Instructions for Use

REF - BM0020 **Alkaline Peptone Water**

Bottled Media

1. Intended Use

For *in vitro* diagnostic use. BM0020 Alkaline Peptone Water is an enrichment medium in the isolation of *Vibrio* species from faeces, food, and water samples.

2. Composition*

Ingredient	g/L
Peptone	10.0
Sodium chloride	20.0

*Adjusted/supplemented as needed to meet performance requirements

3. Summary and Explanation

First developed by Shread *et al.* [1] as an enrichment broth for the growth of *Aeromonas* species, Cruickshank [2] showed that with a higher pH, the medium can be used for the enrichment of *Vibrio* species. Alkaline Peptone Water is recommended by UKHSA as a supplementary medium in the investigation of gastroenteritis [3].

4. Principle

Peptone is the source of the required nitrogen, carbon, and other essential nutrients. Sodium chloride maintains the osmotic balance. The high pH of the medium inhibits most enteric organisms for at least 24 hours.

5. Physical Characteristics

	Appearance and Colour	pH
Medium	Straw liquid	8.6 ± 0.2

6. Materials Provided

BM0020 Alkaline Peptone Water is available in the formats detailed below. Each bottle is ink-jet printed or labelled with (abbreviated) product name, product code, lot number and expiry date.

Product Code	Product Format
BM0020-M002-10	50 x 10ml in Thin Wall Universals
BM0020-M002-20	50 x 20ml in Thin Wall Universals
BM0020-R1L-1000	6 x 1000ml in 1000ml Sirop Bottles

7. Materials Needed but not Provided

Standard microbiological laboratory materials e.g., sterile loops or swabs, collection containers, incubators, media for isolation and quality control organisms.

8. Specimens

BM0020 Alkaline Peptone Water is suitable for the testing of the following specimens:

- Food and Environmental: products for human consumption, animal feed and environmental samples
- Clinical: rectal swabs and stool specimens [3]

Sampling and transport equipment must be used in accordance with the end user's suppliers' recommendations. Refer to appropriate standard method or local guidance on sample collection and subsequent processing.

9. Test Procedures and Interpretation of results

Follow local, national, or international guidelines.

Clinical Samples:

Inoculate swab specimens directly into Alkaline Peptone Water. Material not being cultured directly from a swab may be transferred into the medium using a sterile microbiological loop. For faecal specimens, aseptically transfer approximately 1g of the sample to the medium and mix well.

Food and Environmental Samples:

Prepare a homogenised suspension using a ratio of 1:9 of sample to Alkaline Peptone Water.

Incubate inoculated broth at 37 ± 1°C aerobically for 6 hours, after which, subculture 10µl of the productivity broth (regardless of turbidity) onto a suitable agar (such as E&O PP0270 TCBS) and incubated at 37 ± 1°C aerobically for 18-24 hours. Re-incubate broths until a total incubation time of 24 hours is reached.

After incubation, examine broths for turbidity; examine subcultures on agar for colonies (typical colony appearance outlined in Quality Control table below). Perform further biochemical, serological, molecular, or mass spectroscopy testing to confirm identity of presumptive positive isolates from subcultures. Refer to relevant guidelines.

10. Quality Control

Organism	Incubation	Result (Specificity)
V. parahaemolyticus (NCTC 10885) *V. furnissii* (NCTC 11218)	37 ± 1°C aerobically for 6 hours 37 ± 1°C aerobically for 6 hours Subculture 10µl of the productivity broths onto PP0270 TCBS agar and incubate at 37 ± 1°C aerobically for 18-24 hours.	Subculture: Green colonies Subculture: Yellow colonies

It is the responsibility of the user to perform 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

To fully verify BM0020 Alkaline Peptone Water performance, samples were tested to assess colony morphology and recovery level when incubated at 37 ± 1°C aerobically for 6 hours, before being subcultured on PP0270 TCBS agar and incubated at 37 ± 1°C aerobically for 18-24 hours. All samples showed good recovery and the correct morphology of the required test organisms: *Vibrio parahaemolyticus* (NCTC 10885) and *Vibrio furnissii* (NCTC 11218). Therefore, it can be concluded that BM0020 Alkaline Peptone Water, meets performance criteria when used according to the instructions outlined above.

12. Limitations of the Medium

- As oxidase testing may lead to false negative results on media containing carbohydrates (such as TCBS) subculture to nutrient or blood agar before the test is conducted.
- Due to natural variation, some strains may grow poorly on this medium.

13. Precautions and Warnings

This product is considered non-hazardous under CLP regulations. Wear such PPE as recommended by laboratory COSHH assessment. During and after use, always handle all materials in a manner conforming to Good Laboratory Practices and consider that material under test should be regarded as a potential biohazard if mishandled.

Refer to E&O BM0020 Bottled Media Material Safety Data Sheet.

14. Storage conditions and Shelf life

Store BM0020 in the original bottle with the lid tightly closed at between 15 and 30°C. Kept under these conditions it may be used up to date of expiry shown on product label.

Dispose of in accordance with local and national authority requirements. Do not use media if it is contaminated, discoloured or out of date. Additionally, do not use medium if it has been stored inappropriately or the packaging has been damaged.

15. References

1. Shread, P., Donovan, T. and Lee, J. (1981) A survey of the incidence of Aeromonas in human faeces. Soc. Gen. Microbiol., Q8, pp.184.
2. Cruickshank, R. (1968) Medical Microbiology. 11th ed., London, UK: Livingstone Ltd.
3. Public Health England (2020) Gastroenteritis. UK Standards for Microbiology Investigations. Syndromic, S 7(2). London: Standards Unit, National Infection Service.

Version History*

001 23/10/23 - 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 o REF Catalogue number	LOT Batch code	IVD *In vitro* Diagnostic Medical Device	Manufacturer	Use by
Temperature limitation	Contents sufficient for <n> tests	Consult Instructions for Use	Keep away from direct light	Store in a dry place