



## King's Medium B Base w/ 1.5% Agar

M1544F

Kings Medium B Base w/ 1.5% Agar is recommended for the non-selective isolation, cultivation and pigment production of *Pseudomonas* species in accordance with FDA BAM, 1998

### Composition\*\*

Ingredients	Gms / Litre
Proteose peptone	20.000
Dipotassium hydrogen phosphate	1.500
Magnesium sulphate	1.500
Agar	15.000
Final pH ( at 25°C)	7.2±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 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 lbs pressure (121°C) for 15 minutes. Aseptically pour into sterile Petri plates.

### Principle And Interpretation

*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(1). 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(2). This medium can be used as a general medium for the non-selective isolation and pigment production of *Pseudomonas* species from foods, cosmetics etc (3). This media contain 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 (4). The addition of dipotassium phosphate increases the phosphorus content of the medium thereby enhancing production of fluorescent pigment.

### Quality Control

#### Appearance

Cream to yellow homogeneous free flowing powder

#### Gelling

Firm, comparable with 1.5% Agar gel

#### Colour and Clarity of prepared medium

Light yellow coloured, clear to slightly opalescent gel forms in Petri plates

#### Reaction

Reaction of 3.8% w/v aqueous solution (containing 1.0 %v/v glycerol) at 25°C. pH : 7.2±0.2

#### pH

7.00-7.40

#### Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

#### Cultural Response

Organism	Inoculum (CFU)	Growth	Recovery	Pigment production
<b>Cultural Response</b>				
<i>Pseudomonas aeruginosa</i> ATCC 17934	50-100	good-luxuriant	>=70%	greenish yellow
<i>Pseudomonas aeruginosa</i> ATCC 27853	50-100	good-luxuriant	>=70%	greenish yellow
<i>Pseudomonas aeruginosa</i> ATCC 9027	50-100	good-luxuriant	>=70%	greenish yellow
<i>Burkholderia cepacia</i> ATCC 25609	50-100	good-luxuriant	>=70%	no pigment

### Storage and Shelf Life

Store below 30°C in tightly closed container and prepared medium at 2-8°C. Use before expiry period on the label.

### Reference

- 1.King, E. O, M. K Ward, and D. E Raney. 1954. J. Lab and Clin. Med 44: 301-307.
- 2.FDA, U.S. 1998. Bacteriological Analytical Manual. 8 ed. Gaithersburg, MD: AOAC International.
- 3.Ann, G, and Matthyse. 1998. The Genus Agraobacterium. The Prokaryotes 3 ed.
- 4.Todar K., Todars Online Textbook of Bacteriology, University of Wisconsin -Madison, Department of Bacteriology.

Revision : 1/ 2015

### Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory,diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.