Laboratory Guidebook
Notice of Change

Chapter new, revised, or archived: MLG 5C Appendix 1.00

Title:  Flow Chart Specific for FSIS Laboratory Isolation and Identification of non-O157 Shiga Toxin-Producing Escherichia coli (STEC)

Effective Date: 02/04/2019

Description and purpose of change(s):

This flow chart was issued in association with MLG 5C Detection and Isolation of Top Seven Shiga Toxin-Producing Escherichia coli (STEC) from Meat Products and Carcass and Environmental Sponges.
Flow Chart Specific for FSIS Laboratory Isolation and Identification of Top Seven Shiga Toxin-Producing Escherichia coli (STEC)

Per 325 g sample, add 975 ml of mTSB¹, stomach for 2 min. For sponges with 10 ml of buffer, add 50 ml of mTSB¹ to bring the volume to 60 ml, mix well. Incubate @ 42 ± 1°C for 15-24 hours. NOTE: Sample receipt temperature of ≤15°C is required.

Acronym Table
1. mTSB = Modified Tryptone Soy Broth
2. iQ-Check™ = Rapid Screen Assay
3. mRBA = Modified Rainbow Agar
4. SBA = Sheep Blood Agar
5. VITEK® 2 = VITEK® 2 Compact System Automated Biochemical Identification System
6. WGS = Whole Genome Sequencing

* This chart represents the best-case scenario but analyses may take longer due to normal analytical circumstances such as restreaking isolates for purity.

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Issuing Authority: Director, Laboratory Quality Assurance Staff (LQAS)

Day 1

Day 2

Day 3

Day 4/Day 5

Flow Chart Specific for FSIS Laboratory Isolation and Identification of Top Seven Shiga Toxin-Producing Escherichia coli (STEC)

Pick isolates to nutrient agar deep for further characterization.

CONFIRMED POSITIVE ISOLATES