



Orange Serum Agar | AS-1312

Used for cultivating aciduric microorganisms, especially those related to spoilage of citrus products.

Because citrus fruit juices have an acidic pH range of 2.4 – 4.2, they specifically support the growth of microbes that tolerate acidity. Yeast, molds, and certain bacteria like *Lactobacillus* and *Leuconostoc* species are among them. *Leuconostoc mesenteroides*, *Lactobacillus fermentum*, and *Lactobacillus plantarum* are the main lactic acid bacteria and yeast contaminants that cause citrus juice to spoil.

Orange Serum Agar (OSA), created by Murdock and Hays, is frequently used to culture these aciduric bacteria. Essential nutrients are supplied by this culture media, such as carbon and nitrogen supplies provided from yeast extract and casein peptone, as well as fermentable glucose for energy metabolism.

Composition (gr/L)

Pancreatic Digest of Casein	10
Yeast Extract	3
Glucose	4
Dipotassium Hydrogen Phosphate	3
Orange Extract	5
Agar	17
Final pH at 25°C	5.5 ± 0.2

Preparation

Dissolve 42 g of the powder into 1 liter distilled water. Autoclave at 115 °C for 15 min. DO NOT OVERHEAT.

Quality Control

Dehydrated Appearance: Fine, homogeneous, free of extraneous material, may contain dark tan particles

Prepared Appearance: Light to medium, yellow to tan; clear to slightly hazy.

Reaction of 4.2% Solution at 25°C: pH 5.5 ± 0.2

Microbial Test Results

incubate at 28 °C aerobically for up to 4 days.

Organism (ATCC)	Recovery
<i>Lactobacillus plantarum</i> (14917)	Good
<i>Lactobacillus casei</i> (39392)	Good
<i>Bacillus cereus</i> (11778)	Good
<i>Candida albicans</i> (10231)	Good

Storage

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