

38719 Photobacterium Broth

Photobacterium Broth is used for cultivation and demonstration of luminescence of photobacteria.

Composition:

Ingredients	Grams/Litre
Casein enzymic hydrolisate	5.0
Yeast extract	2.5
Sodium chloride	30.0
Ammonium chloride	0.3
Magnesium sulfate	0.3
Ferric chloride	0.01
Calcium carbonate	1.0
Monopotassium dihydrogen phosphate	3.0
Sodium glycerophosphate	23.5
Final pH 7.0 +/- 0.2 at 25°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

Appearance: Light yellow coloured, homogeneous, free flowing powder.
 Colour and Clarity: Light amber coloured, clear to slightly opalescent solution with heavy white precipitate.

Directions:

Suspend 65.6 g in 1 litre distilled water. Heat to boiling to dissolve the medium. Sterilize by autoclaving at 121°C for 15 minutes. Before pouring mix well to evenly distribute precipitate formed.

Principle and Interpretation:

Photobacterium Broth is prepared based on the formulations described by Daudoroff (1) and Giese (2) for the cultivation and demonstration of luminescence at photobacteria.

Casein enzymatic hydrolysate and yeast extract provide nitrogenous compounds, carbon, sulfur, trace nutrients, vitamin B complex, which are essential for the growth of photobacteria. Potassium dihydrogen phosphate helps in maintaining the buffering capacity of the medium. Chlorides, sulfate and carbonate and also the glycerophosphate helps for luminescence. The intensity of luminescence is related to the aeration of culture. The greater the oxygen supply, the greater will be luminescence.

Cultural characteristics after 18-24 hours at 25-30°C.

Organisms (ATCC)	Growth	Luminescence
<i>Lucibacterium harveyi</i> (14126)	+++	+
<i>Vibrio fischeri</i> (7744)	+++	+

References:

1. Daudoroff, J. Bact., 44, 451 (1942)
2. Giese, J. Bact., 46, 323 (1943)

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

