Catalog No. M-1100

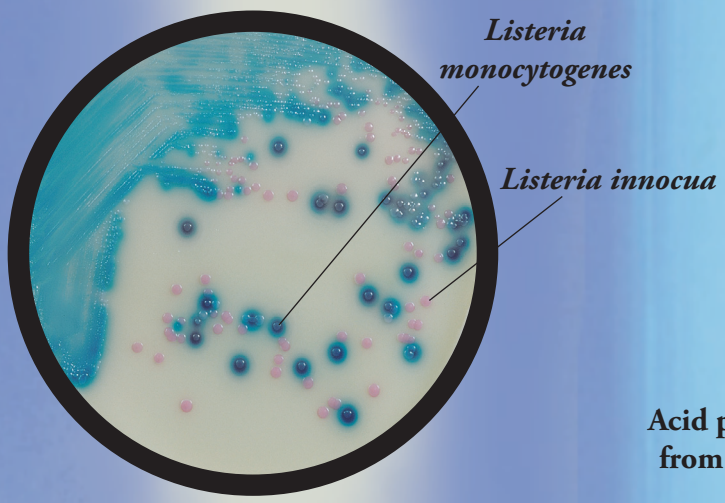
R&F PRODUCTS

Patent Applied

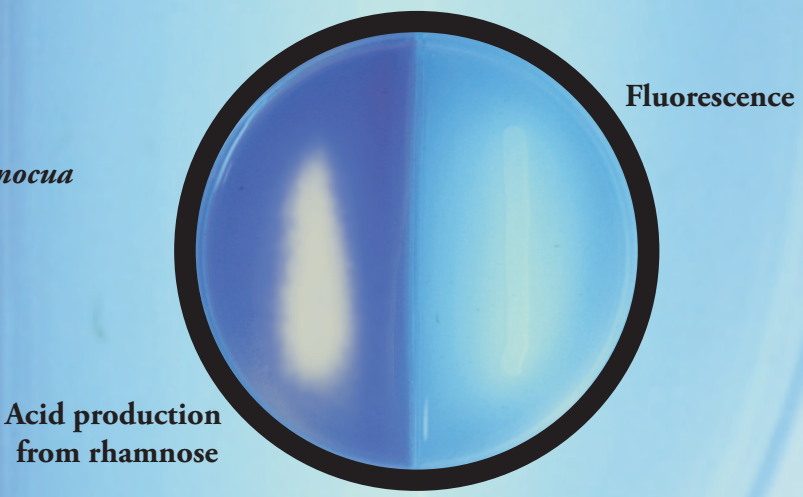
R & F® *Listeria* sp./*Listeria monocytogenes* Chromogenic Plating Medium

A Selective & Differential Medium For Detecting Nonpathogenic & Pathogenic *Listeria* On a Single Plate

Presumptively positive colonies of nonpathogenic *Listeria* sp. appear pink, whereas *Listeria monocytogenes* and *Listeria ivanovii* appear as blue-green to blue-violet colonies with or without a precipitate after 42-48 hours at 35°C.



R & F® *Listeria* sp./*Listeria monocytogenes* Chromogenic Plating Medium Powder



R & F® *Listeria monocytogenes* Confirmatory Medium
Separates *L. monocytogenes* from *L. ivanovii*

Product contains BIOSYNTH AG patented substrate (PCT/EP98/01091)

R & F® *Listeria* sp./*Listeria monocytogenes* Chromogenic Plating Medium at 35°C for 42-48 hours

Bacterial Species	# of Strains	Colonial Morphology
Listeria monocytogenes	39	Convex, 1-2 mm, blue-green to blue-violet, ± precipitate
Listeria ivanovii	4	Convex, 1-1.5 mm, dark blue-green, large ppt.
Listeria innocua	6	Convex, 1-2 mm, pink, no ppt.
Listeria welshimeri	2	Convex, 1-2 mm, pink, no ppt.
Listeria seeligeri	1	Convex, 1-2 mm, pink, no ppt.
Listeria grayi	1	Convex, 1-2 mm, pink, no ppt.
Bacillus cereus/B. thuringiensis	3	No Growth
Enterococcus sp.*		Scant Growth; pinpoint; clear
Gram positive sp.**		No Growth
Gram negative sp.***		No Growth
Yeasts sp.****	3	No Growth

* *Enterococcus faecalis, E. faecium,* and *E. avium*

** Includes: *Bacillus circulans,* and *B. subtilis; Staphylococcus aureus, S. epidermidis,* and *S. saprolyticus; Lactobacillus acidophilus* and *L. plantarum;* and *Pediococcus cerevisiae*

*** Includes: *E. coli* (2 strains) and *E. coli* 0157:H7 (1 strain); *Enterobacter aerogenes; Citrobacter freundii; Shigella sonnei; Morganella morganii; Providencia alcalifaciens; Pantoea agglomerans: Enterobacter sakazakii, Klebsiella pneumoniae* and *K. ozaenae*

**** *Zygosaccharomyces bailii* and *Z. rouxii; Candida albicans*

ORDERING INFORMATION:

M-1100 R & F® *Listeria* sp./*Listeria monocytogenes* Chromogenic Plating Medium

M-1110 R & F® *Listeria* sp./*Listeria monocytogenes* Supplement for Plating Medium

M-1150 R & F® *Listeria* sp./*Listeria monocytogenes* Chromogenic Detection System

M-0520 R & F® *Listeria monocytogenes* Confirmatory Medium

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Advantages of R & F® *Listeria* sp./*Listeria monocytogenes* Chromogenic Detection System

- This highly differential system is based on specific chromogenic substrates in the plating medium that simultaneously differentiate both nonpathogenic *Listeria* species *(L. innocua, L. seeligeri. L. welshimeri,* and *L. grayi*) as pink colonies and the pathogenic *Listeria* species *(L. monocytogenes* and *L. ivanovii)* as blue-green to blue-violet colonies on a single plate in 42-48 h at 35°C.

- Unlike selective/differential agar for *Listeria* species that depend on the detection of only ß-glucosidase activity and produce a single color for colonies for all *Listeria* species, the differentiation mechanism in this system works by the combination of indoxyl derivative chromogenic substrates that produce positive color reactions for colonies of nonpathogenic *Listeria* sp. that are pink due to their ß-glucosidase activity, and blue-green to blue-violet for the pathogenic species depending on the strain-specific balance of ß-glucosidase (pink) and phosphatidylinositol-specific-phospholipase C (blue) activities.

- The agar surface of the plates have an opaque white background that facilitates differentiation of colored colonies of both groups of *Listeria* organisms growing on the surface of the plate.

- A rapid and convenient fluorogenic test and acid from rhamnose are provided in the system that differentiates *Listeria monocytogenes* from *Listeria ivanovii* within 6 hours.

REFERENCES

1. Restaino, L., E.W. Frampton, W.C. Lionberg, and A.L. Restaino. 2006. A multi-chromogenic agar for the dual detection of nonpathogenic and pathogenic *Listeria* species. Poster No. P3-64, IAFP 2006.

2. Restaino, L., E.W. Frampton, W.C. Lionberg, and A.L. Restaino. 2007. Detection of non pathogenic and pathogenic *Listeria* species by use of a chromogenic agar. *Food Prot. Trends.* 27:592-596.

3. Swiech, R. et al. 2008. Efficacy of a chromogenic plating medium for detaching *Listeria* species from environmental samples. Poster No. P3-16, IAFP 2008.