



Method for the Detection of *Alternaria radicina* in Carrot seed

Crop: Carrot (*Daucus carota*)
Pathogen: *Alternaria radicina* (*A. radicina*) Meier, Drechsler and Eddy
Date: July 2017

Sample and sub-sample size

The test is done on a minimum sample size of 200 seeds and a maximum sub-sample size of 100 seeds.

Note: The method was validated using a minimum of 200 seeds. However, sample size depends on the risk management strategy of each user, and thus the choice of sample size is at the user's discretion.

Principle

- Detection of *A. radicina* by incubation of seeds on a blotter or agar media
- Identification of the fungus by conidiophores and the development and morphology of the conidiospores.

Restrictions on Use

- This test method is suitable for untreated seed.
- This test method is suitable for seed that has been treated using physical (hot water) or chemical (chlorine) processes with the aim of disinfestation and disinfection, provided that any residue, if present, does not influence the assay. It is the responsibility of the user to check for such antagonism and/or inhibition by analysis, sample spiking, or experimental comparisons.
- The ability to detect *A. radicina* can be influenced by the presence of other fungi. This can influence the reliability of the test.
- This test method has not been validated for seed treated with protective chemicals or biological substances. 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 a comparative test were validated by ISTA and formed the basis of two methods adopted by ISTA (the blotter test 7-002a and the malt agar test 7-002b) in January 2003.

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 description

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

Note: The method was reviewed recently and found to be fit for purpose. The section **Sample and sub-sample size** has been updated.