Chaitanya Group Of Industries

ReadyMED®
Dehydrated Cell Culture Media

Technical Data Sheet

Mutans-Sanguis Agar RDM-MuDA-01

Principle
Mutans-Sanguis agar is composed of casein enzymic hydrolysate, yeast extract, L-cystine, sodium sulphite, sodium chloride, disodium phosphate, sodium bicarbonate, sodium acetate, sucrose and agar. Casein hydrolysate is source of nitrogen and amino acids. Yeast extract provides nitrogen, carbon, vitamins and minerals necessary to support bacterial growth. L-cystine lower the oxidation-reduction potential of the medium. Sodium sulphite, sodium acetate, disodium phosphate, and sodium bicarbonate are sources of ions that simulate metabolism. Sucrose is carbohydrate and energy source. The streptococci utilize the sucrose and produce extracellular polysaccharide and help in characterization of streptococci species on basis of colony morphology. *Streptococcus mutans* forms white, grey or yellow colored, rough, heaped, irregular colonies resembling frosted glass. While the *Streptococcus sanguis* forms white or colorless, smooth or rough, hard and rubbery colonies.

Use: Recommended for differentiation of *Streptococcus mutans* and *Streptococcus sanguis* associated with oral microflora.

Contents*

Ingredients	Gram/Litre
Casein Enzymic Hydrolysate	15.00
Yeast Extract	5.00
L-Cystine	0.20
Sodium Sulphite	0.10
Sodium Chloride	1.00
Disodium Phosphate	0.80
Sodium Bicarbonate	2.00
Sodium Acetate	12.00
Sucrose	50.00
Agar	12.00
pH at 25˚C	7.3 ±0.2

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 98.10 grams in 1000 ml distilled water. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 min, cool it to 42-45 °C and distribute aseptically in petri plates. Ensure complete solidification and inoculate test sample aseptically.

Specimens types analyzed
Oral clinical samples etc.

Precautions to be taken
These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation
The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Beige colored free flowing, homogeneous powder
Reaction of 9.8% solution	7.3 ±0.2 at 25 ˚C
pH	7.10- 7.50
Gelling	Firm comparable with 1.2% agar gel
Color and clarity of ready medium	Light amber colored opalescent gel
Growth Promotion properties	Best at ≤ 100 CFU at 32-37 ºC for 18-72 h
Indicative properties	Optimum at ≤ 100 CFU at 32-37 ºC for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response

Cultural characteristics observed in presence of 10% CO_2 + 90% H_2, after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum	Growth	Recovery	Colony color	Colony size
Streptococcus mutans (ATCC 25175)	50-100	Luxurious	60-65%	Gray to Beige	0.5 to 1.5 mm
Streptococcus sanguinis (ATCC 10556)	50-100	Luxurious	60-65%	White to colorless	1 to 3 mm

Storage and Shelf Life

Hygroscopic; keep container tightly closed. Store in cool dry place.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. Atlas, R. M. (2005). *Handbook of media for environmental microbiology*. CRC press.
2. Loesche W. J., (1996), *Microbiology of Dental Decay and Periodontal Disease. In: Barons Medical Microbiology* (Baron S et al, eds.), 4th Ed., University of Texas Medical Branch

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