



PRODUCT SPECIFICATION SHEET

Streptococcus Selection Agar (DM723)

Intended Use

Streptococcus Selection Agar (DM723) is for selective isolation and enumeration of *Streptococci* including group A beta haemolytic strains.

Product Summary and Explanation

Streptococcus is a genus of gram positive bacteria, many of which are facultative anaerobes. Species of *Streptococcus* are classified based on their hemolytic properties. Alpha hemolytic species cause oxidation of iron in hemoglobin molecules within red blood cells, giving it a greenish color on blood agar. Beta hemolytic species cause complete rupture of red blood cells. On blood agar, this appears as wide areas clear of blood cells surrounding bacterial colonies. Gamma-hemolytic species cause no hemolysis. Pike,⁽¹⁾ formulated Streptococcus Selection Agar for the selective isolation of *Streptococci* from various materials, especially those which are heavily contaminated with accompanying heterogenous microbial flora.⁽²⁾ Welch et al.⁽³⁾ described the abilities of these medium to recover group A beta-haemolytic *Streptococci*.

Principles of the Procedure

Streptococcus Selection Agar contains casein enzymic hydrolysate, papaic digest of soyabean meal, dextrose and salts in the medium which provides nutrients essential for the growth of *Streptococci*. Sodium azide and sodium sulphite helps to inhibit gram-negative rods while crystal violet suppresses *Staphylococci*. However, *Streptococci* are not affected by these inhibitors at these concentrations. Due to this reason, this media is useful in studies of streptococcal flora from nutritional, dental and epidemiological specimens.

Formula / Liter

Ingredients	Gms / Liter
Casein enzymic hydrolysate	15.00
Papaic digest of soyabean meal	5.00
Dextrose	5.00
Sodium chloride	4.00
Sodium citrate	1.00
Sodium sulphite	0.20
L-Cystine	0.20
Sodium azide	0.20
Crystal violet	0.0002
Agar	15.00
Final pH: 7.4 ± 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.
3. Sodium azide has a tendency to form explosive metalazide with plumbing material. It is advisable to use enough water to flush off the disposable.

Directions

1. Suspend 45.6 grams of the medium in one liter of distilled water.
2. Heat to boiling, to dissolve the medium completely.
3. Autoclaving is not required if medium is used on the same day.
4. If storage is desired, sterilize by autoclaving at 118°C for 15 minutes.
5. Avoid overheating. Mix well and dispense as desired.





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Quality Control Specifications

Dehydrated Appearance	Cream to yellow homogeneous free flowing powder
Prepared Medium	Light to medium amber coloured clear to slightly opalescent gel forms in Petri plates
Reaction of 4.56% Solution	pH : 7.4 ± 0.2 at 25°C
Gel Strength	Firm, comparable with 1.5% Agar gel

Expected Cultural Response: Cultural characteristics observed after an incubation at 35 - 37°C for 18 - 24 hours.

Sr. No.	Organisms	Results to be achieved		
		Inoculum (CFU)	Growth	Recovery
1.	<i>Bacillus subtilis</i> ATCC 6633	$\geq 10^3$	inhibited	0%
2.	<i>Enterococcus faecalis</i> ATCC 29212	50 - 100	good-luxuriant	$\geq 50\%$
3.	<i>Escherichia coli</i> ATCC 25922	50 - 100	none-poor	$\leq 10\%$
4.	<i>Pseudomonas aeruginosa</i> ATCC 27853	$\geq 10^3$	inhibited	0%
5.	<i>Staphylococcus aureus</i> ATCC 25923	50 - 100	none-poor	$\leq 10\%$
6.	<i>Streptococcus pyogenes</i> ATCC 19615	50 - 100	good-luxuriant	$\geq 50\%$

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

Test Procedure

Refer to appropriate references for standard test procedures.

Results

Refer appropriate references and 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. Growth of coliforms, *Proteus*, *Pseudomonas* and *Bacillus* species is markedly suppressed in this medium. However, some strains of *Staphylococci* and *Pneumococci* may grow in this medium.
2. All streptococcal colonies must be confirmed for identification.
3. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
4. Consult appropriate texts for detailed information and recommended procedures.

Packaging

Product Name : Streptococcus Selection Agar

Product Code : DM723

Available Pack sizes : 500gm/100gm

References

1. Vera, H. D. 1947. The ability of peptones to support surface growth of lactobacilli. J. Bacteriol. 54:14.





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3. Niven. 1949. J. Bacteriol. 58:633.
4. Harrison, A. P., Jr., and P. A. Hansen. 1950. The bacterial flora of the cecal feces of healthy turkeys. J. Bacteriol. 59:197.
5. Frank, H. A. 1955. The influence of various media on spore count determinations of a putrefactive anaerobe. J. Bacteriol. 53:561.
6. Vanderzant, C., and D. F. Splittstoesser (eds.). 1992. Compendium of methods for the microbiological examination of food, 3rd ed. American Public Health Association, Washington, D.C.

Further Information

For further information please contact your local MICROMASTER Representative.



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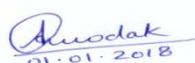
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