OXALIS Diagnostics Pvt. Ltd.

# Technical Data

## Chromogenic Coliform Agar 100 g / 500 g

Used for Simultaneous detection of Escherichia coil and total coliforms in water samples.

**Product Presentation:**

| Cat No. | Product description | Pack Size |
|---|---|---|
| **11030050100** | Chromogenic Coliform Agar | 100 Gram |
| **11030050500** | Chromogenic Coliform Agar | 500 Gram |

**Principle**

Chromogenic Coliform Agar is a selective medium recommended for the simultaneous detection and recovery of sub-lethally injured coliforms in water samples. The CCA media is composed of tryptone, yeast extract, sodium chloride, sodium dihydrogen phosphate, disodium hydrogen phosphate, sodium pyruvate, sorbitol, tryptophan, tergitol-7 and three chromogenic substrates. The three chromogenic substrates are 6-chloro-3-indoxyl β-D-galactopyranoside, 5-bromo-4-chloro-3-indoxyl- β-D-glucuronic acid cyclohexamine ammonium salt, monohydrate and IPTG (Isopropyl-β-D-thiogalactopyranoside). Tryptone, sodium pyruvate and sorbitol provide nitrogenous substances, fermentable carbohydrate and other essential growth nutrients for the organisms. The L-Tryptophan improves the indole reaction thus increasing the revealing reliability. Sodium dihydrogen phosphate, disodium hydrogen phosphate buffers the medium. Tergitol-7 inhibits gram-positive as well as some gram-negative bacteria other than coliforms. The enzyme ß-D-galactosidase produced by coliforms hydrolyzes 6-chloro-3-indoxyl-β-D-galactopyranoside to form pink to red colored colonies. The enzyme ß-D-glucuronidase produced by E.coli, cleaves 5-bromo-4chloro-3-indoxyl-β-D-glucuronic acid. Colonies of E.coli give dark blue to violet colored colonies due to cleavage of both the chromogens. The presence of the third chromogenic IPTG enhances the color of reaction

**Composition**

| Ingredients | Grams / Litre |
|---|---|
| Tryptone | 1.000 |
| Yeast extract | 2.000 |
| Sodium chloride | 5.000 |
| Sodium dihydrogen phosphate | 2.200 |
| Disodium hydrogen phosphate | 2.700 |
| Sodium pyruvate | 1.000 |
| Sorbitol | 1.000 |
| Tryptophan | 1.000 |
| Tergitol-7 | 0.150 |
| Chromogenic mixture | 0.400 |
| Agar | 15.000 |

Final pH (at 25°C) 6.8± 0.2

*Formula adjusted, standardized to suit performance parameters

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**Type of specimen**

water samples – Water and waste water

**Specimen Collection and Handling**

Ensure that all samples are properly labeled. Follow appropriate techniques for handling samples as per established guidelines. Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure. The samples must be stored and tested within the permissible time duration. After use, contaminated materials must be sterilized by autoclaving before discarding.

**Directions**

- ✓ Dissolve 31.00 grams (the equivalent weight of dehydrated medium per liter) in 1000 ml distilled water.
- ✓ Heat to boiling to dissolve the medium completely.
- ✓ DO NOT AUTOCLAVE. DO NOT OVERHEAT.
- ✓ Cool to 45-50°C. Mix well and distribute aseptically in petri plates and allow to solidify.
- ✓ Ensure complete solidification and inoculate test sample aseptically.

**Storage and Stability**

- ✓ Store Dehydrated culture media in cool, dry place at 10°C-30°C away from direct light.
- ✓ Store prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

**Quality Control**

**Dehydrated Appearance:** Light beige coloured, homogenous and free flowing powder.
**Prepared Appearance:**Light beige coloured slightly opalescent gel.

**Growth Promotion Test:** Cultural characteristics observed after an incubation of 18-24hours at 30°C - 35°C.
**Cultural Response :**

| Organism | Type Culture | Growth | Colour of colony | Incubation Temperature | Incubation Period |
|---|---|---|---|---|---|
| *Escherichia coli* | **ATCC 8739** | Good | Pinkish Purple | 30°C -35°C | 24 Hours |
| *Pseudomonas aeruginosa* | **ATCC 10145** | Good | Colourless or greenish pigment | 30°C -35°C | 24 Hours |
| *Salmonella enterica subsp. enterica serovar Typhimurium* | **ATCC 14028** | Good | colourless | 30°C -35°C | 24 Hours |
| *Staphylococcus aureus* | **ATCC 25923** | Inhibited | -- | 30°C -35°C | 24 Hours |

**Interpretation of Results**

- ✓ After proper incubation, the plates should show isolated colonies in streaked areas and confluent growth in areas of heavy inoculation.
- ✓ In cultures for fungi, examine plates for fungal colonies exhibiting typical colour and morphology.

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**Warranty**

- ✓ This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

**Disposal**

Disposal of infectious material and material that comes in to contact with clinical sample must be decontaminated and dispose of by autoclaving or incineration or established laboratory procedures.
User must be ensure safe disposal of used or unusable preparation of the products.

**Reference**


- ✓ Baird R.B., Eaton A.D., and Rice E.W., (Eds.), (2015), *Standard Methods for the Examination of Water and*
- ✓ Jorgensen,J.H., Pfaller , M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015), *Manual of Clinical Microbiology*, 11th Edition. Vol. 1 *Wastewater*, 23rd Ed., APHA, Washington, D.C



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