

Plate Count Agar (i23144)

For obtaining microbial plate counts from milk and dairy products, foods, water and other materials of sanitary importance.

Industry: Food / Dairy product / Water

Principles & Uses

Plate Count Agar is a vital culture medium for enumerating microorganisms in various samples. Its formulation, in accordance with Buchbinder et al.'s recommendations, has evolved to eliminate the need for milk. This modified composition supports the growth of a wide range of microorganisms without additional ingredients, aligning with the standards set by organizations like APHA, ISO, and AOAC. It's the top choice for plate counts in diverse sample types, consistent with the principles of the 'Standard Methods for the Examination of Dairy Products' and the FDA's Tryptone Glucose Yeast Agar.

This medium's versatility stems from its well-balanced ingredients. Pancreatic digest Casein, offering nitrogen and carbon sources, amino acids, and essential nutrients, combines with yeast extract, a source of vital B-complex vitamins. Glucose fuels bacterial growth while agar serves as the solidifying agent. The pour plate technique, recommended by APHA, ensures accurate results. This agar is proficient not only in food and animal feed samples but also for microbial content determination in water and other materials, aligning with established standards such as EN ISO 4833 and ISO 17410. It goes by several names, including Tryptone Glucose Yeast Agar and Casein-Peptone Dextrose Yeast Agar. Devoid of inhibitors or indicators, it provides a nutrient-rich environment for microbial enumeration.

Composition (gr/L)

Pancreatic digest Casein 5, Yeast Extract 2.5, Glucose 1, Agar 14.

Final pH at 25°C 7.0 ± 0.2

Preparation from dehydrated Powder

Add 22.5 g of the powder in 1 Liter of distilled water. Autoclave at 121°C for 15 minutes.

Quality Control

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

Prepared Appearance: Light amber, slightly opalescent.

Reaction of 2.25% Solution at 25°C: pH 7.0 ± 0.2

Cultural Response

Inoculate using the pour plate method and incubate at 35 ± 2°C for 18-48 hours.

Organism (ATCC*)	Recovery
<i>Lactobacillus johnsonii</i> (11506)	Good
<i>Staphylococcus aureus</i> (25923)	Good

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



S. aureus.

The background has been darkened to enhance colony visibility.

Storage

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