

Salmonella LT Protocol

Liquid Eggs

Background

The *Salmonella* LT test kit is a fast, specific, qualitative method for detecting *Salmonella* in food. The original AOAC approved protocol for raw chicken, cooked ham, and chocolate can also be used for isolating and detecting *Salmonella* in liquid eggs.

Protocol for detecting *Salmonella* in liquid eggs

NOTE: The procedure deviates from the AOAC approved method. The procedure uses Tryptic Soy Broth (TSB) rather than Buffered Peptone Water (BPW)

- Add 25g of liquid egg to 225mL of Tryptic Soy Broth (TSB) supplemented with ferrous sulfate
- Enrich 16 hours at 37°C
- Remove 1mL of enriched sample
- Lyse 5µL of sample using the bead tubes provided with the kit
- Re-suspend the Freeze Dried Reagents using 10µL of the lysed sample and 10µL of supplied reconstitution buffer
- PCR and automatic result interpretation with the Idaho Technology R.A.P.I.D.[®] LT instrument and software
- The system can detect 1 colony forming unit (CFU) of *Salmonella* in 25g of liquid eggs

Results

Results from an internal study show that using the AOAC approved *Salmonella* LT FSS method with liquid eggs is as sensitive as the FDA Bacteriological Analytical Manual (BAM) methods. The system is sensitive even with sample pooling. The *Salmonella* LT FSS has both a sensitivity and specificity rate of 100% when detecting *Salmonella* in liquid eggs, and had no false positive or false negative calls.

Sample Type	Inoculating Organism	Level	MPN CFU/25g	No. Test Portions	Reference Method	<i>Salmonella</i> LT	
					Positive	Presup. Positive	Confirmed Positive
Individual	<i>S. muenchen</i>	Low	<0.75 / 25g	20	9	9	9
		Control	0	5	0	0	0
Pooled	<i>S. muenchen</i>	Low	5.75 / 25g	10	10	10	10
		Control	0	40	0	-	-

The *Salmonella* LT FSS is significantly faster than the reference method, providing results in about 17 hours as opposed to 72 hours for the FDA BAM method.

TECHNICAL
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TECHNICAL NOTE

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