



PRODUCT SPECIFICATION SHEET

Oxytetra Glucose Yeasts Agar Base w/ Biotin (DM1820)

Intended Use

Oxytetra Glucose Yeasts Agar Base w/ Biotin (DM1820) is recommended for selective isolation and enumeration of yeast and moulds from foodstuff.

Product Summary and Explanation

In foods and dairy products for enumerating yeasts and molds acidified media may be used. However, in some cases, antimicrobics better suppress bacterial growth and improve recovery of yeasts and molds.^(1,2) Yeast and mould growth is often limited by the presence of acid-tolerant bacterial flora. Consequently, it is apparent that more active media and different selective agents are required in order to deal with a variety of foodstuffs, types of microorganisms to be studied and incubation conditions. The use of oxytetracycline alone was not sufficient to obtain reliable yeast and mould counts, under certain conditions and when testing certain foods like milk and milk products.

Oxytetra Glucose Yeast Agar Base w/ Biotin were originally formulated by Mossel et al (1, 2) for the isolation and enumeration of yeasts and moulds from foodstuffs.^(3,4) They found that addition of Oxytetra selective supplement to a neutral pH medium increased the recovery / count of yeast and moulds as compared to acidified medium. OGYE Agar is specified as a standard methods medium for use with dairy products.⁽¹⁾

Principles of the Procedure

Oxytetra Glucose Yeasts Agar Base w/ Biotin contains yeast extract which provides B-complex vitamins which stimulate growth. Dextrose acts as carbon and energy source. Low pH helps to reduce the bacterial flora. The addition of oxytetracycline makes the medium more selective by inhibiting the growth of Lactobacilli encountered in milk and milk-products at low pH. Biotin is used as a crucial growth factor for lactose utilizing yeast.

Formula / Liter

Ingredients	Gms / Liter
Yeast extract	5.00
Dextrose	20.00
Biotin	0.0001
Agar	12.00
Final pH: 7.0 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

Precautions

1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

Directions

1. Suspend 18.5 grams of the medium in 500 ml of distilled water.
2. Heat to boiling to dissolve the medium completely.
3. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.
4. Cool to 50°C and aseptically add reconstituted contents of one vial of Oxytetra Selective Supplement (MS023).
5. Mix well and pour into sterile Petri plates.

Quality Control Specifications

Dehydrated Appearance	Cream to light yellow homogeneous free flowing powder
Prepared Medium	Light amber coloured clear to slightly opalescent gel forms in Petri plates
Reaction of 3.7% Solution	pH : 7.0 ± 0.2 at 25°C
Gel Strength	Firm, comparable with 1.2% Agar gel



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Expected Cultural Response: Cultural characteristics observed with added 1 vial of Oxytetra Selective Supplement (MSO23), after an incubation at 25-30°C after 2-5 days.

Sr. No.	Organisms	Results to be achieved		
		Inoculum (CFU)	Growth	Recovery
1.	<i>Aspergillus brasiliensis</i> ATCC 16404	50-100	good-luxuriant	--
2.	<i>Candida albicans</i> ATCC 10231	50-100	good-luxuriant	≥50%
3.	<i>Escherichia coli</i> ATCC 25922	≥10 ³	inhibited	0%
4.	<i>Saccharomyces cerevisiae</i> ATCC 9763	50-100	good-luxuriant	≥50%
5.	<i>Saccharomyces uvarum</i> ATCC 9080	50-100	good-luxuriant	≥50%

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure

Refer appropriate references for standard test procedures.

Results

Refer appropriate references and test procedures for interpretation of results.

Storage

Store the sealed bottle containing the dehydrated medium at 10- 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

Expiration

Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedure

1. The choice of a suitable media for enumeration of yeasts and moulds greatly depends on the nature of foodstuffs to be tested and the organisms that grow on them.
2. These media remain bacteriostatic when inoculated with not greater than 1 ml of a 10⁻¹ food dilution and incubation at 22°C.
3. The number of yeasts or moulds is calculated per one gram or 1 ml of sample under investigation by multiplying the number of colonies with the dilution factor.
4. Lactic acid bacteria are inhibited on this medium.
5. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
6. Consult appropriate texts for detailed information and recommended procedures.

Packaging

Product Name : Oxytetra Glucose Yeasts Agar Base w/ Biotin

Product Code : DM1820

Available Pack sizes : 500gm

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.



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3. Mossel, Visser and Mengerink. 1962. Lab. Pract. 11:109.
4. Mossel, Kleynen-Semmeling, Vincentie, Beerens and Catsaras. 1970. J. Appl. Bacteriol. 33:454.

Further Information

For further information please contact your local MICROMASTER Representative.



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