

## Certificate of Analysis

Certificate No: BMDX/COA/P/410/2026

**Product Name:** CLED Agar / MacConkey III Agar

**Product Code:** SP90C1012

**Lot No:** 260422002

**Expiry date:** 29/07/2026

**Date of Analysis:** 22/04/2026 – 24/04/2026

**Parameter Requirement:** Physical, Chemical and Microbiological Analysis

| Physical & Chemical Test | Specification                                     | Results |
|--------------------------|---|---------|
| Color                    | CLED Agar: Blue/Green-colored gel                 | Passed  |
|                          | MacConkey III Agar: Dark red colored gel          | Passed  |
| pH                       | CLED Agar: 7.30 ± 0.2                             | Passed  |
|                          | MacConkey III Agar: 7.10 ± 0.2                    | Passed  |
| Hardness                 | Semi-solid with a firm, smooth, & bounces surface | Passed  |
| Pour Depth/Thickness     | CLED Agar: 3.00mm to 3.50mm                       | Passed  |
|                          | MacConkey III Agar: 3.00mm to 3.50mm              | Passed  |

| Microbiological Test                      | Specification   | Results |
|---|---|---------|
| <b>CLED Agar:</b>                         |   |         |
| <i>Escherichia coli</i> ATCC® 25922       | Growth; colonies yellow, medium yellow  | Passed  |
| <i>Proteus mirabilis</i> ATCC® 12453      | Growth; colonies blue, medium blue-green to blue                                    | Passed  |
| <i>Staphylococcus aureus</i> ATCC® 25923  | Growth; colonies small, yellow; medium yellow                                       | Passed  |
| <i>Proteus vulgaris</i> ATCC® 8427        | Growth; colonies colorless to blue; swarming inhibited; slight spreading acceptable | Passed  |
| Uninoculated plate                        | No growth   | Passed  |
| <b>MacConkey III Agar:</b>                |   |         |
| <i>Escherichia coli</i> ATCC® 25922       | Pink to red growth  | Passed  |
| <i>Proteus mirabilis</i> ATCC® 12453      | Growth; colorless Inhibition of swarming  | Passed  |
| <i>Salmonella Typhimurium</i> ATCC® 14028 | Growth; colorless   | Passed  |
| <i>Staphylococcus aureus</i> ATCC® 25923  | No growth   | Passed  |
| <i>Enterococcus faecalis</i> ATCC® 29212  | No growth   | Passed  |
| Uninoculated plate                        | No growth   | Passed  |

### Sample statement:

1. Culture media were prepared according to procedure SP-PD-BMDX-02 Production Process Control and SP-PD-BMDX-11 Product Specification.
2. Culture media were kept at temperature conditions 2-8°C.
3. QC Organisms were prepared and followed according to procedure SP-QC-BMDX-07 Quality Control Testing and SP-PD-BMDX-11 Product Specification.

**Result:**

The information given is believed to be correct, all results reported in this certificate relate only to the product in this certificate of analysis according to SP-PD-BMDX-11 Product Specification.

**Sign by:**



**Fairuz Ayuni Binti Abdul Halim**

**QC Executive**

BSc. in Microbiology with Honours

Universiti Putra Malaysia

**Date:** 24/04/2026