TM 1607 - SCHUBERTS ARGININE BROTH

INTENDED USE

For isolation of chlorine damaged *Pseudomonas aeruginosa* in swimming pool.

PRODUCT SUMMARY AND EXPLANATION

Swimming pool is a body of water of limited size contained in a holding structure. Indicators of health risk in swimming pools include normal skin flora that are shed, such as *Pseudomonas* and *Staphylococcus*. However, these bacteria may be stressed or injured due to chlorination. These injured bacteria are incapable of growth and colony formation under standard conditions because of structural or metabolic changes. Schuberts Arginine Broth is used as an enrichment medium for chlorine-stressed *Pseudomonas aeruginosa* strains.

chuberts Arginine Broth, formulated by Schuberts, utilizes the fact that with arginine, *P. aeruginosa* produces a strongly alkaline reaction resulting in an easily identifiable colour change from grey-green to blue-violet. The indicators used for this purpose are bromothymol blue and cresol red. The medium may be used with either the membrane filter or the liquid enrichment technique.

COMPOSITION

Ingredients	Gms / Ltr
Casein enzymic hydrolysate	17.000
Soya peptone	3.000
D-Glucose	0.500
Sodium chloride	5.000
L-Arginine monohydrochloride	10.000
Bromothymol blue	0.0075
Cresol red	0.010
Brilliant green	0.00038

PRINCIPLE

Casein enzymic hydrolysate and soya peptone serve as rich sources of carbon, nitrogen and essential growth nutrients. Glucose is the energy source. Brilliant-green inhibits the accompanying gram-positive flora while having no toxic effect on pre-stressed *P. aeruginosa.* A color change from grey-green to blue-violet indicates the presence of *P. aeruginosa* allowing presumptive detection of *P. aeruginosa.*

INSTRUCTION FOR USE

- Dissolve 35.52 grams in 1000 ml distilled water.
- Heat if necessary to dissolve the medium completely.
- Mix well and dispense into sterile tubes or flasks as desired.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to light blue homogeneous free flowing powder.
Appearance of prepared medium : Grey green coloured clear solution in tubes.
pH (at 25°C) : 7.0±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

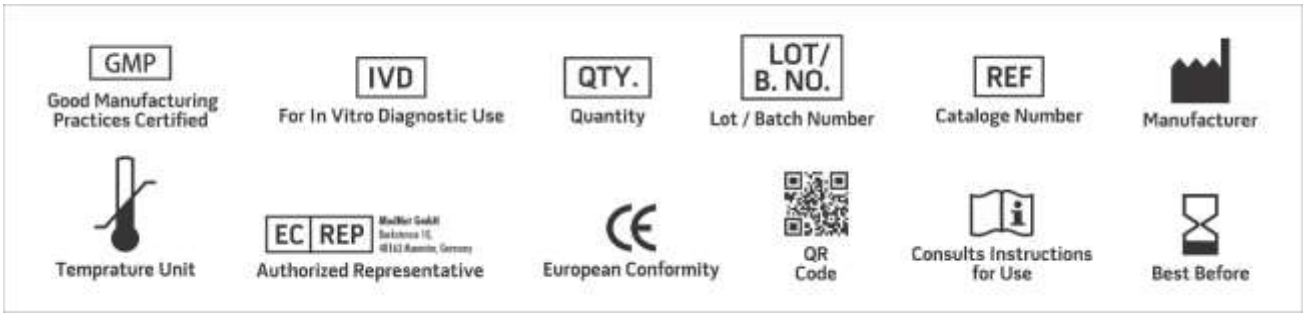
Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Color of the colony	Incubation Temperature	Incubation Period
Pseudomonas aeruginosa	27853	50-100	Good-luxuriant	Positive reaction	35-37°C	24-48 Hours
Pseudomonas aeruginosa	9027	50-100	Good-luxuriant	Positive reaction	35-37°C	24-48 Hours
Pseudomonas stutzeri	17832	50-100	None-poor	Negative reaction	35-37°C	24-48 Hours
Aeromonas hydrophila	7966	50-100	Good-luxuriant	Positive reaction	35-37°C	24-48 Hours
Enterococcus faecallis	19433	50-100	Fair-good	Negative reaction	35-37°C	24-48 Hours
Escherichia coli	25922	50-100	Good-luxuriant	Variable reaction	35-37°C	24-48 Hours

PACKAGING:
In pack size of 500 gm bottles.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES
1. Seyfried P. L., Tobin R. S., Brown N. E. and Ness P. F., 1985, Am. J. Pub. Health 75: 1071
2. Klapes N. A. and Vesley D., 1988, Appl. Environ. Microbiol. 52: 589
3. Eaton A. D., Clesceri L. S. and Greenberg A. E. (Ed.), 1998, Standard Methods for the Examination of Water and Wastewater, 20th Ed., American Public Health Association, Washington, D.C.
4. DIN 38411, Part 8, May 1982, Nachweis Van Pseudomonas aeruginosa.
5. Schubert, R., 1989, Zbl. Bakt. Hyg. B 187; 266-268.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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