



PHM009

Phyto Pspi Agar Base

Semi- selective medium for the detection of *Pseudomonas syringae* pv. *pisi* on seeds of pea.

Composition **:

Ingredients	Grams/Litre
Tryptone	5.00
Peptone	3.00
Sodium chloride	5.00
Sucrose	50.00
Agar	15.00

**Formula adusted standard to suit the performance parameter

Direction:

Suspend 78.0 grams in 990 ml distilled water. Add 1 gram of boric acid to 10 ml of distilled water. Heat to boiling to dissolve the medium completely. Separately sterilize the solutions by autoclaving at 15 lbs pressure (121°C) for 15 minutes .Cool to 45-50°C and aseptically add the rehydrated contents of one vial of CN supplement 1 (PHS008) and boric acid. Mix well and pour into Petriplate.

Principle and Interpretation :

Pseudomonas syringae pv. *Pisi* is a plant pathogen which can infect wide range of plant species. These bacteria tend to be seed borne, and are dispersed between plants via rain splash (1).

Bacterial blight of pea is caused by *Pseudomonas syringae* pv. *Pisi* which is a seed-borne disease occurring in most pea growing areas all over the world, occasionally causing serious reduction in yield and seed quality follows epidemics (2). Pathogen attacks all ground parts of plant (stems, leafstalks, leaves, stipules, beans). On leaves, stems, and beans, it forms brown round spots with a dark center, which is surrounded by a wide border. Spots are yellow, round and, poorly pressed-in on seeds. Bacteria penetrate into vascular bunches and cause withering of peas. Pathogen also attacks sweet pea, pea vine, cowpea, and other leguminous cultures (3).

Phyto Pspi Agar Base is a semi- selective medium developed for the detection of *Pseudomonas syringae* pv. *pisi* on seeds of pea. Tryptone and peptone are used as nitrogen sources in the media. The media becomes selective with the addition of CN Supplement 1 (PHS008)

Quality Control:

Light yellow coloured, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity

Yellow coloured, opalescent gel forms in Petri plates

PHM009**Phyto Pspi Agar Base****Cultural Response:**

Cultural characteristics observed after an incubation at 30-32°C for 5-6 days with added CN Supplement 1 (PHS008) and Boric acid.

Organism (ATCC)	Growth	Colour of the Colony
<i>Pseudomonas syringae</i> pv. <i>pisi</i>	luxuriant	white to transparent , mucoid and dome shaped
<i>Candida albicans</i> (10231)	inhibited	-
<i>Saccharomyces cerevisiae</i> (9763)	inhibited	-

References:

1. Hirano, S. S. and C. D. Upper (1990) Population biology and epidemiology of *Pseudomonas syringae* Annual Reviews in Phytopathology 28:155-177
2. Typing of *Pseudomonas syringae* pv. *pisi* strains by fluorescent AFLP fingerprinting, Journal of Plant Pathology (2007), 89 (3), 421-425.
3. *Pseudomonas syringae* pv. *pisi* (Sackett) Young et al. - Bacterial Blight of Peas, Interactive agricultural Ecological Atlas of Russia and Neighboring Countries.

Storage and Shelf-life:

Store below 30°C and the prepared medium at 2 - 8°C. Use before expiry date on the label.

**Disclaimer :**

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