VIDAS *Salmonella* (SLM) Assay - AOAC 996.08

SCOPE

This method is applicable to:

- Raw meats, meat products and carcass swabs.

PRINCIPLES

Detection of *Salmonella* is based on enzyme-linked fluorescent immunoassay performed in an automated VIDAS instrument. Following enrichment (see below) *Salmonella* is detected in boiled broth by specific monoclonal antibodies. A fluorescent marker is then added and *Salmonella* detected automatically by the VIDS machine. The detection protocol can be broken down as follows:

- **Pre-enrichment in non-selective liquid medium**
  Sample is diluted 1:10 in pre-warmed (room temperature or 37 ± 1°C for large volumes) buffered peptone water and pre-enriched at 37 ± 1°C for 18 h ± 2 h. For carcass sponges, buffered peptone water is added to the moistened sponge to bring the total volume to 60-100 mL and the sample incubated at 37 ± 1°C for 18 ± 2 h. In the case of sponges BPW need not be warmed to room temperature before being used to re-hydrate the sponge, for all subsequent additions BPW should be warmed to room temperature.

- **Selective Enrichment**
  Selenite cystine broth and tetrathionate broth are inoculated with pre-enrichment broth and incubated at 35 ± 1 and 42 ± 1°C, respectively, for 18 ± 2 h.

- **Post-enrichment**
  Selective enrichment broths are inoculated into M-broth and incubated for 6 h at 42 ± 1°C.

- **Enzyme immunoassay**
  Salmonella is assayed by testing a portion of boiled post-enrichment broth. The assay is automated and carried out in the VIDAS instrument following the manufacturer's instructions. The assay should be finished in approximately 45 minutes.

- **Cultural confirmation**
  All *Salmonella* positive samples should be confirmed using refrigerated M broth following AS 5013.10.

CHECKLIST

Pre-enrichment	Is the buffered peptone water used for pre-enrichment?	
	Is BPW warmed prior to use (room temperature or 37 ± 1°C)?	
	Is the correct amount of enrichment broth used for the weight of sample analysed?	
	Is a positive control run with each batch of samples analysed?	
	Are reference cultures inoculated into primary enrichment broth at a level of 10 to 100 cells?	
	Is pre-enrichment done at 37 ± 1°C for 18 h?	
Selective-enrichment	Is selective enrichment carried out in SC and TT broth?	
	Is SC broth incubated at 35 ± 1°C for 18 h?	
	Is TT broth incubated at 42 ± 1°C for 18 h	
Post-enrichment	Is M-broth incubated at 42 ± 1°C for 6 h?	
Enzyme immunoassay	Are the manufacturer's instructions available?	
	Are kits stored at 2-8°C when not in use?	
Cultural confirmation	Is *Salmonella* confirmed from M-Broth or selective enrichment media?	
(if applicable)	If an external laboratory is used is it department approved?	
	M broth should be supplied to off-site laboratories for confirmation following AS 5013.10	
	Are *Salmonella* confirmed using AS 5013.10 (with appropriate selective agar plates)?	