Salmonella Chromogenic Contact Plates

Catalogue No. AS-715 · Ready-to-use contact plates (55 mm)

1. Intended Use

Ready-to-use 55 mm chromogenic contact plates for the presumptive detection of Salmonella on surfaces, with E. coli differentiation.

For laboratory microbiological testing, quality control and research use only. Not intended for direct use in food, human or veterinary therapeutic applications, diagnosis, or consumption.

2. Mode of Action

Selective agents suppress Gram-positive and much accompanying Gram-negative flora. C8-esterase-positive Salmonella cleave Magenta-caprylate (magenta/purple colonies); β-galactosidase-positive E. coli form blue colonies.

3. Composition

Component	Function
Peptones and yeast extract	Nitrogen, carbon, vitamins and growth factors
Inorganic salts	Osmotic balance and buffering
Selective agents	Inhibition of Gram-positive and part of the accompanying Gram-negative flora
5-Bromo-6-chloro-3-indolyl caprylate (Magenta-caprylate)	C8-esterase substrate: magenta Salmonella colonies
β-D-galactosidase chromogenic substrate	Blue E. coli colonies
Agar	Gelling agent

Quantitative formulation is proprietary.

4. Product Specifications

Format	Ready-to-use contact (RODAC-type) plates, 55 mm, convex agar surface
Fill volume	15.5 ± 1.0 mL per plate (convex meniscus above the rim)
Contact area	Approximately 25 cm²
Pack size	10 plates per pack (as stated on label)
Storage	2–8 °C, in the dark, in the original sleeve, agar side up. Do not freeze.
Shelf life	Expiry stated on label; batch-specific
Incubation	35–37 °C, aerobic. Read at 24 hours; re-examine negative plates at 48 hours

5. Directions for Use

1. Bring plates to room temperature. Discard any plate with condensation on the agar, contamination or damage.
2. Remove the lid. Press the convex agar surface firmly onto the test surface for about 10 seconds with even pressure (about 500 g). Do not slide or rotate the plate.
3. Personnel: press gloved fingertips gently onto the agar. Air: leave the open plate exposed, for example for 15 minutes.

4. Replace the lid, label the plate, and clean the sampled area to remove residual medium.
5. Incubate inverted as directed, then count colonies by colour.

Incubation: 35–37 °C, aerobic. Read at 24 hours; re-examine negative plates at 48 hours.

6. Interpretation of Results

Organism group	Colony colour
Salmonella spp. (presumptive)	Magenta / purple
Escherichia coli	Blue
Other organisms	Colourless, or inhibited

Magenta colonies are presumptive Salmonella and must be confirmed by biochemical and serological tests before any decision is taken.

7. Quality Control

Incubation: 35–37 °C, aerobic. Read at 24 hours; re-examine negative plates at 48 hours.

Organism	Strain	Inoculum (CFU)	Growth	Colony colour
Salmonella Typhimurium	ATCC 14028	≤100	Good growth	Magenta / purple
Salmonella Enteritidis	ATCC 13076	≤100	Good growth	Magenta / purple
Escherichia coli	ATCC 25922	≤100	Good growth	Blue
Staphylococcus aureus	ATCC 25923	10^4–10^6	Inhibited	—
Enterococcus faecalis	ATCC 29212	10^4–10^6	Inhibited	—

8. Limitations

- Results are presumptive. Some Proteus, Pseudomonas and other strains are C8-esterase positive and can form purple colonies. Confirm all magenta colonies.
- Some Salmonella serovars may grow weakly or show weaker colour; re-examine negative plates at 48 hours.
- The medium does not contain disinfectant neutralisers (lecithin, polysorbate 80). Residual disinfectant on sampled surfaces may reduce recovery.
- Contact plates suit flat, smooth surfaces only. Use swabs and enrichment methods for irregular surfaces or low-level contamination.

9. Disposal

Used plates contain viable microorganisms. Autoclave (121 °C, at least 15 minutes) or incinerate. If neither is possible, flood plates with 5–10 % bleach, leave overnight, then discard according to local regulations.

10. Related Standards (for user reference)

- ISO 18593:2018 — Microbiology of the food chain — Horizontal methods for surface sampling
- ISO 6579-1 — Microbiology of the food chain — Detection of Salmonella spp. (reference method for confirmation)
- ISO 14698-1 — Cleanrooms and associated controlled environments — Biocontamination control

11. Literature / References

6. Perry J.D., Ford M., Taylor J., Jones A.L., Freeman R., Gould F.K. (1999). ABC medium, a new chromogenic agar for selective isolation of Salmonella spp. J. Clin. Microbiol. 37:766–768.
7. Manafi M. (2000). New developments in chromogenic and fluorogenic culture media. Int. J. Food Microbiol. 60:205–218.
8. Gaillot O., di Camillo P., Berche P., Courcol R., Savage C. (1999). Comparison of CHROMagar Salmonella medium and Hektoen enteric agar for isolation of salmonellae from stool samples. J. Clin. Microbiol. 37:762–765.
9. Perry J.D. (2017). A decade of development of chromogenic culture media for clinical microbiology. Clin. Microbiol. Rev. 30:449–479.

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