



Method for the Detection of *Pseudomonas syringae* pv. *pisi* on Pea seed

Crop: *Pisum sativum*
Pathogen: *Pseudomonas syringae* pv. *pisi* (*P. s.* pv. *pisi*)
Date: July 2017

Sample and sub-sample size

The recommended minimum sample is 5,000 seeds with a maximum sub-sample size of 1,000 seeds.

Principle

- Detection of viable bacteria based on soaking seeds and plating the liquid obtained on semi selective media.
- Optional identification of suspect bacterial colonies with biochemical tests.
- Confirmation of suspect bacterial colonies is completed by one of the two proposed pathogenicity assays.

Sensitivity and Restrictions on Use

- This test method is suitable for untreated seed.
- The ability to recover *P. s.* pv. *pisi* on plates can be influenced by the presence of other microorganisms and/or inhibitory chemicals used for seed disinfestation/disinfection. It is the responsibility of the user to check for such antagonism and/or inhibition by analysis, sample spiking or experimental comparisons.
- This test method has not been validated for seed treated with protective chemicals or biological substances or physical (such as hot water) or chemical (calcium or sodium hypochlorite) processes with the aim of disinfestation/disinfection. If a user chooses to test treated seed using this method, it is the responsibility of the user to determine empirically (through analysis, sample spiking or experimental comparisons) whether the protective chemicals or biological substances have an effect on the method results.

Validation

Results of an ISHI–Veg comparative test were validated by ISTA, see www.seedtest.org (>>Technical Committees >>Seed Health Committee >>Testing Methods >>Method Validation). The method was adopted as an ISTA Rule (7-029) in June 2013 and it came into force in January 2014.

The method has also been approved by the US National Seed Health System (NSHS) as a Standard A (see <http://seedhealth.org/seed-health-testing-methods/>).

Method Execution

To ensure process standardization and valid results, it is strongly recommended to follow the best practices developed by ISHI-Veg for *Dilution Plating Assays in Seed Health Tests* (see <http://www.worldseed.org/our-work/phytosanitary-matters/seed-health/ishi-veg/>).

Method description

See www.seedtest.org (>>Technical Committees >>Seed Health Committee >>Testing Methods)