MC-Media Pad - AOAC 091702 and MicroVal 2015LR52

AOAC 091702 and MicroVal 2015LR52 differ in incubation time and temperature and amount of sample to be analysed. AOAC 091702 is a validation study for incubation of MC-Media Pad at 35 ± 1°C for 24 -48 h and applies only to 50 g raw meats and other foods. MicroVal 2015LR52 is a validation study for 10 g samples, incubated at 30 ± 1°C for 72 h.

SCOPE

Enumeration of aerobic bacteria in raw meats and other foods.

PRINCIPLES

MC-Media Pad is a ready-to-use dry medium method for aerobic bacterial counts. The sample when added onto the test pad diffuses through the whole pad through capillary action. The media pads are coated with growth medium and three redox indicators for detection of aerobic bacteria, which when grown on the pad produce red coloured colonies.

- **Inoculation & incubation**

  AOAC 091702

  A 50 g sample is diluted in 450 mL of Butterfield's phosphate buffer. After homogenising one mL is plated onto the centre of the pad. Pads are incubated at 35 ± 1°C for 24 ± 2 h (rapid usage) or 35 ± 1°C for 48 ± 2 h (standard usage). Carcass sponges should be hydrated with 25 mL of diluent. Rapid usage may not be suitable for some food types (e.g. those suspected of containing large amounts of lactic acid bacteria or psychrophilic bacteria).

  MicroVal 2015LR52

  A 10 g sample is diluted in 90 mL of Phosphate Buffered Saline or appropriate diluents and incubated at 30 ± 1°C for 48 ± 3 h, reddish colonies are marked and re-incubated for a further 24 ± 1 h. Carcass sponges should be hydrated with 25 mL of diluent.

- **Interpretation**

  The countable number on MC-Media RAC pads is less than 300 colonies. All reddish coloured colonies are counted. For large numbers of colonies, count one to three squares and calculate the average per square. The average of the count is then multiplied by 20 to get the total number of colonies on the pad. Certain bacteria may produce diffuse and fuzzy round shaped colonies. In this case dark coloured points should be counted as colonies. When the entire growth area is stained or when the number of colonies exceeds 300 per pad, repeat the test with higher dilutions.

  For swab samples, counts should be expressed as CFU/cm^2.

  For meat and meat products, counts should be expressed as CFU/g.

Note: calculations for different species and sample types can be found in Appendix 2 of the *Microbiological Manual for Sampling and Testing of Export Meat and Meat Products*.

CHECKLIST

Inoculation	Is the diluent used recommended by the manufacturer?	_____
	What weight of sample and volume of diluent are used?	_____
	Are appropriate dilutions used to ensure a count less than 300 CFU/plate?	_____
	Is the cover film of the media pad opened diagonally?	_____
Incubation	What are the incubation conditions and period?	_____
	What is the shelf life of opened MC-Media pads?	_____
	How are open packs re-sealed and stored?	_____
Interpretation	What colonies are identified and counted as aerobic bacteria?	_____
	How are counts outside the countable number reported?	_____
	Are the manufacturer's instructions available and are they reproduced in the lab manual?	_____

QC CHECKLIST

	Are MC-Media pads obtained from an ISO/IEC 17025 accredited supplier and is a QC report/certificate supplied with the batch?	_____
	Are relevant QC parameters (e.g. sterility, quantitative recovery, etc.) checked and initialled before use?	_____