

iChrome™ Salmonella Agar (ic27004)

Used for the isolation and differentiation of *Salmonella* species from *E. coli* by chromogenic method.

Industry: Water / Food / Clinical

Principles & Uses

iChrome™ Salmonella Agar represents an advanced method for *Salmonella* identification and is aligned with ISO standards for detecting *Salmonella* in food and water samples, offering more precise and efficient differentiation. While traditional methods relying on hydrogen sulfide production and lactose fermentation are limited in identifying the diverse *Salmonella* species, this innovative medium provides a more comprehensive approach.

Key components like peptone offer essential growth nutrients, while bile salts inhibit Gram-positive. Bacteriological agar solidifies the medium.

The chromogenic approach is based on two substrates, yielding distinct colony colors for *Salmonella*. Magenta colonies result from the hydrolysis of one substrate, while microorganisms producing the enzyme that cleaves the second substrate produce blue-green colonies. Non-*Salmonella* organisms appear blue-green or remain uncolored.

Salmonella species, known for causing a range of infections from gastroenteritis to typhoid fever, are characterized by magenta colonies. In contrast, *E. coli* and other β -glucuronidase-positive organisms exhibit a characteristic blue-green color.

Composition (gr/L)

Peptone 20, bile salts No. 3 1.5, Chromogenic Mixture 0.075, agar-agar 15.

Final pH at 25°C 7.2 ± 0.2

Preparation from dehydrated Powder

Suspend 18.3 g of the medium in 500 ml of purified water. Autoclave at 121°C for 15 minutes. Allow to cool

to 50 °C, add the content of one vial of iChrome™ Salmonella supplement. Mix well and pour into sterile petri dishes.

Quality Control

Dehydrated Appearance: Light beige, free-flowing, homogeneous.

Prepared Appearance: Light amber, slightly opalescent.

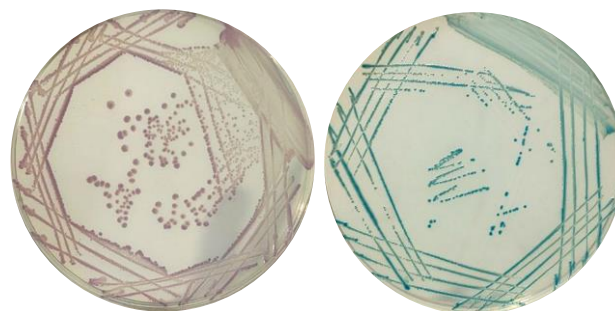
Reaction of 3.66% Solution at 25°C: pH 7.2 ± 0.2

Cultural Response

Cultural response was observed after 18-48 hours of incubation at 35 ± 2°C.

Organism (ATCC*)	Recovery	Colony color
<i>Salmonella typhimurium</i> (14028)	Good Growth	Magenta
<i>Escherichia coli</i> (25922)	Good	Blue-Green
<i>Proteus mirabilis</i> (43071)	Good	Colorless
<i>Bacillus subtilis</i> (6633)	Inhibited	-
<i>Staphylococcus aureus</i> (25923)	Inhibited	-

*ATCC is a registered trade mark of the American Type Culture Collection.



Salmonella with magenta colonies (left). *E. coli* with blue-green colonies (right).

Storage

Store supplement, dehydrated medium and prepared medium at 2-8 °C.