

REF – BM0017

Instructions for Use
micrAlert Neutraliser
Bottled Media

1. Intended Use

micrAlert Neutralising Solution is a general-purpose neutralising buffer for use with micrAlert bacterial indicator products (see Section 7). The product is designed to neutralise the antimicrobial effects of disinfectants¹ allowing recovery of microorganisms sampled from surfaces that may contain disinfectant residues. The accompanying sterile swab is present to allow easy sampling of the target surface.

2. Composition*

Formula	Amt/L
Tryptone	10.0g
Sodium chloride	5.0g
Disodium hydrogen phosphate	3.5g
Potassium dihydrogen phosphate	1.5g
Lecithin	3.0g
Polysorbate 80	20.0ml
Sodium thiosulphate	1.0g
L-histidine	1.0g

* Adjusted/supplemented as needed to meet performance requirements

3. Summary and Explanation

BM0017 micrAlert Neutralising Solution is a general-purpose disinfectant-neutralising buffer for use with micrAlert bacterial indicator products (see Section 7). The product requires a sterile swab suitable for surface sampling. The disinfectant neutralising-agents are present to inactivate a wide range of antimicrobials¹ that may be used for surface disinfection.

4. Principle

This is a general-purpose, ready-to-use neutralising solution containing lecithin, polysorbate 80, histidine and sodium thiosulphate to inactivate disinfectants including hypochlorite bleaches, peroxy compounds, quaternary ammonium compounds, phenolics, alcohols, hexachlorophene, mercury products, halogens, and aldehydes¹. Tryptone is present to assist in recovery of non-lethally damaged organisms that may be present, sodium chloride provides osmotic balance, and pH is maintained by the phosphate buffer system.

5. Physical Characteristics

	Appearance and Colour	pH
Medium	Pale straw liquid	7.0 ± 0.2

6. Materials Provided

BM0017 is supplied in a 6.5ml plastic screw-top tube containing 3ml of micrAlert Neutraliser (Product Code BM0017-M054-3)

7. Materials Required but Not Provided

- BM0017 micrAlert Neutralising Solution is designed for use with:
 - BM0014 micrAlert Listeria
 - BM0015 micrAlert Salmonella
 - BM0016 micrAlert Coliform
- These media have been validated for use with micrAlert Neutralising Solution.
- Suitable agar plates if subculture is required for isolation and/or full confirmation/identification.
- General microbiological lab equipment such as incubators, QC organisms, etc.

8. Specimen Collection

This product is intended to neutralise disinfectant residues that may remain on surfaces after cleaning and disinfection so that any non-lethally damaged microorganisms may be recovered. Wet the swab in the micrAlert Neutralising Solution, gently squeeze the tip against the side of the tube above the liquid level to remove excess fluid and apply the swab to the test area. A 100cm² template may be used on suitable surfaces. Follow your current instructions for surface sampling.

When surface sampling is complete, aseptically insert the swab into the chosen micrAlert bacterial indicator product and follow product instructions.

Should micrAlert bacterial indicator products not be available at the site of sampling, the swab may be transported to the lab in the micrAlert Neutralising Solution tube. Simply snap the swab into the tube as above, replace the cap and transport to the laboratory. Samples will remain viable for 24 hours at ambient temperature in the micrAlert Neutralising Solution.

9. Test Procedure and Interpretation of Results

- Place the micrAlert Neutralising Solution tube upright on a flat surface. Place the selected micrAlert bacterial indicator solution tube(s) upright on a flat surface.
- Open a swab pouch at the opposite end from the tip. Peel back the pouch until approximately half of the shaft is exposed – leave the tip covered until ready to use.
- When ready to take the sample, remove the swab from the pouch.
- Handle the swab shaft only by the area above the breakpoint (indicated by the black line).
- Wet the swab in the micrAlert Neutralising Solution and gently squeeze the tip against the side of the tube above the liquid level to remove excess fluid.
- Following your sampling protocol, use the swab to take a sample from the surface. A 100cm² template may be used on a suitable surface to provide an estimate of the area swabbed.
- Remove the cap from the chosen micrAlert bacterial indicator tube and insert the swab into the broth. With the swab tip submerged in the broth, squeeze the swab gently against the side of the tube and rotate the swab to ensure release of organisms.
- Ensure the black line that indicates the position of the breakpoint is facing the centre of the tube and snap the swab shaft against the rim of the tube.
- Replace the cap firmly. The swab shaft will lock in place in the cap-capture port allowing easy removal of the swab should that be required.
- Record required sample information on the tube label.
- Do not reuse the swab or other device to inoculate other micrAlert bacterial indicator products. Use a fresh swab for each micrAlert product to be inoculated.
- Transport the sample to the laboratory and begin processing as soon as possible.
- Follow directions on incubation time and temperature given for the micrAlert bacterial indicator product(s) used.

10. Quality Control and Performance

Organism	Incubation	Result (Specificity)
<i>Listeria monocytogenes</i> NCTC 11994 <i>Listeria innocua</i> NCTC 11288 <i>Salmonella typhimurium</i> NCTC 12023 <i>Escherichia coli</i> NCTC 12241	Aerobically at 20-25°C for 300 ± 10 seconds	≤ 30% difference between before and after counts

These tests are conducted in the E&O Quality Control Laboratory as part of the release specification for this product. It is the responsibility of the user to perform Internal Quality Control testing taking into consideration the intended use of the medium and in agreement with any local relevant guidelines (e.g., frequency, strains used, atmosphere, incubation temperature).

11. Performance

Quality Control testing is carried out on all manufactured lots of BM0017 micrAlert Neutralising Solution to ensure compliance with the specification. During full verification of the product, use-dilutions of hypochlorite

bleach (1.25% solution in deionised water), isopropanol (70% solution in deionised water) and Virkon® (21.4% potassium peroxysulphate) (1.0% solution in deionised water) were added to micrAlert Neutralising Solution and equilibrated for 15-30 minutes at room temperature. Deionised water alone was added to micrAlert Neutralising Solution as a control.

Cultures of *Escherichia coli* (NCTC 12241), *Staphylococcus aureus* (NCTC 12981), *Listeria monocytogenes* (NCTC 11994), *Salmonella typhimurium* (NCTC 12023) and *Citrobacter freundii* (ATCC 43864) were added to separate tubes to produce bacterial counts of between 300 and 1,500cfu/ml. Samples (100µl) from each tube were removed at zero time, 10 minutes, and 60 minutes incubation and sub-cultured to Tryptone Soya Agar (TSA). The TSA sub-cultures were incubated aerobically at 37 ± 1°C for 18-24 hours, colonies counted, and compared to a control appropriately diluted from the stock cultures.

Results showed that there was no loss in viability of the organisms in the micrAlert Neutralising Solution/disinfectant mix after incubation for zero, 10, or 60 minutes at room temperature. Results were comparable to the water control. It was concluded that the BM0017 micrAlert Neutralising Solution inactivated the disinfectants and met the performance criteria.

12. Limitations of the Medium

- BM0017 micrAlert Neutralising Solution is intended for use on inanimate surfaces only.
- BM0017 micrAlert Neutralising Solution is intended for use with micrAlert Listeria (E&O BM0014), micrAlert Salmonella (E&O BM0015), and/or micrAlert Coliform (E&O BM0016).

13. Precautions and Warnings

- BM0017 micrAlert Neutralising Solution should be validated by users in local conditions.
- This product is single use only, do not use on multiple test areas.
- Do not use if the packaging, tube, or swab are damaged, discoloured, or passed the expiry date.
- This product should only be used by, or under the supervision of, trained professionals. E&O Laboratories cannot be held responsible for unauthorised or untrained use, or for off-label application.
- This product is for use in combination with micrAlert bacterial indicator products. Follow instructions for use provided with these products.
- Collected specimens should be considered potential biohazards. Wear PPE and take precautions recommended by local COSHH assessment (refer to BM0017 and micrAlert bacterial indicator product Material Safety Data Sheet).
- Not to be taken. Do not use to collect samples from humans, animals, carcasses, or meat products.
- Dispose of used tubes, liquids, lids, and swabs as contaminated waste according to local and national guidelines.

14. Storage and Shelf Life

Store BM0017 micrAlert Neutralising Solution in the original packaging at between 2 and 30°C away from light and moisture. Kept under these conditions the product may be used up to the date of expiry shown on the label.

15. References

1. Russell AD. Neutralization procedures in the evaluation of bactericidal activity. In: Collins CH, Allwood MC, Bloomfield SF, Fox A, eds. Disinfectants: their use and evaluation of effectiveness. London: Academic Press, 1981:45-59.

Version History*

001 24/05/2023 - New Document Created

*Note: minor typographical, grammatical, and formatting changes are not included in the revision history.



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TABLE OF APPLICABLE SYMBOLS

 REF Catalogue number	 Batch code		 Manufacturer	 Use by
 Temperature limitation	 Contents sufficient for <n> tests	 Consult Instructions for Use	 Keep away from direct light	 Store in a dry place