

Rapid Recovery and Detection of *Phytophthora ramorum* Propagules in Nursery Water

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Phytophthora ramorum, causal agent of sudden oak death, continues to threaten U.S. forest ecosystems and the nursery industry. Currently, USDA APHIS's protocol utilizes the Bottle of Bait (BOB) recovery method for *P. ramorum*, which requires collecting water from a source, baiting with healthy rhododendron leaves for a 3-day incubation period, followed by plating on semi-selective media. Rapid methods are needed for recovery and detection of *P. ramorum* propagules from water sources. Working at the National Ornamental Research Site at Dominican University California, we are developing rapid water filtration and flocculation methods for recovery and detection of *P. ramorum* propagules from nursery irrigation water. A mock irrigation pond was established with flow from a *P. ramorum*-infested plot into an adjoining plot. Antibodies raised against *P. ramorum*-specific secreted proteins were applied for detection of zoospores and sporangia from 1 L samples in filter extracts or alum flocculates using standard immunoassay procedures. Results with spiked samples indicate that propagules of *P. ramorum* recovered by filtration or flocculation from spiked nursery water samples can be detected in 24 hours or less.