



New Rapid Molecular Test Kit and Testing Service for Detection of Blueberry Scorch Virus (BIScV) Launched by Agdia, Inc.

Agdia, Inc. is happy to announce the launch of a [new rapid, field-deployable RNA-based assay for detection of Blueberry scorch virus \(BIScV\)](#). The new test outperforms all commercially available serological (ELISA) tests and matches the performance of the most well-established PCR methods in use today.

Blueberry scorch virus has been a significant threat to blueberry production in the Pacific Northwest of the United States for many years, spreading more recently across the country as far as the US Northeastern Seaboard.

While this single-stranded, RNA *Carlavirus* is known to be aphid-borne, it can also be spread through vegetative propagation from stock plants. Symptoms of infection include dieback, “scorch” symptoms on

flowers, reduced fruit yield, marginal leaf chlorosis and red line patterns.

Symptoms take a long time to develop (1-2 years from the point of infection, according to the [North Central IPM Center](#)).

Such a wide range of symptom onset and type highlights the necessity of testing to ensure clean nursery stock as well as regular diagnostic monitoring of production sites to cull infected bushes before aphids transmit the disease to neighboring plants.

Sample	Agdia NEW AmplifyRP XRT	BIScV PCR ¹	Vendor A ELISA O.D.	Vendor B ELISA O.D.
Positive Sample 1	Positive	Positive	0.110	0.132
Positive Sample 2	Positive	Positive	0.108	0.113
Positive Sample 3	Positive	Positive	Not Tested	Not Tested
Positive Sample 4	Positive	Positive	Not Tested	Not Tested
Positive Sample 5	Positive	Positive	Not Tested	Not Tested
Positive Sample 6	Positive	Positive	Not Tested	Not Tested
Healthy Sample 1	Negative	Negative	0.108	0.136
Healthy Sample 2	Negative	Negative	0.112	0.132
Healthy Sample 3	Negative	Negative	0.110	0.117
Healthy Sample 4	Negative	Negative	0.111	0.115
Healthy Sample 5	Negative	Negative	Not Tested	Not Tested
Healthy Sample 6	Negative	Negative	Not Tested	Not Tested
Positive Control	Positive	Positive	3.679	1.206 ²
Extraction Buffer	Negative	Negative	0.115	0.114

¹PCR protocol from Kalinowska *et al.* 2015.

²Vendor A's positive control used in Vendor B's ELISA.

Figure 1: BIScV diagnostic sensitivity and specificity method comparison

As part of our continual product improvement efforts Agdia has identified that most, if not all commercially available BIScV serological assays were prone to false-negative results due to either low sensitivity or lack of specificity for serologically divergent viral isolates. Since low sensitivity and lack of specificity in serological assays cannot be addressed by even the best antibodies, we shifted our development focus to molecular identification via AmplifyRP® XRT where the primer design could be targeted to ensure detection of the infected samples/isolates.

AmplifyRP® XRT for BIScV is the rapid diagnostic output of these efforts, and we think the results speak for themselves. Not only does this new molecular assay outperform all ELISA offerings on the market, it is also comparable to PCR methods used in diagnostic laboratories, without the costly and labor-intensive RNA purification step(s). Additionally, AmplifyRP® technology is generally more resistant than RT-PCR to the various inhibitors found in fruit leaves. See Figure 1



for a results comparison across test formats. A full validation report is also available for more details on test performance.

[AmplifyRP® XRT for BISCv](#) is compatible with most qPCR instruments on the market as well as with the [AmpliFire® isothermal fluorometer](#) (Figure 2) when portability and ultimate protocol simplicity is desired. This test is also being deployed by Agdia's Testing Services division for customers who prefer to submit samples to a laboratory with an ISO 17025-accredited quality management system rather than test onsite.

About Agdia

A leading provider of diagnostic solutions for agriculture, Agdia, Inc. has been serving plant breeders, propagators, growers, universities, and private testing laboratories since 1981. The company offers a comprehensive portfolio of validated, easy-to-use diagnostics for identifying plant pathogens, hormones, and transgenic traits. In addition, Agdia operates an ISO accredited, in-house, testing services laboratory. Agdia's quality management system is ISO 9001:2015 certified and their Testing Services Laboratory is ISO 17025:2017 accredited. Visit the company's website at www.agdia.com, e-mail info@agdia.com, phone 1-574-264-2615 (toll-free 800-622-4342) or fax 1-574-264-2153.



Figure 2: AmpliFire® Isothermal Fluorometer

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