



CEOS CHROMOGENIC COLIFORM AGAR

USES

CEOS Chromogenic coliform agar is a chromogenic medium for the determination of coliform bacteria and *E. coli* in water.

PRINCIPLES AND PROCEDURES

CEOS Chromogenic coliform agar is a selective and differential medium for the simultaneous determination of *E. coli* and coliform bacteria in water and food. Bile salts ensure medium selectivity, Salmon-GAL ensures coliform and *E. coli* differentiation, and chromogenic substrates detect β -galactosidase, X-GAL and β -glucuronidase. Salmon-GAL is hydrolyzed by coliforms, releasing a pinkish-yellow pigment; the reaction was aided by IPTG (isopropyl- β -D-thiogalactopyranoside) present in the medium. X-GLUC hydrolyzes, in addition to enterobacteria, *E. coli* and other *Salmonella* and *Shigella* strains with the release of blue pigment. The presence of tryptophan in the medium allows a direct indole test on colonies with the addition of Kovacs reagent, to confirm *E. coli*.

E.coli is an indicator of fecal pollution, a potential pathogen that causes severe digestive diseases. Coliform bacteria are primarily non-pathogenic bacteria that protect the gut from infection by pathogenic bacteria. They are excreted by faeces from the body, facultative are anaerobes, gram-negative, rod-like, non-porogenic bacteria that ferment lactose with the formation of acid and gas.

REAGENTS

CEOS Chromogenic coliform agar (g/l)

Caseine	1,00
Tryptophan	1,00
Yeast extract	2,00
Sodium chloride	5,00
Di-sodium hydrogen phosphate	2,70
Sodium pyruvate	1,00
Tergitol 7	0,15
Sodium dihydrogen phosphate	2,20
Sorbitol	1,00
IPTG	0,10



X-GLUC	0,10
Salmon GAL	0,20
Agar	15,00

pH 6,8±0,2

Color: slightly opalescent, light amber.

PRECAUTIONS

IVD. Only for professional use. Do not use product if there are visible signs of microbial contamination, color change, drying, cracking or other signs of quality deterioration.

Apply aseptic techniques and identified precautions against microbiological hazards throughout all procedures. Prepared plates, bottles, sample bottles and other contaminated materials have to be sterilized in autoclave after use and before disposing.

STORAGE AND SHELF LIFE

Products that are listed on cardboard packaging are packed in tight plastic foil, for better stability. Products must be kept at dark place and in temperature span suggested on labels, in original packaging until use. Moisture in form of fine mist or small drops on the inside of the lid, especially during and after keeping in the fridge, is acceptable and sign of medium freshness. Products can be used until expiration date (see packaging label) and incubated during recommended incubation periods.

If products from opened stack are kept on clean place where temperature is between 2-8°C, they can be used for one week (7 days). Exposure to light before and during incubation must be reduced.

USERS QUALITY CONTROL

Inoculate representative samples with the following strains:

Microorganisms	Results
<i>Pseudomonas aeruginosa</i> ATCC 10145	Growth, colorless colonies
<i>Enterobacter aerogenes</i> ATCC 13048	Good growth, red to pink colonies
<i>Enterococcus faecalis</i> ATCC 19433	Inhibited
<i>Escherichia coli</i> ATCC 25922	Good growth, dark blue to violet colonies
<i>Escherichia coli</i> ATCC 8739	Good growth, dark blue to violet colonies

According to ISO 11133:

Incubation conditions: 36±2 °C / 21±3 h.

Inoculation conditions: Productivity quantitative (100±20. Min. 50 CFU) / Selectivity (10⁴-10⁶ CFU) / Specificity (10³-10⁴ CFU)



CERTIFIKAT

PROCEDURE

Materials provided

CEOS Chromogenic coliform agar . Microbiologically controlled.

Materials not provided

Additional culture medium, reagents and laboratory equipment if needed.

Test procedure

Inoculate solid samples by direct streaking on the medium surface.

Liquid samples can be inoculated by spread plating, pour plating or membrane filtration method.

Incubate aerobically at $35 \pm 2^\circ\text{C}$ for 18-24 hours.

Incubation conditions may vary depending on the target of the analysis:

- $44 \pm 1^\circ\text{C}$ for 24 ± 2 hours if research is focused on fecal coliform bacteria;
- $30 \pm 1^\circ\text{C}$ for 24-48 hours to maximize total coliform detection.

Results

β -glucuronidase-negative E. coli strains, such as E. coli O157, are colorless on this medium.

PACKAGING/AVAILABILITY

Plates \varnothing 90 mm ready to use, 20pcs	50110426
Plates \varnothing 60 mm ready to use, 30 pcs	51110426

MORE INFORMATIONS

For more informations contact manufacturer.

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