

OGYE Agar Base

Intended Use

OGYE Agar Base is for use with the antimicrobial agent, oxytetracycline, in isolating and enumerating yeasts and molds in foods.

Summary and Explanation

Acidified agar may be used for enumerating yeasts and molds in foods and dairy products. However, in some cases, antimicrobials better suppress bacterial growth and improve recovery of yeasts and molds.^{1,2}

Mossel et al.^{3,4} described Oxytetracycline-Glucose Yeast Extract (OGYE or OGY) Agar for selectively isolating and enumerating yeasts and molds in foods. Mossel et al. demonstrated improved recovery compared to acidified agar media.

OGYE Agar is specified as a standard methods medium for use with dairy products.¹

Principles of the Procedure

OGYE Agar Base contains yeast extract to supply B-complex vitamins which stimulate growth. Dextrose is the carbon energy source. Agar is the solidifying agent. The addition of oxytetracycline inhibits the growth of bacteria.

Formula

Difco™ OGYE Agar Base

Approximate Formula* Per Liter

Yeast Extract	5.0	g
Dextrose	20.0	g
Agar	12.0	g

*Adjusted and/or supplemented as required to meet performance criteria.

Directions for Preparation from Dehydrated Product

1. Suspend 37 g of the powder in 1 L of purified water. Mix thoroughly.
2. Heat with frequent agitation and boil for 1 minute to completely dissolve the powder.
3. Autoclave at 121°C for 15 minutes.
4. Aseptically add 100 mg of the antimicrobial agent, oxytetracycline, to the medium at 50°C. Mix well.
5. Test samples of the finished product for performance using stable, typical control cultures.

Procedure

See appropriate references for specific procedures.

Expected Results

Refer to appropriate references and procedures for results.

User Quality Control

Identity Specifications

Difco™ OGYE Agar Base

Dehydrated Appearance: Tan, free-flowing, homogeneous.

Solution: 3.7% solution, soluble in purified water upon boiling. Solution is medium amber, very slightly opalescent.

Prepared Appearance: Medium amber, slightly opalescent.

Reaction of 3.7%

Solution at 25°C: pH 7.0 ± 0.2

Cultural Response

Difco™ OGYE Agar Base

Prepare the medium per label directions (with the addition of oxytetracycline). Inoculate using the pour plate technique and incubate at 22 ± 3°C for 48-72 hours (up to 5 days if necessary).

ORGANISM	ATCC™	INOCULUM CFU	RECOVERY
<i>Aspergillus brasiliensis (niger)</i>	16404	10 ² -10 ³	Good
<i>Escherichia coli</i>	25922	10 ³ -2 × 10 ³	Inhibition
<i>Saccharomyces cerevisiae</i>	9763	10 ² -10 ³	Good
<i>Saccharomyces cerevisiae</i>	9080	10 ² -10 ³	Good

References

1. International Organization for Standardization. 2004. Milk and milk products – Enumeration of colony forming units of yeasts and/or moulds – colony count technique at 25°C. ISO 6611/IDF 94, 2004-10-15, 2nd ed. ISO, Geneva, Switzerland.
2. Beuchat and Cousin. 2001. In Downes and Ito (ed.), Compendium of methods for the microbiological examination of foods, 4th ed. American Public Health Association, Washington, D.C.
3. Mossel, Visser and Mengerink. 1962. Lab. Pract. 11:109.
4. Mossel, Kleyne-Semmeling, Vincantie, Beerens and Catsaras. 1970. J. Appl. Bacteriol. 33:454.

Availability

Difco™ OGYE Agar Base

CCAM COMPF IDF ISO

Cat. No. 218111 Dehydrated – 500 g