

# A new chromogenic media for *Listeria monocytogenes* enumeration: Evaluation of chromID™ Lmono performance

**Mrs Defargues, LIAL-MC (Laboratoire interprofessionnel d'Analyses Laitières du Massif Central, Aurillac, France)**

**Objective:**

ChromID Lmono from bioMérieux is a new chromogenic medium that enables *Listeria monocytogenes* enumeration and presumptive identification in food products and production environmental samples.

The goal of this study was to evaluate the performance of this new method on dairy products in comparison with the ISO 11290-2 (Amendment 1, 2005).

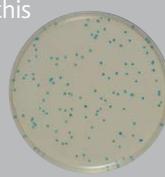
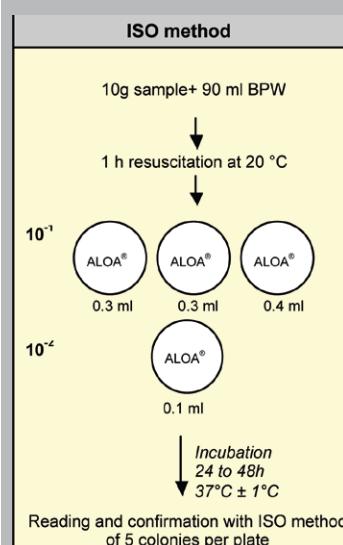
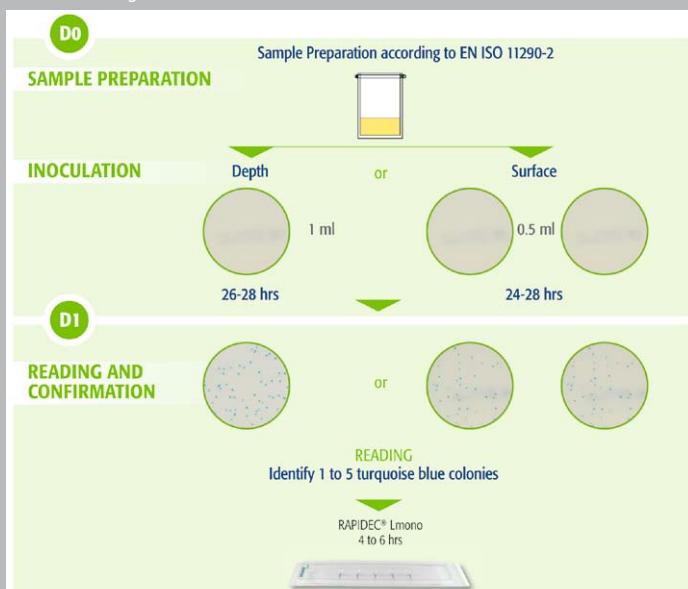


Figure 2: ISO method



Protocol: Figure 1: ChromID Lmono method



Two references are available for chromID Lmono: pre-plated media and bottled media. Both have been tested in parallel to the ISO 11290-2 (A1) surface method. *Listeria monocytogenes* growth is characterised by forming

typical blue-turquoise colonies with no associated halo. *Listeria* species other than *Listeria monocytogenes* and *Listeria ivanovii* are inhibited or grow on the medium producing white colonies. Confirmations were

performed on 5 characteristic *Listeria monocytogenes* colonies with:

- Rapidec® Lmono from bioMérieux: for alternative method
- classical tests from ISO 11290-2: for the reference method.

54 dairy products were tested (raw milk and raw milk cheese):

- 33 samples were naturally contaminated by *Listeria monocytogenes*
- 21 samples did not present any characteristic colony.

## Results

All enumeration results were transferred into log CFU / ml or g and a log difference calculation was then performed: These bias are non significant. (See table 1) T-test was performed and 0 is included in confidence interval.

Whatever the tested plating, the chromID Lmono method showed satisfying relative linearity performances (cf fig 3 & 4).

**Conclusion:**  
chromID Lmono for *Listeria monocytogenes* enumeration in surface or depth trials

Table 1: Log differences

	ChromID Lmono surface / ISO	ChromID Lmono depth / ISO	ChromID Lmono surface / ChromID Lmono depth
Log difference	-0.04	0,01	0.05

present equivalent results to ISO 11290-2 (A1). chromID Lmono is an easy method to implement in the laboratory, in particular:

- for low numbers surface enumeration with 2 chromID Lmono plates instead of the recommended 3 in ISO method.
- for Rapidec Lmono confirmation which is fast and easy to perform.

This alternative method for *Listeria monocytogenes* enumeration provides a shorter time to confirmed result (1 day) and increased productivity compared to ISO method.

Fig. 3

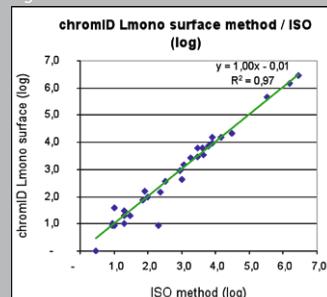


Fig. 4

