



Technical Datasheet

Analysis Name: Detection of STEC by iQ-Check

Method Number: LI-00.768

Scope of Application: Scope is applicable to a broad range of food categories and raw materials. It is not applicable to environmental samples, pet food, and dietary supplements. .

Description: A qualitative Real-Time PCR (RT-PCR) method, using the iQ-Check® Prep system, iQ-Check® VirX and/or iQ-Check® SerO II kit (Bio-Rad) for the detection of Shiga-toxic *Escherichia coli* (STEC). The VirX kit screens for the Shiga-toxin genes *stx1/stx2*. The SerO II kit will screen for the presence of the Top 7 STEC serotypes (O26, O45, O103, O111, O121, O145, and O157).

Sample Weight Required: 25 g, 375g (maximum weight for flour only)

Method Reference: Microval certificate # 2021LR96

Analytical Platform: PCR

Special Information: Samples that screen positive for the *stx1/stx2* gene target will be considered as Presumptive Detected for STEC and will automatically undergo the Top 7 serogroup screening. If the sample is negative for all the Top 7 serogroups, the result will be Presumptive Detected/No Top 7. If the sample is positive for any of the Top 7 serogroups, the result will be Presumptive Detected/Top 7 Detected, with reporting of the detected serogroup(s). No cultural confirmation will be performed.

Analyte Reported	Unit of Measure	Limit of Detection at 50%	Results
STEC (Screening) Final	/25g /375g	Flour (25g) = 1.1 CFU/g Flour (375g) = 0.61 CFU/g Pizza (25g) = 0.4* CFU/g Dried Whole Egg (25g) = 0.3* CFU/g Glazed Turkey Tenderloins (25g) = 0.2* CFU/g Gouda Cheese (25g) = <1.0* CFU/g	Not Detected Presumptive Detected No Top 7 STEC Presumptive Detected Top 7 STEC



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		Seasoning Blend (25g) = 1.2* CFU/g Brown Gravy (25g) = 0.3* CFU/g Frozen Green Beans (25g) = <0* CFU/g Pasteurized Orange Juice (25g) = 0.5* CFU/g	
O-Group Identified	n/a	n/a	O26, O45, O103, O111, O121, O145, and/or O157

* Conducted as an estimated limit of detection at 50% (eLOD₅₀) per ISO 16140-3:2021.