

TECHNICAL BULLETIN

APHANOMYCES TESTING



What is Aphanomyces euteiches?

Aphanomyces euteiches is a persistent root rot pathogen, infecting peas, lentils, dry beans, as well as alfalfa, during the entire growing season. Take notices, as this soil borne fungi-like eukaryote belongs to the oomycete family in which the spores survive in a resting state for up to 10 years, plus the oospores are water mobile. Root rot in peas is typically due to infection of Aphanomyces and/or Fusarium (most prevalent *F. avenaceum* and *F. solani*), so DNA lab confirmation is critical.

How to submit samples

- Follow proper sampling procedures to build a representative sample.
- For soil, package 2 cups in a plastic bag. Minimize the amount of crop residue and plant tissue in the sample.
- For tissue, wrap the suspected root tissue in paper towel, then package in a plastic bag.
- Complete the Chain of Custody form, which is available on our website. Ensure to detail the result recipients and invoice information.
- Samples should be couriered.
- Standard turn around is 7-10 business days. RUSH analysis available upon request.

How does SGS BioVision Test for Aphanomyces?

- PCR method modelled after 'A sensitive assay for rapid detection and quantification of *Aphanomyces euteiches* in soil' (Gangneaux C. et. Al Phytopathology).
- Quality controls processed in tandem for each PCR: Positive Control (Detection), Negative Control (Not Detected), Extraction Blank, and No Template Control.
- STANDARD qualification available for soil and root tissue.
- Reporting for STANDARD testing: Results are reported as 'Detected' if all replicates have detectable PCR product greater than 100 spores/gram of soil, otherwise the results are reported as 'Not Detected'.



Learn more about Aphanomyces Testing and our other services at biovision.ca.

