



Escherichia coli are common in human bacterial flora. Most of them are harmless, but some known as Shiga Toxic *E. coli* or STEC, can cause severe, sometimes lethal, pathologies.

Among these STEC, *E. coli* O157:H7 is the most commonly reported serotype related to human diseases. Main infection source is contaminated food making it a major concern for food processors.

Pall GeneDisc Technologies provides an ideal solution for food companies in need of a reliable control of *E. coli* O157:H7 risk.

GeneDisc System Benefits

Rapid — Accelerate the batch release of your short shelf life products and raw materials. While other methods such as immunoassays or culture methods require up to 3 days to results, the Pall's GeneDisc method allows a detection of pathogenic *E. coli* O157 in as fast as 10 hours.

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

High throughput capability — Process up to 96 samples DNA extractions simultaneously in less than one hour.

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

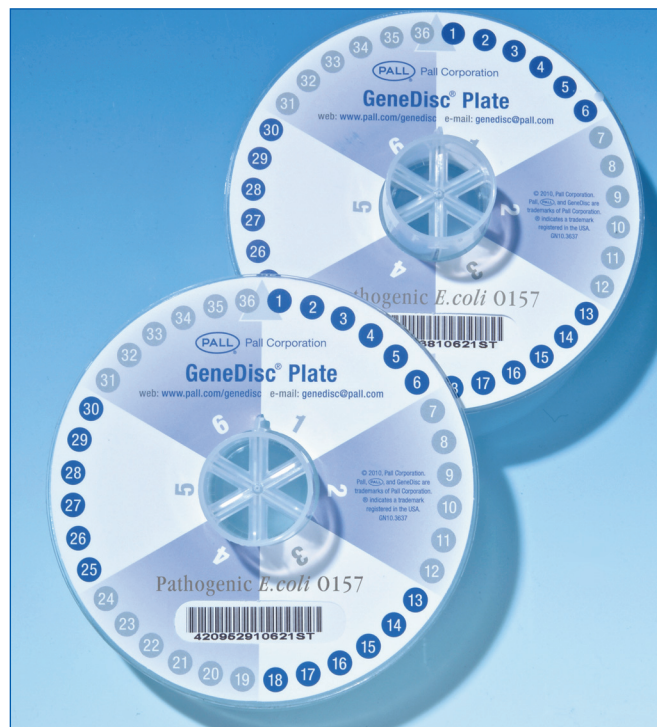
Pathogenic strains discrimination — Screening method based on detection of virulence factors (shigatoxin and intimin) provides a lower rate of presumptive positive.

In line with MLG 5 and ISO 16654 — NF VALIDATION and AOAC certified method.

Test *Salmonella* spp. simultaneously — Analysis with *Salmonella* spp. is available and does not require any additional hands-on time nor enrichment.

GeneDisc® Technologies

For easy, rapid and reliable detection of pathogenic *E. coli* O157(:H7) in food

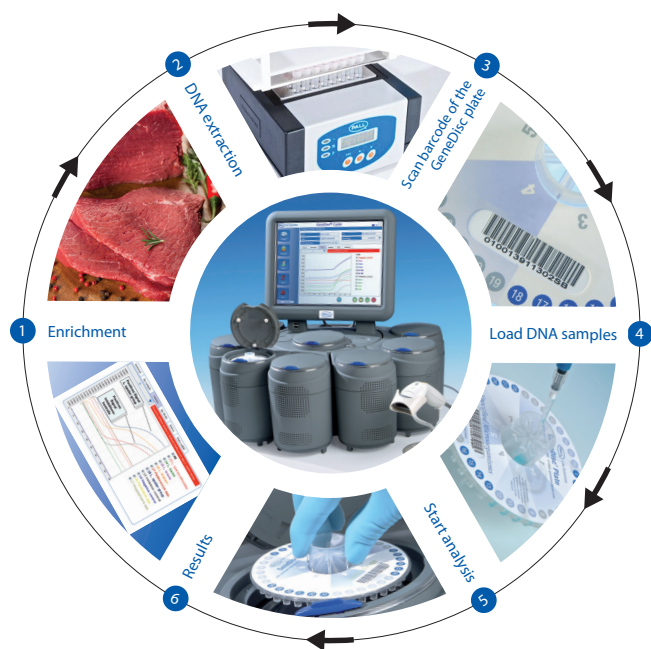


Pathogenic *E. coli* O157 Identification

Bacteria	Gram –, motile enterobacteria producing shigatoxins (<i>stx</i>) and intimin (<i>eae</i>)
Food vehicle	Large variety of food especially dairy products and beef cattle
Disease	Gastro-enteritis, Hemorrhagic diarrhea, Hemolytic-uremic syndrome (HUS)
Incidence of cases (per 100,000 population)	0.95 (FoodNet, 2010)
Notification rate (per 100,000 population)	0.32 (EFSA, ECDC, 2010)
Related outbreaks	Not determined (Europe) 53 (CDC, 2009-2010)
Related recalls	8 (FDA & FSIS, 2012)
Related alerts/information	8 (RASFF, 2011)



How the System Works



Technical Information

Enrichment Time	Down to 8 hours
Sample Preparation Time	< 1 hour for 96 samples
PCR Cycle Time	< 1 hour
Total Turnaround Time	Down to 10 hours
Hands On Time	About 30 minutes for 96 samples (<30 s/sample)
Limit Of Detection	1 bacteria in 25 g of food sample 1 bacteria in 375 g of raw ground beef or raw beef trim
Specificity	Wide range of strains tested for inclusivity and exclusivity
Internal Positive Control Per Sample Analysis	Detects presence of inhibitors in each sample DNA extract

Validations

Method	Part Number	Validation	Matrix	Time to Result
<i>E. coli</i> 0157	GECO1571XX006	AOAC	Raw Ground Beef/ Raw Beef Trim	10 h
<i>E. coli</i> 0157 & <i>Salmonella</i> spp.	GECOSLM2XX006			
<i>E. coli</i> 0157:H7	GECO1571XX006	NF VALIDATION	Raw Beef Meat	10 h
	GEHECID106006		Dairy products/ Vegetables products	18 h
<i>E. coli</i> 0157:H7 & <i>Salmonella</i> spp.	GECOSLM2XX006		Raw Beef Meat	10 h
	GEHECID106006		Dairy products/ Vegetables products	18 h

Ordering Information

Part Number	Description	Samples/pack
Equipment		
EGDCV3A	GeneDisc Cyclor Base Unit	-
EGDSV3A	GeneDisc Cyclor Sub Unit	-
EGDUL1A230 (EU)	GeneDisc Ultra-Lyser	-
EGDUL1A120 (US)		
EGDBH96230 (EU)	GeneDisc DryBlock Heater 96	-
EGDBH96120 (US)		
SPSKIT96	Extraction Pack Food 2 Starter Kit	-
Consumables		
PFOOD1100	Extraction Pack Food 1	100
PFOOD2096	Extraction Pack Food 2 (High throughput)	96
GECO157106006	GeneDisc Pathogenic <i>E. coli</i> 0157	36
GECO157112006		72
GECOSLM206006	GeneDisc Pathogenic <i>E. coli</i> 0157 & <i>Salmonella</i> spp.	36
GECOSLM212006		72
GEHECID106006	GeneDisc EHEC 5 ID (H7, O26, O103, O111, O145)	36

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.



GEN 25/06 – 11/08
ALTERNATIVE ANALYTICAL METHODS FOR AGRIBUSINESS
Certified by AFNOR certification
www.afnor-validation.org



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February 2014