

King Agar B, Pseudomonas Agar F (i23242)

Selective culture media proposed by KING, WARD and RANEY (1954) for the isolation and differentiation of *Pseudomonas* based on the formation of pyocyanin and/or pyorubin or fluorescein.

Industry: Water

Principles & Uses

King Agar B, also known as Pseudomonas Agar F or Flo Agar, acts as a tool for differentiating *Pseudomonas* species, offering a robust platform for the identification and confirmation of *Pseudomonas aeruginosa*, particularly in water samples with low microbial backgrounds.

King Agar B utilizes mixed peptone for essential nutrients and glycerol as a carbon source. It inhibits pyocyanin formation while promoting fluorescein elaboration. The medium's components, such as dipotassium hydrogen phosphate and magnesium sulfate, play specific roles, with magnesium sulfate activating fluorescein production.

P. aeruginosa manifests distinctive colonies surrounded by a yellow to greenish-yellow zone due to fluorescein production, which fluoresces under UV light. Temperature is crucial, as fluorescent strains typically grow between 25 - 35°C. The presence of pyocyanin can be confirmed by a bright green color, extracted with chloroform for validation. The medium aids in differentiation from *P. fluorescens* and *P. putida*. The CFC Selective Supplement enhances selective isolation.

Composition (gr/L)

Peptone from Meat 10 g, Peptone from Casein 10 g, Magnesium Sulfate 1.5 g, Dipotassium Hydrogen Phosphate 1.5 g, Agar 12 g.

Also, to be added: Glycerol 10 ml.

Final pH at 25°C 7.2 ± 0.2

Preparation from dehydrated Powder

Suspend 10 ml glycerol / litre together with 35 g Pseudomonas Agar F Base / litre. CFC selective supplement can optionally add to make the medium selective. Autoclave for 15 min at 121 °C. Make slant tubes or pour plates.

Quality Control

Dehydrated Appearance: Light beige, free-flowing, homogeneous.

Prepared Appearance: Light to medium amber, Opalescent.

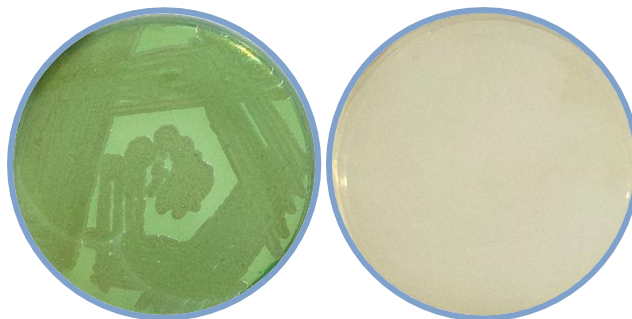
Reaction of 3.5% Solution at 25°C: pH 7.2 ± 0.2

Cultural Response

Inoculate with fresh cultures and incubate at 35 ± 2°C for 18 - 24 hours.

Organism (ATCC*)	Recovery	Pigment Production
<i>Pseudomonas aeruginosa</i> (9027)	Good	Greenish yellow
<i>Pseudomonas aeruginosa</i> (27853)	Good	Greenish yellow
<i>Pseudomonas cepacian</i> (25609)	Good	No pigment

*ATCC is a registered trade mark of the American Type Culture Collection.



Pseudomonas aeruginosa (left). Prepared Culture Medium (right).

Storage

Keep the container at 15-30 °C. Store prepared medium at 2-8 °C.