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Nestlé Quality Assurance Center  
Dublin

# 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).

Additional O-Groups: STEC O80 is validated and mandatory for all Nestle products, but is optional for non-Nestle customers. The O80 analysis will be run and reported as a Customer Specific Method (CSM).

**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 and O80 serogroup screening for Nestle products. Non-Nestle customers may opt-in or opt-out of the O80 screen. If the sample is negative for all the Top 7 and O80 serogroups, the result will be Presumptive Detected/No Top 7. If the sample is positive for any of the Top 7 or O80 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	Not Detected Presumptive Detected No Top 7 STEC Presumptive Detected Top 7 STEC



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		Dried Whole Egg (25g) = 0.3* CFU/g Glazed Turkey Tenderloins (25g) = 0.2* CFU/g Gouda Cheese (25g) = <1.0* CFU/g Seasoning Blend (25g) = 1.2* CFU/g Brown Gravy (25g) = 0.3* CFU/g Frozen Green Beans (25g) = <1* CFU/g Pasteurized Orange Juice (25g) = 0.5* CFU/g Parmesan Cheese (25g) = 0.4* CFU/g	
O-Group Identified (Top 7)	n/a	n/a	O26, O45, O103, O111, O121, O145, and/or O157
CSM O80 Group	n/a	n/a	O80

\* Conducted as an estimated limit of detection at 50% (eLOD<sub>50</sub>) per ISO 16140-3:2021.