



Compact Dry EC - AOAC 110402

SCOPE

Meats and other foods

PRINCIPLES

Compact Dry EC is a ready-to-use dry chromogenic plate contains selective culture media, gelling agent and two chromogenic enzyme substrates, 5-bromo-6-chloro-3-indoxyl-beta-D-galactopyranoside (Magenta-GAL) and 5-bromo-4-chloro-3-indoxyl-beta-D-glucuronic acid, cyclohexylammonium salt (X-Gluc) which are responsible for the colour change. Plates are hydrated with sample and gelling agents cause the media to solidify. Colonies that produce red/pink colours are indicative of coliforms and blue/blue purple colonies are indicative of *Escherichia coli*. The total coliform count is the sum of red/pink and blue/blue purple colonies.

Compact Dry plates are not supplied by a NATA certified media supplier and therefore new batches of media must undergo quality control prior to use. A check list for Compact Dry plate QC is provided for guidance.

The enumeration of *E. coli* is broken down into stages as follows:

- **Inoculation**

Samples are diluted 1:10 in Butterfield's phosphate diluent and one-mL diluent is placed on the centre of the Compact Dry EC plate. Carcase sponges should be hydrated with 25 mL of diluent and can be enumerated without further dilution. Serial dilution must be prepared using Butterfield's phosphate diluent.

- **Incubation**

Compact Dry EC plates are incubated at $35 \pm 2^{\circ}\text{C}$ for 24 h.

- **Interpretation**

The countable range on *E. coli* Compact Dry EC is approximately 10 – 150. All blue/blue purple colonies are counted as *E. coli*. Red/pink colonies are coliforms. The total coliform count is the sum of red and blue colonies.

CHECKLIST

Inoculation	Is the Butterfield's phosphate diluent used for preparation of samples and dilutions?	_____
	Is a positive control run with each batch of samples analysed?	_____
Incubation	What is the storage temperature of Compact Dry plates?	_____
	How are open packs stored?	_____
	What are the incubation conditions and period?	_____
	What is the maximum number of colonies counted on Compact Dry EC plates?	_____
	How are counts outside the countable range reported?	_____
Interpretation	What colonies are identified and counted as <i>E. coli</i> ?	_____
	What colonies are identified and counted as coliforms?	_____
	Is the count reported as CFU/cm ² for swabs and surface samples?	_____

COMPACT DRY QC CHECKLIST

	Is media QC carried out on all new batches of Compact Dry plates?	_____
	Are new batches clearly identified and held in quarantine until QC results are known?	_____
	Are morphology checks for positive and negative controls recorded for new batches of Compact Dry plates?	_____
	Is recovery of <i>E. coli</i> on new batches of Compact Dry plates compare to that on non-selective agar?	_____
	Is an appropriate performance standard used to pass new batches of Compact Dry plates ie 70%?	_____