

Product Information Sheet

K5013 King's B Medium

Synonyms: KB Medium, KB Agar, King's Agar B, King's Base Medium; KBM; KB; King's B Agar; Pseudomonas Agar F

Properties:

- Form: Powder
 Appearance: Off-White to Tan
 Application: Phytopathology, Microbiology, Seed Testing, Plant Defense & Immunity
 Solubility: Partially Soluble in Cold Water, Soluble in Boiling Water
 Typical Working Concentration: 37.23 g/L
 Storage Temp: Room Temperature
 Other Notes:
 - Add 10-15 mL/L of Glycerol (Prod # [G381](#)) prior to autoclaving for carbon source.
 - Add 50 mg Cephalexin (Prod # [C2112](#) or [C1970](#)) and 35 mg Nystatin (Prod # [N581](#)) per liter to select for Pseudomonads (Vogel & Bonner, 1956).

Formula (mg/L):

Peptone	20,000
Potassium Phosphate, Dibasic	1500
Magnesium Sulfate, Anhydrous*	730
Agar	15,000

* The molarity of the magnesium sulfate in this medium is the same as the original formulation; the anhydrous form is used to minimize water content of the dry powder medium.

Application Notes:

A general, non-selective bacterial growth medium. It is most often used for the culture of *Pseudomonas aeruginosa* & *P. syringae*, some of the most-characterized pathogens of plants (Staskawicz *et al.*, 1987; Whalen *et al.* 1991), as well as *P. savastanoi*. Some pathovars of *Pseudomonas* will fluoresce under UV light on KB Medium, such as *P. syringae*. This is due to the production of pyochelin (a derivative of pyocyanin), which is a siderophore produced under low iron conditions. While pyocyanin is pigmented blue and doesn't require UV light for visualization on KB Medium, pyochelin does require UV light for detection of fluorescence (Todar, 2014).

References:

- King, E.O., Ward, M.K., and D.E. Raney. (1954) Two simple media for the demonstration of pyocyanin and fluorescein. *J. Lab. Clin. Med.* Vol. 44 pg. 301-307.
- Staskawicz, B., Dahlbeck, D., Keen, N., and C. Napoli. (1987) Molecular Characterization of Cloned Avirulence Genes from Race 0 and Race 1 of *Pseudomonas syringae* pv. *glycinea*. *J. Bacteriology*. Vol 169(12) pg. 5789-5794.
- Todar K., Todars Online Textbook of Bacteriology, University of Wisconsin - Madison, Department of Bacteriology. Accessed Aug 2014.
- Vogel. HJ and Bonner, DM (1956). Acetyl ornithase of Escherichia coli: Partial purification and some properties. *J. Biol. Chem.* 218, 97-106.

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Whalen M.C., Innes R.W., Bent A.F., and B.J. Staskawicz (1991) Identification of *Pseudomonas syringae* pathogens of *Arabidopsis* and a bacterial locus determining avirulence on both *Arabidopsis* and soybean. *Plant Cell* Vol. 3(1) pg. 49-59.

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