix, massage each sponge that is in the sealed blender bag for approximately one minute.
3. Incubate the samples in an incubator for 24±2 h at 29±0.5°C for the enrichment phase.
4. At the end of the 24 h enrichment phase, streak a loopful of an enriched sample over the surface of the one MOX and one RLM agar plates. Incubate the streaked plates for 24±2 h at 35±2.0°C in an incubator.



5. After the 24 h incubation examine both the MOX and RLM agar plates for colonies with morphology typical for *Listeria* spp. with following re-examination after 48 ± 2 h of total incubation.
6. Use a loop to contact a minimum of 20 (if available) suspect colonies presented in MOX agar plate and collectively streak for isolation on one or more HL agar plates. Incubate the streaked HL plates at $35 \pm 2.0^\circ\text{C}$ for 22 ± 4 h.
7. Confirm the colonies growing on HL agar plates as *Listeria* spp. as recommended in the USDA FSIS Microbiology Laboratory Guidebook Chapter 8.07.

Interpretation and Test Result Report

1. If no suspect colonies with morphology typical for *Listeria* spp. have been found on MOX and/or RPM agar plates after 48 ± 2 h of total incubation, the sample is considered negative for *Listeria* spp.
2. If the suspect colonies with morphology typical for *Listeria* spp. have been found on MOX and/or RPM agar plates after 48 ± 2 h of total incubation, the sample should be considered as potentially positive for *Listeria* spp. The suspect colonies must be confirmed according to the USDA FSIS Microbiology Laboratory Guidebook Chapter 8.07.

Product Storage and Shelf Life:

The dehydrated media should be kept at $12\text{--}25^\circ\text{C}$, in tightly closed bottle in a dry well ventilated place protected from light. The expiry date is indicated on the bottle.

If the media has been autoclaved it can be stored at $2\text{--}8^\circ\text{C}$ for up to 45 days, in a tightly closed bottle in a cool dry place protected from light.

If the media has not been autoclaved, dispose of unused media, using recommended disposal methods.

Disposal:

Dispose all materials used and the enrichment media by autoclaving or according to approved practices.

Ensure that all biohazard waste is disposed of according to local, municipal, provincial, state and/or federal regulations.

Precautions:

The use of microbiological media such as the ACTERO™ *Listeria* Enrichment Media requires trained laboratory personnel familiar with good microbiological laboratory practices.



Wearing a laboratory coat, disposable gloves, and eye protection while handling specimens and performing the assay is strongly recommended.

Extreme care should be taken in handling test samples and enrichment broths. All enrichment broths may contain various pathogens whether they contain *Listeria* spp. or not. Moreover, pregnant women and potentially immunocompromised individuals should be prohibited from laboratory rooms or areas where *L. monocytogenes* isolation or identification procedures are in progress.

Terms and Conditions:

FoodChek Systems Inc. makes no representations and warranties concerning its products other than those stated herein. All Product(s) delivered hereunder by FoodChek Systems Inc., its affiliates or any other person on its behalf shall, at the time of delivery, be manufactured to meet FoodChek Systems Inc.'s specifications and all applicable laws. All other terms, conditions and warranties, including any warranty of merchantability, quality, fitness or suitability for a particular or intended purpose, implied by common law or statute, (implied warranties) are expressly excluded.

Catalogue Number:

FCM-011: ACTERO™ *Listeria* Enrichment Media (500 g)

For further information please contact:

FoodChek Systems Inc.
Suite 450, 1414 – 8 St. S.W.
Calgary, Alberta, Canada
T2R 1J6
Tel: 1-877-298-0208

FoodChek™

Food safety, **simplified.**

Actero™

