

Table 1
Propagation Host Species of Some Potexviruses

Potexviruses	Propagation species	Refs. for purification methods
Bamboo mosaic (BaMV)	<i>Hordeum vulgare</i>	34
Cactus X (CVX)	<i>Chenopodium quinoa</i>	35
Cassava common mosaic (CCMV)	<i>Euphorbia prunifolia</i>	36
Clover yellow mosaic (CYMV)	<i>Vicia faba</i>	37
Cymbidium mosaic (CybMV)	<i>Datura stramonium</i>	38
Dioscorea latent (DLV)	<i>Nicotiana megalosiphon</i>	39
Foxtail mosaic (FMV)	<i>H. vulgare</i>	37
Hippeastrum latent (HsLV)	<i>Hippeastrum hybridum</i>	40
Hydrangea ringspot (HRSV)	<i>Hydrangea macrophylla</i>	41
Lily virus X (LVX)	<i>Lilium hybrid</i>	42
Nandina mosaic (NdMV)	<i>N. benthamiana</i>	43
Narcissus mosaic (NMV)	<i>Narcissus tazetta</i>	44
Nerine virus X (NVX)	<i>Nerine sarniensis</i>	45
Papaya mosaic (PMV)	<i>Carica papaya</i>	22
Pepino mosaic (PpMV)	<i>N. glutinosa</i>	46
Plantago asiatica mosaic (PIAMV)	<i>Plantago asiatica</i>	47
Potato aucuba mosaic (PAMV)	<i>N. tabacum</i> cv. Xanthi nc	32
Potato X (PVX)	<i>N. tabacum</i>	22,23
Strawberry mild yellow edge-associated (SMYEAV)	<i>Rubus rosifolius</i>	31
Viola mottle (VMV)	<i>C. quinoa</i>	21
White clover mosaic (WCIMV)	<i>Phaseolus vulgaris</i>	48
Wineberry latent (WbLV)	<i>C. quinoa</i>	49
Zygocactus X (ZVX)	<i>C. quinoa</i>	50

yields. Approximately 0.25–3 g/kg tissue of purified virus preparations can be obtained for most potexviruses (20,21; see **Note 1**). To purify different potexviruses, a variety of methods have been developed. A potexvirus is inoculated onto an appropriate propagation host (**Table 1**). Approximately 10–14 d postinoculation, the infected leaf tissues can be collected and homogenized in a suitable buffer. Clarification of the sap is achieved by passing through cheesecloth, by filtration/absorption, by treatment with organic solvents, or by low-speed centrifugation. The virus can be concentrated either by differential centrifugation, or by precipitation with PEG. Further purification of the virus can be achieved by density gradient centrifugation in sucrose or in CsCl.

The purification method described here is based on PVX, according to Erickson and Bancroft (22) and Huisman et al. (23).