

Agdia's Recommended Method for the Identification of PVY-n

1. Test the sample with Agdia's general PVY test (catalog number 20001). The PVY test catalog number 20001 uses a monoclonal (clone 4C3) for detection and a polyclonal for capture. It is offered with the alkaline phosphatase label and is recommended for all types of tissue.

2. If the sample tests positive for PVY then test with Agdia's PVY-n test (catalog number 26001, clone 1F5) and Agdia's PVY-o+c test (catalog number 20600, clone MAB2). If the sample tests negative for PVY no further testing is necessary. Clone 1F5 reacts with almost all PVY-n and a few PVY-o isolates. Clone MAB2 does not react with any PVY-n, but has been shown to react with all other PVY strains. If the sample tests negative by clone 1F5 and tests positive by clone MAB2 the sample is interpreted as negative by ELISA for PVY-n. If the sample tests positive by clone 1F5 and negative by clone MAB2 then the sample is interpreted as positive by ELISA for PVY-n and a bioassay is suggested to confirm this result.

3. Bioassay any sample that deviates from the two results mentioned above. Deviations from the above two results are not expected to occur very often.

These 3 steps are illustrated in the following table.

PVY	PVY-n	PVY-o+c	Results
-	N/A	N/A	Negative for PVY
+	-	+	Negative for PVY-n
+	+	-	Positive test for PVY-n; Confirm with bioassay
+	-	-	Suspect; Confirm with bioassay
+	+	+	Suspect; Confirm with bioassay

Recognized Strains of PVY:

PVY-n Tobacco Veinal Necrosis Strains
 PVY-o Common Strains
 PVY-c Stipple streak strains
 Other strains MM, NN, MN, NTN

References:

CMI/AAB Descriptions of Plant Viruses, Nos. 37, 242.

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Ellis, P., Stace-Smith, R., and de Villiers, G. 1997. Identification and geographic distribution of serotypes of potato virus Y. *Plant Dis* 81:481-484.

McDonald, J. G. and G. T. Kristjansson. 1993. Properties of strains of potato virus Yn in North America. *Plant Dis* 77:87-89.

McDonald, J. G. and R. P. Singh. 1996. Host range, symptomology, and serology of isolates of potato virus Y (PVY) that share properties with both the PVY-n and PVY-o strain groups. *Am Potato J* 73:309-315.

McDonald, J. G. and R. P. Singh. 1996. Response of potato cultivars to North American isolates of PVY-ntn. *Am Potato J* 73:317-323.

For answers to your technical questions, please contact us at techsupport@agdia.com.



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