

GeneDisc® Technologies

For an easy, rapid and specific detection of *Listeria* in food and environmental samples

Listeria monocytogenes is an opportunistic foodborne pathogen that can affect a wide range of food products and can cause severe infections with high mortality rate to the elderly, immunodepressed persons and pregnant women. Since *L. monocytogenes* has the ability to grow slowly at refrigerated temperatures, it is a major concern for food companies.

Two factors have also raised interest for *Listeria* spp. detection. Cases of listeriosis related to other *Listeria* spp. have been reported. Furthermore, evidence suggests the presence of other non-pathogenic *Listeria* spp. can be an early indication of *L. monocytogenes* contamination.

Pall GeneDisc Technologies provides solutions for food processors in need of a reliable control of *L. monocytogenes* and/or *Listeria* spp. risk.



GeneDisc System Benefits

Rapid — Accelerate your controls workflow and achieve fast releases of short shelf life products and testing of raw materials. While other methods such as immunoassays or culture methods (chromogenic media) require up to 3 days to get a result, Pall's GeneDisc method allows a detection of *Listeria* in as fast as 20 hours.

Easy to use — GeneDisc solutions are designed for routine use. Implementing PCR (Polymerase Chain Reaction) has never been this easy.

Modular — System modularity fits your throughput needs: up to 96 samples can be analyzed in a one hour PCR run.

A Solution Designed For Food Industries

In line with MLG 8, BAM 10, OMA 993.12 and ISO 11290 – NF VALIDATION and AOAC certified method.

Adaptive to testing needs – Simultaneous or individual testing solutions for *L. monocytogenes* and *Listeria* spp. are available with same hands-on time and enrichment.

Listeria monocytogenes Identification

| | |
|---|---|
| Bacteria | Gram + bacilli |
| Food Vehicle | Large variety of food especially dairy, raw meat and ready-to-eat products |
| Disease | Listeriosis – can cause severe, invasive infections (e.g., sepsis, meningitis, fetal death) |
| Incidence of Cases (per 100,000 population) | 0.28 (FoodNet, 2010) |
| Notification Rate (per 100,000 population) | 0.35 (EFSA, ECDC, 2010) |
| Related Outbreaks | 3 (strong evidence) (EFSA, ECDC, 2010) 7 (CDC, 2010) |
| Related Recalls | 102 (FDA & FSIS, 2012) |
| Related Alerts / Information | 106 (RASFF, 2011) |



How the System Works



Technical Information

| | |
|---|--|
| Enrichment Time | Down to 18 hours |
| Sample Preparation Time | < 1 hour for 48 samples |
| PCR Cycle Time | < 1 hour |
| Total Turnaround Time | Down to 20 hours |
| Hands On Time | About 45 minutes for 48 samples (<1 min/sample) |
| Limit Of Detection | 1 bacteria in 25 g of food sample and in environmental samples |
| Specificity | Wide range of strains tested for inclusivity and exclusivity |
| Internal Positive Control Per Sample Analysis | Detects presence of inhibitors in DNA extract sample |



GEN 25/08 – 07/10, GEN 25/07 – 07/10
ALTERNATIVE ANALYTICAL METHODS FOR AGRIBUSINESS
Certified by AFNOR certification
www.afnor-validation.org



Validations

| Validation | Matrix | Time to Result |
|---------------|--|----------------|
| AOAC | Variety of foods and selected environmental surfaces | 26 h |
| NF VALIDATION | Food products and environmental samples | 26 h |
| | Raw milk | 20 h |

Ordering Information

| Part Number | Description | Samples/pack |
|--------------------|--|--------------|
| Equipment | | |
| EGDUL1A230 (EU) | GeneDisc Ultra-Lyser | - |
| EGDUL1A120 (US) | GeneDisc Ultra-Lyser | - |
| EGDCV3A | GeneDisc Cycler Base Unit | - |
| EGDSV3A | GeneDisc Cycler Sub Unit | - |
| Consumables | | |
| PFOOD1100 | Extraction Pack Food 1 | 100 |
| GLISMON206006 | GeneDisc <i>Listeria monocytogenes</i> | 36 |
| GLISMON212006 | GeneDisc <i>Listeria monocytogenes</i> | 72 |
| GLISSPP106006 | GeneDisc <i>Listeria</i> spp. | 36 |
| GLISSPP112006 | GeneDisc <i>Listeria</i> spp. | 72 |
| GLISDU0106006 | GeneDisc <i>Listeria</i> DUO | 36 |
| GLISDU0112006 | GeneDisc <i>Listeria</i> DUO (<i>Listeria monocytogenes</i> and <i>Listeria</i> spp.) | 72 |

We also offer a full product range for pathogen detection in food and water and for spoilage organisms in beverage.

Quantitative tests for pathogens in water (*Legionella*, *E. coli*, *Enterococcus*...) are also available.

For more information including part numbers please contact us.



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