



First report of postharvest fruit rot of *Physalis pubescens* in China caused by *Phoma pomorum*

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Physalis pubescens (Solanaceae) is a species of flowering plant which integrates edible and medicinal in the nightshade family. In 2017–2018, fruit rot disease occurred on postharvest *Physalis pubescens* (cv. Hajinlong) and stored in a commercial storage in Harbin, China, with an incidence of 10–30% of 5000 kg from three growing areas. Infected fruits showed a little black spot, slightly sunken and then enlarged gradually up to 5–10 mm in diameter with gray-black mycelium. Ten pieces of symptomatic fruit tissues from the lesion margin were surface disinfested and cultured on potato dextrose agar (PDA) at 26 °C in darkness. Colony of fungal cultures from all diseased tissues were lanose to somewhat felty, smoky gray to olivaceous green, remaining whitish at the center and with a pale, even margin, aerial mycelium abundant on PDA. Unicellular hyaline conidia were oblong with obtuse ends or narrowly ellipsoid, continuous, guttulate, measured 3.9–5.8 µm × 1.8–2.6 µm (Sørensen et al. 2013). ITS and *Act* gene of a representative isolate G2 were amplified, respectively (White et al. 1990; Aveskamp et al. 2009). The sequences (accession Nos. MH620799 for ITS and MN701176 for *Act*) showed 98% and 100% identity to the sequence of *Phoma pomorum* strains (MH861278 and FJ426943.1). To validate Koch's postulates, ten *P. pubescens* fruits (cv. Hajinlong) were surface disinfested and stab-wounded with

a sterile needle and inoculated with conidia suspension of G2 (30 µl/fruit, 10⁶ spores/ml). Sterile water was used as a negative control. All fruits were placed in a humidified chamber at 26 °C for 10 days in dark. All inoculated fruits showed symptoms identical to those observed in storage for 15 days after inoculation. The pathogen was re-isolated and confirmed to be *P. pomorum* based on morphological characteristics and molecular assays. To our knowledge, this is the first report confirming *P. pomorum* causing disease on postharvest *P. pubescens* in China.

References

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