**PALCAM Agar Base**

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| **Product No.** | **Product Category** | **Specification** |
| HCM066 | Dehydrated Culture Medium | 500g/bottle |
| 026070 | Dehydrated Culture Medium | 250g/bottle |

**Intended Use**

For the selective isolation and culture of *Listeria monocytogenes*.

**Principle and Interpretation**

Peptone provides the carbon and nitrogen sources necessary for growth; yeast extract powder and starch provide carbon and nitrogen sources, vitamins and growth factors; sodium chloride can maintain a balanced osmotic pressure; glucose provides a carbon source; Listeria hydrolyzes esculin and reacts with iron ions to form black 6,7-dihydroxycoumarin; mannitol is a fermentable sugar, and phenol red is a pH indicator; lithium chloride and other antibiotics can inhibit Gram-negative bacteria and most Gram-positive bacteria; agar is the coagulant of the culture medium.

**Formulation**

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| **Ingredients** | **/liter** |
| Peptone | 23 g |
| Starch | 1 g |
| NaCl | 5 g |
| Columbia agar | 13 g |
| Mannitol | 10 g |
| Ferric ammonium citrate | 0.5 g |
| Esculin (aesculin) | 0.8 g |
| Dextrose (glucose) | 0.5 g |
| Lithium chloride | 15.0 g |
| Phenol red | 0.08 g |
| pH7.2±0.2 at 25°C | |

**Preparation**

Weigh 68.9g of dry powder of this product, add 1L of distilled water or deionized water, stir, heat and boil until completely dissolved, divide into Erlenmeyer bottles, sterilize at 121℃ for 15min, cool to room temperature and set aside. Heat to dissolve agar before use, cool to 50℃, add 1 tube of supporting reagent (SR0140) per 100mL of basal culture medium, shake well and pour into sterilized culture dish.

**Quality Control**

The following quality control strains were inoculated and cultured at 35-37℃ for 24h. The results are as follows:

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| **Quality control strains** | **Growth** |
| Listeria monocytogenes ATCC19115 | Gray-green colonies with a black depression in the  center and black surrounding |
| Enterococcus faecalis ATCC29212 | - |
| Escherichia coli ATCC25922 | - |

**Storage and Shelf Life**

2-30℃，Keep container tightly closed, avoid direct sunlight.

Use before expiry date on the label.

**Precautions**

1. When weighing the dehydrated medium, please wear masks to avoid causing respiratory system discomfort

2. Keep container tightly closed after using to prevent clumping.

**Waste Disposal**

Microbiological contamination was disposed by autoclaving at 121°C for 30 minutes.

**Revision**

On June 14, 2024

**References**

# BAM Media M118a: PALCAM Listeria Selective Agar

Chapter 10: Detection of Listeria monocytogenes in Foods and Environmental Samples, and Enumeration of Listeria monocytogenes in Foods