TM 1085 - SELLERS DIFFERENTIAL AGAR

INTENDED USE

For identification and differentiation of gram-negative non-fermentative bacilli particularly *Pseudomonas aeruginosa* and *Acinetobacter calcoaceticus.*

PRODUCT SUMMARY AND EXPLANATION

Sellers Differential Agar is formulated as described by Sellers for differentiation and identification of non-fermentative gram-negative bacilli especially *Pseudomonas aeruginosa*, *Acinetobacter calcoaceticus* and *Alcaligens faecalis.* The medium is complex with differentiation ability based on oxidation of dextrose, fluorescence, production of nitrogen and pH changes.

COMPOSITION

Ingredients	Gms / Ltr
Yeast extract	1.000
Peptic digest of animal tissue	20.000
L-Arginine	1.000
D-Mannitol	2.000
Sodium chloride	2.000
Sodium nitrate	1.000
Sodium nitrite	0.350
Magnesium sulphate	1.500
Dipotassium phosphate	1.000
Bromo thymol blue	0.040
Phenol red	0.008
Agar	15.000

PRINCIPLE

Yeast extract and peptic digest of animal tissue are the sources of carbon and nitrogen compounds as well as vitamins and minerals. Oxidation of dextrose by the organisms is readily visible as a yellow band at the slant-butt junction. The dextrose added prior to inoculation diffuses into the medium during incubation period. *P. aeruginosa* exhibits acid reaction from dextrose. However, the reaction is masked by deamination of arginine and high peptone concentration. Most of *Acinetobacter* species produce a yellow band due to glucose oxidation. This band may disappear after 24 hours. D-Mannitol and magnesium sulphate stimulate fluorescence while nitrogen gas production is stimulated by dipotassium phosphate. Sodium nitrate and nitrite serve as substrates for the production of nitrogen gas for denitrifying bacteria. Phenol red and bromothymol blue are the pH indicators. Arginine dihydrolase positive reaction is indicated by the formation of blue colour. Inoculation is done by stabbing deep into the butt and streaking the slant.

INSTRUCTION FOR USE

- Dissolve 44.90 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Dispense in test tubes and sterilize by autoclaving at 15 psi pressure (121°C) for 10 minutes.
- Cool the tubed medium in slanted position.
- Just before inoculation add 0.15 ml or 2 drops of 50% sterile dextrose solution to each slant by letting it run down the side of the tube opposite the slant.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to pink homogeneous free flowing powder.
Appearance of prepared medium : Green coloured clear to slightly opalescent gel forms in tubes as slants with butt.
pH (at 25°C) : 6.7±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Slant	Butt	Band	Fluorescence(under UV)	Incubation Temperature	Incubation Period
Acinetobacter baumannii	19606	50-100	Good	Blue	Green	Yellow	Negative	35 - 37°C	18 - 24 Hours
Alcaligenes faecalis	8750	50-100	Good	Blue	Blue-green	None	Positive	35 - 37°C	18 - 24 Hours
Pseudomonas aeruginosa	27853	50-100	Good	Blue-green	Blue-green	Blue	Positive	35 - 37°C	18 - 24 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

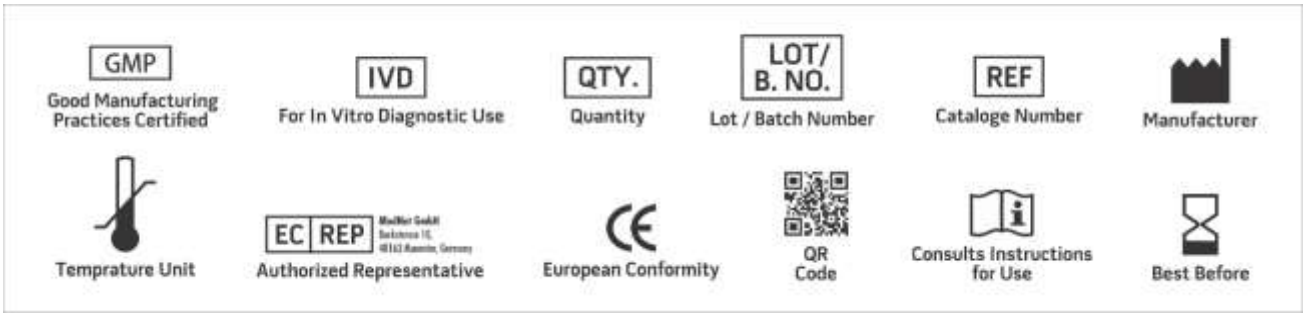
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided 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. Sellers W., 1964, J. Bacteriol., 87:46.
2. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore



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

***For Lab Use Only**

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