

ICAR - National Meat Research Institute

Chengicherla, P.B. No. 19, Boduppal PO, Hyderabad-500 092, Telangana, India

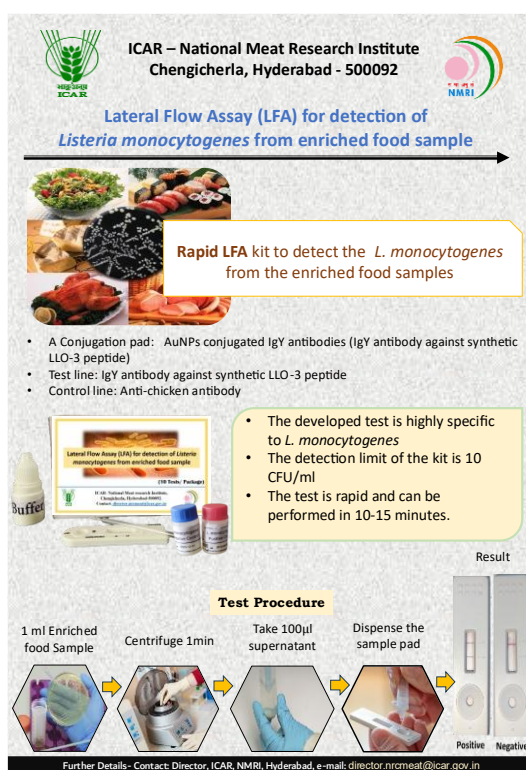
(ISO 9001:2015 और FSSC 22000 प्रमाणित, ISO/IEC 17025:2017 NABL मान्यता प्राप्त, FSSAI रेफरल प्रयोगशाला)

Synthetic peptide-based Lateral Flow Assay (LFA) for the detection of *Listeria monocytogenes* from enriched foods

Inventor: Dr. S. B. Barbuddhe, Dr. Deepak B. Rawool.

Brief Description: The present product/technology is novel as it involves the development of an LFA for detecting *L. monocytogenes* in food of animal origin employing synthetic LLO-3 peptide-derived polyclonal IgY antibodies. The developed technology saves time, labour, and has point of care applicability. The results of the developed technology is almost at par with IS 14988: Part 1: 2020 culture method. The IgY antibodies derived against LLO-3 synthetic peptide, are stable, economical, and can be scalable to any extent. The developed technology will be quite useful for food processing industries, and diagnostic laboratories. The unique features of the developed technology are

Cost of the technology: Yet to be decided



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Lateral Flow Assay (LFA) for detection of
Listeria monocytogenes from enriched food sample

Rapid LFA kit to detect the *L. monocytogenes*
from the enriched food samples

- A Conjugation pad: AuNPs conjugated IgY antibodies (IgY antibody against synthetic LLO-3 peptide)
- Test line: IgY antibody against synthetic LLO-3 peptide
- Control line: Anti-chicken antibody

- The developed test is highly specific to *L. monocytogenes*
- The detection limit of the kit is 10 CFU/ml
- The test is rapid and can be performed in 10-15 minutes.

Test Procedure

- 1 ml Enriched food Sample
- Centrifuge 1min
- Take 100µl supernatant
- Dispense the sample pad

Result

Positive Negative

Further Details - Contact Director, ICAR, NMRI, Hyderabad, e-mail: director.nrmri@icar.gov.in

For further details please contact:

Director,

ICAR - National Meat Research Institute

Chengicherla, P.B. No. 19, Boduppal PO, Hyderabad-500 092, Telangana, India

Phone: 040-29801672/73/74; Email: director.nmri@icar.org.in; Website: <https://nmri.res>