

Technical Data Sheet

Linden Grain Medium Halal (base)

Ordering number: 1.02747.5000 / 1.02747.9025

Culture medium for the detection of yeasts, moulds and bacteria in beverages

Linden Grain Medium is designed for media fill simulations of beverage bottling and ice crusher installations.

Mode of Action

Optimum growth conditions are created for fungi and bacteria due to the high nutrient content of Linden Grain Medium. The pH of the medium can be adjusted to the filling line criteria. At a pH of 4.3 fungi and bacteria which are adapted to grow under high acid conditions show visible growth within 7 days of incubation at 28°C. Bacteria which grow best at neutral to slight alkaline pH like *Bacillus subtilis* show no growth/very limited growth in Linden Grain Medium at pH 4.3. Any growth within the medium (turbidity) or on the surface of the medium or on the inner wall or bottom of the tubes and bottles indicates the presence of spoilage organisms.

Experiments have shown that Linden Grain Medium could also be used after freezing and thawing, thus making this medium suitable for ice crusher installations.

Typical Composition

D(+) -glucose	20.0
Yeast extract	3.5
Peptone	2.0
Ammonium sulfate	2.0
Potassium dihydrogen phosphate	1.0
Magnesium sulfate	1.0

Preparation

Dissolve 29.5 g in 1 liter of purified water; adjust pH as needed (for example 4.1-4.5 for high-acidity products) using 1 M HCL or tartaric acid, autoclave



(15 minutes at 121°C). The initial pH is in the low-acidity range (typically 5.0-5.5). It is not specified and may vary.

The prepared broth is clear and yellowish.

Application and Interpretation

Perform media fill procedure. Fill bottles with Linden Grain Medium. Adjust filling volume of the bottles to ensure the presence of sufficient oxygen in the headspace.

Incubate bottles up to 7 days at 28°C.

Look for any visible growth in the bottles.

Storage and Shelf Life

Dehydrated culture medium: usable up to the expiry date when stored in tightly closed containers, in a dry place, at +2°C to +8°C.

Prepared broth: usable up to 4 weeks when stored in tightly closed containers at room temperature (up to 28°C).

Quality Control

Control Strains	Inoculum CFU/10 ml	Incubation at 28°C (days)	Visible Growth
<i>Geosmithia putterillii</i> ATCC 10487	50 – 500	3 - 7	+
<i>Cladosporium cladosporioides</i> ATCC 38494	50 – 500	3 - 7	+
<i>Zygosaccharomyces fermentati</i> ATCC 34891	50 - 500	3 - 7	+
<i>Bacillus subtilis</i> ATCC 6051	50 - 500	1	-

Please refer to the actual batch related Certificate of Analysis.

Ordering Information

Product	Cat. No.	Pack size
Linden Grain Medium Halal (Base)	1.02747.5000	5 kg
Linden Grain Medium Halal (Base)	1.02747.9025	25 kg
Linden Grain Medium (Base), replaces 1.00553.5000	1.03790.5000	5 kg
Linden Grain Medium (Base), replaces 1.00553.9025	1.03790.9025	25 kg
Hydrochloric acid 25% Emsure®	1.00314.1000	1000 ml
L(+)-Tartaric Acid	1.00804.0250	250 g

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<p><i>Cladosporium cladosporioides</i> ATCC 38494</p> <p>4 days at 28°C</p>	<p><i>Zygosaccharomyces fermentati</i> ATCC 34891</p> <p>2 days at 28°C</p>	<p><i>Geosmithia putterillii</i> ATCC 10487</p> <p>7 days at 28°C</p>

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