

TM 2145 - KING'S MEDIUM B BASE W/ 1.5% AGAR (FDA BAM, 1998)

INTENDED USE

For non-selective isolation, cultivation and pigment production of *Pseudomonas* species.

PRODUCT SUMMARY AND EXPLANATION

Pseudomonas aeruginosa is known to produce two types of pigments, pyocyanin and fluorescein which is a characteristic property and aids in its isolation from clinical and food samples. An additional pigment entitled pyorubin was reported by King. Pyocyanin is green, fluorescein is fluorescent yellow and pyorubin is reddish brown in colour. Some strains produce all the three pigments while the others produce one or two. Kings Medium B Base w/ 1.5% agar, recommended by FDA BAM is particularly suited for fluorescein production. This medium can be used as a general medium for the non-selective isolation and pigment production of *Pseudomonas* species from foods, cosmetics etc.

COMPOSITION

Ingredients	Gms / Ltr
Proteose peptone	20.000
Dipotassium hydrogen phosphate	1.500
Magnesium sulphate	1.500
Agar	15.000

PRINCIPLE

This media contains proteose peptone, which provides carbonaceous and nitrogenous compounds for the growth of bacteria. Glycerol serves as a source of energy and also as an enhancer in pigment production. Magnesium sulphate also enhances pigment production. Pigments and/ or their derivatives produced by *Pseudomonas* species play a role as siderophores in the iron uptake systems of bacteria, and hence, their production is markedly enhanced under conditions of iron deficiency. The production of pigments especially non-fluorescent blue pigment, pyocyanin is readily demonstrated by culturing on Kings Medium B Base w/ 1.5% Agar, which contains no added iron. The addition of dipotassium phosphate increases the phosphorus content of the medium thereby enhancing production of fluorescent pigment.

INSTRUCTION FOR USE

- Dissolve 38.00 grams of dehydrated medium in 1000 ml distilled water containing 10 ml of glycerol.
- Heat to boiling to dissolve the medium completely.
- Mix well. Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Aseptically pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

- Appearance of Powder** : Cream to yellow homogeneous free flowing powder.
- Appearance of prepared medium** : Light yellow coloured, clear to slightly opalescent gel forms in Petri plates.
- pH (at 25°C)** : 7.2±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Pigment production	Incubation Temperature	Incubation Period
<i>Pseudomonas aeruginosa</i>	17934	50-100	Good-luxuriant	>=50%	Greenish yellow	35 - 37°C	18-24 Hours
<i>Pseudomonas aeruginosa</i>	27853	50-100	Good-luxuriant	>=50%	Greenish yellow	35 - 37°C	18-24 Hours
<i>Pseudomonas aeruginosa</i>	9027	50-100	Good-luxuriant	>=50%	Greenish yellow	35 - 37°C	18-24 Hours
<i>Burkholderia cepacia</i>	25609	50-100	Good-luxuriant	>=50%	No pigment	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. King E. O., Ward M. K. and Raney D. E., 1954, J. Lab and Clin. Med., 44:301-307.
2. Murray P. R., Baron E. J., Jorgensen J. H., Tenover F. C., Tenover F. C., (Eds.), 8th Ed., 2003, Manual of Clinical Microbiology, ASM, Washington, D.C.
3. Ann G., Matthyse, 1998, The Genus Agraobacterium, Chapter 3.1.4. Martin Dworkin, 3rd Ed., The Prokaryotes, An Evolving Electronic Resource for the Microbiological Community.
4. Todar K., Todars Online Textbook of Bacteriology, University of Wisconsin - Madison, Department of Bacteriology.



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

***For Lab Use Only**
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