

Validation report

DAS-ELISA Sss

Article No.: 111177 (Sss Complete kit 96) / 111175 (Sss Complete kit 480) / 111172 (Sss Complete kit 960)

General information:

Target Pathogen	Sss (<i>Spongospora subterranea</i> f. sp. <i>subterranea</i> / <i>Spongospora subterranea</i> / Powdery scab)
Genus	<i>Spongospora</i>
Method	DAS-ELISA

Technical information:

Antibodies	Monoclonal antibodies developed against resting spores of <i>Spongospora subterranea</i> from potato tubers.
Sampling	Detection of resting spores in potato and in soil. Tubers: Wash and then cut slices of tuber peeling containing lesions. Homogenize the slices 1:10 to 1:50 in extraction buffer "General". Soil: Take soil at a depth of 10-30cm from distinct locations and dry at RT or at 40 to 45°C. Mix well and remove particles larger than 1 to 2mm by using a sieve. Homogenize 2g of soil with 6ml of extraction buffer "General" overnight in presence of quartz sand on a shaker. Spin down and use supernatant for analysis.
Controls	Negative control (NC): lyophilized extracts from healthy plants Positive control (PC): lyophilized Sss infected plant extracts
Working volume	200 µl / well

Host matrix:

Tested plant material	Resting spores (zoospores & zoosporangia do not react), soil, peel
Tested species infected	<i>Solanum tuberosum</i> (Potato)

Specificity:

Analytical Specificity	100%
Number of tested samples from target organism (True Positives)	35
Diagnostic Specificity	100%
Number of tested samples non-target organism (True Negatives)	45
Detected isolates / geographic regions (Inclusivity)	Various spores, soil samples and potato peelings from unknown origin.
Cross reaction with (Exclusivity)	Ssn (<i>Spongospora subterranea</i> f. sp. <i>nasturtii</i>)
No cross reaction tested with (Exclusivity)	Plasmodiophora brassicae Plasmodiophoromycetes sp. Polymyxa betae Polymyxa graminis Streptomyces sp.

No matrix effect observed with (Selectivity)	<i>Solanum tuberosum</i> (Potato) "Healthy" Soil
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Sensitivity:

Diagnostic Sensitivity	100%
Analytical Sensitivity / LoD	Generally: 1 sporeball / 1 ml of extraction buffer is detected. Tubers: 1 infected in 19 healthy tubers Soil: 100 sporeballs / g soil
Sensitivity on host matrix	Sss on potato tuber peel: 1:156'250 dilution Pathogen titer unknown
Other sensitivity characteristics	-

Validation:

Internal validation	2004
External validation	2006 (France)
Reproducibility	100%
Repeatability	100%
Validation information	Internally, the reagents have been validated with the BIOREBA isolate collection, composed of various samples with diverse plant host range, collected within the last 40 years.

Validation release Date:
July 10th, 2026

QC manager:



Version: 1 – 10.07.2026.