PSEUDOMONAS F AGAR

INTENDED USE
Remel Pseudomonas F Agar is a solid medium recommended for use in qualitative procedures for differentiation of Pseudomonas aeruginosa from other Pseudomonas spp. based on fluorescein production.

SUMMARY AND EXPLANATION
In 1954, King et al. developed two media formulations (Medium A and Medium B) to enhance pigment production in pseudomonads. Previous work had demonstrated amino acids, inorganic ions, minerals, and peptones influenced the production of pyocyanin and fluorescein. King determined the production of these pigments was affected by the composition of the peptone in the medium. Pigment production was also influenced by the absence or minimal concentrations of components which may have a detrimental effect. A combination of dipotassium phosphate and magnesium sulfate was found to be most effective in stimulating fluorescein production.

PRINCIPLE
Casein and meat peptones, in equal amounts, supply nitrogenous compounds, amino acids, and vitamins necessary for bacterial growth. This ratio of peptones has been found to enhance the production of fluorescein and to inhibit pyocyanin production. The peptone in this medium contains approximately 1% phosphorus which results in superior fluorescein production. Additives such as dipotassium phosphate and magnesium sulfate enhance fluorescein production. Glycerol is an energy source.

REAGENTS (CLASSICAL FORMULA)*
Casein Peptone............................................................... 10.0 g
Meat Peptone.................................................................. 10.0 g
Dipotassium Phosphate .................................................... 1.5 g
Magnesium Sulfate.......................................................... 1.5 g
Glycerol .......................................................................... 10.0 ml
Agar.................................................................................. 15.0 g
Demineralized Water...................................................1000.0 ml

pH 7.2 ± 0.2 @ 25°C

*Adjusted as required to meet performance standards.

PROCEDURE
1. The test isolate should be in pure culture and 18-24 hours old. A nonselective or selective agar plate may be used for inoculation of the test isolate.
2. Select the center of a well-isolated colony and streak onto Pseudomonas F Agar.
3. Incubate the plate in ambient air (caps loosened for slants) at 33-37°C for 18-24 hours. If no growth after 18-24 hours, reincubate at 25°C for up to 7 days.
4. Examine medium daily under a longwave ultraviolet light for a fluorescent zone surrounding growth.

INTERPRETATION OF THE TEST
Positive Test - A bright yellow-green fluorescent zone surrounding growth
Negative Test - No yellow-green pigment produced

QUALITY CONTROL
All lot numbers of Pseudomonas F Agar have been tested using the following quality control organisms and have been found to be acceptable. Testing of control organisms should be performed in accordance with established laboratory quality control procedures. If aberrant quality control results are noted, patient results should not be reported.

CONTROL
Pseudomonas fluorescens ATCC® 13525
Stenotrophomonas maltophilia ATCC® 13637

INCUBATION
Ambient, up to 48 h @ 33-37°C
Ambient, up to 48 h @ 33-37°C

RESULTS
Growth, yellow-green fluorescence
Growth, no fluorescence

BIBLIOGRAPHY

Refer to the front of Remel Technical Manual of Microbiological Media for General Information regarding precautions, product storage and deterioration, specimen collection, storage and transportation, materials required, quality control, and limitations.

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