TM 075 – COOKE ROSE BENGAL AGAR BASE

INTENDED USE
For selective isolation and cultivation of fungi.

PRODUCT SUMMARY AND EXPLANATION
Cooke Rose Bengal Agar is a selective medium formulated as per Cooke. A variety of inhibitory agents have been used to inhibit bacteria in an attempt to isolate fungi from mixed flora. The Kingdom Fungi includes some of the most important organisms, both in terms of their ecological and economic roles. By breaking down dead organic material into simpler forms, they continue the cycle of elements through ecosystems. In addition, most vascular plants could not grow without a symbiotic association with fungi, or mycorrhizae, that inhabit their roots and supply essential nutrients. Other fungi provide numerous drugs (such as penicillin and other antibiotics), foods like mushrooms, truffles and morels, and the bubbles in bread, champagne, and beer. Waksman described an acid medium consisting of peptone, dextrose, inorganic salts and agar for the isolation of fungi from soil. Cooke used the Waksman medium without adjustment for isolation of fungi from sewage. It was discovered that papaic digest of soyabean meal was particularly suitable for use in this medium and that the combination of chlortetracycline, or oxytetracycline, with rose bengal increased the selectivity of the medium.
Smith and Dawson used rose bengal for the inhibition of bacteria in media which has almost neutral reaction concerned with retardation of the development of fungi. Martin used 1: 30,000 Rose bengal and 30µg Streptomycin per ml and found that a wide variety of bacteria are inhibited at reactions between pH 5.5 to 6.5 without inhibiting fungi.
The medium should not be exposed to light as photo-degradation of rose bengal yields compounds that are toxic to fungi. Microscopic examination coupled with biochemical testing using pure cultures is recommended for complete identification. Due to the selective properties of this medium and the type of specimen being cultured, some strains of fungi may be encountered that fail to grow or grow poorly on the complete medium; similarly, some strains of bacteria may be encountered that are not inhibited or partially inhibited.

COMPOSITION

Ingredients	Gms / Ltr
Papaic digest of soyabean meal	5.000
Dextrose	10.000
Monopotassium phosphate	1.000
Magnesium sulphate	0.500
Rose Bengal	0.035
Agar	20.000

PRINCIPLE
Papaic digest of soyabean meal provides nitrogen, carbon and vitamins. Dextrose is an energy source. Rose bengal and chlortetracycline selectively inhibit bacterial growth and restrict the size and height of colonies of more rapidly growing moulds. Monopotassium phosphate provides buffering capability. Magnesium sulfate is a source of divalent cations.

INSTRUCTION FOR USE
- Dissolve 36.54 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- To increase the selectivity of the medium, add 35µg chlortetracycline per ml of the medium.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to light pink homogeneous free flowing powder.
Appearance of prepared medium : Pink-red coloured, slightly opalescent forms in Petri plates.
pH (at 25°C) : 6.0±0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Growth with chlortetracyline	Recovery with chlortetracyline	Incubation Temperature	Incubation Period
Candida albicans	10231	10-100	Luxuriant	>=70%	Luxuriant	>=70%	25-30°C	1-4 Days
Saccharomyces cerevisiae	9763	50-100	Luxuriant	>=70%	Luxuriant	>=70%	25-30°C	1-4 Days
Aspergillus brasiliensis	16404	10-100	Good	40-50%	Good	40-50%	25-30°C	1-4 Days
Escherichia coli	25922	50-100	Luxuriant	>=70%	Inhibited	0%	25-30°C	1-4 Days
Enterococcus faecalis	29212	50-100	Inhibited	0%	Inhibited	0%	25-30°C	1-4 Days

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

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3. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Ed.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D. C.
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5. Smith and Dawson, 1944, Soil Sci., 58:467.

6. Martin, 1950, Ibid., 69:215.
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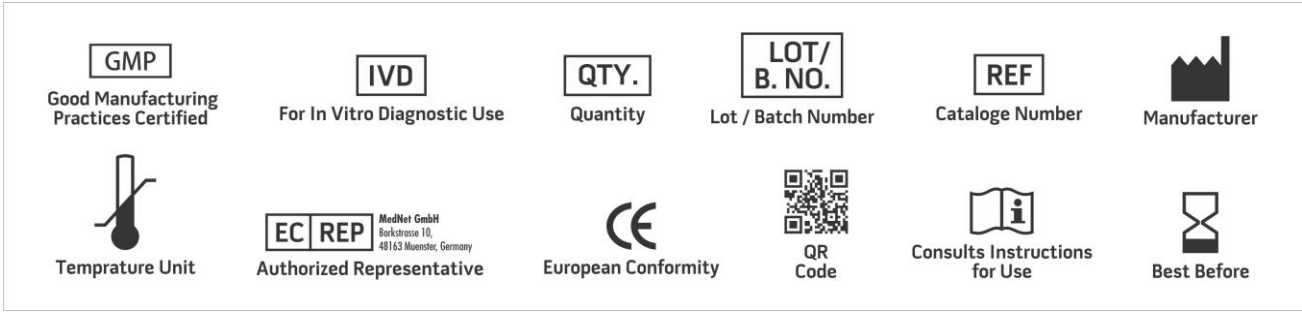

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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