

Starch Agar (i23214)

For the cultivation and differentiation of a variety of microorganisms based on amylase production.

Industry: Food / Clinical

Principles & Uses

Starch Agar, initially developed for the cultivation of *Neisseria*, serves as a medium for detecting starch-hydrolyzing microorganisms in both food and clinical samples. The addition of Gram Iodine to a 48-hour culture on Starch Agar reveals starch hydrolysis by forming a colorless zone around colonies. A blue or purple zone indicates the absence of starch hydrolysis. The size of the clear zone correlates with the starch-hydrolyzing activity of the studied strain. Beef extract within the medium contributes nitrogen, vitamins, carbon, and amino acids. Starch, reacting with Gram Iodine, produces a blue color, and organisms with amylase activity cause a clearing around the isolate while leaving the rest of the medium blue. While initially developed for *Bacillus cereus* identification, Starch Agar finds application in broader microbial studies.

Composition (gr/L)

Beef Extract 3 g, Soluble Starch 10 g, Agar 12 g.

Final pH at 25°C 7.5 ± 0.2

Preparation from dehydrated Powder

Suspend 25 g of the powder in 1 L of distilled water. Mix thoroughly. Autoclave at 121°C for 15 minutes.

Quality Control

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

Prepared Appearance: Light amber, slightly opalescent.

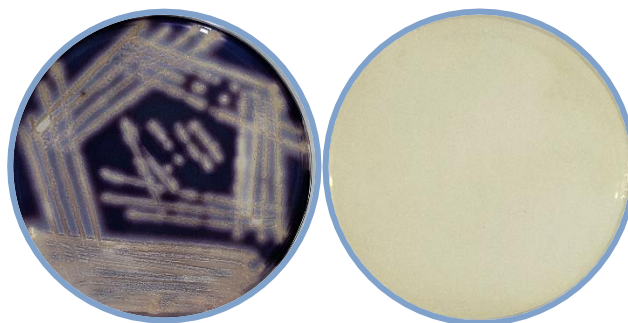
Reaction of 2.5% Solution at 25°C: pH 7.5 ± 0.2

Cultural Response

Cultural response was observed after 40 - 48 hours of incubation at 35 ± 2°C.

Organism (ATCC*)	Recovery	Starch Hydrolysis
<i>Bacillus subtilis</i> (6633)	Good	+
<i>Escherichia coli</i> (25922)	Good	-
<i>Staphylococcus aureus</i> (25923)	Good	-

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



Bacillus subtilis (left). Prepared Culture Media (right).

Storage

Keep the container at 15-30 °C. Store prepared medium at 2-8 °C.