

**Title** First report of sour rot caused by *Geotrichum citri-aurantii* on key lime (*Citrus aurantifolia*) in Colima State, Mexico

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#### Abstract

Sour rot caused by *Geotrichum citri-aurantii* (Ferraris) R. Cif. & F. Cif. (synonym *G. candidum* Link) is a disease that causes postharvest losses of lemon (*Citrus limon* Burm, f.), mandarin (*C. reticulata* Blanco), and orange (*C. sinensis* (L.) Osbeck) (2–4) worldwide, but it has not been described on key lime (*C. aurantifolia* (Christm.) Swingle) from the State of Colima, Mexico. During the agricultural cycle from 2005 to 2007, 300 fruits of key lime were analyzed. Symptoms observed on approximately 40% of the fruits were wounds with a sour, fermented smell with 30% of the softened area covered with white mycelium. A *Geotrichum* sp. was isolated on potato dextrose agar (PDA). On the basis of morphological criteria (1) and sequencing the internal transcribed spacer (ITS1-5.8s-ITS2) region of rDNA (GenBank Accession No. EU131181), the fungus was identified as *G. citri-aurantii*. A sample of the fungus was deposited in the Biology Collection of Yeast and Fungi (Reg. No. CLT20) of Centro de Investigaciones Biológicas del Noroeste, Mexico. Key limes were inoculated with *G. citri-aurantii* by placing three drops (20 µl each) of a sterile water suspension of  $10^6$  arthroconidia/ml in three punctured wounds of 3-mm diameter produced with a sterile scalpel on the fruit surface. Ten plastic boxes with five fruit each were stored for 2 weeks at 20°C and 85% relative humidity. Sour rot symptoms on key lime inoculated with *G. citri-aurantii* were identical to fruit in the field. The control fruit inoculated with sterile water did not develop symptoms. The fungus was reisolated, confirming Koch's postulates. The test was repeated three times to confirm our diagnosis. To our knowledge, this is the first report of *G. citri-aurantii* causing sour rot on key lime in Colima, Mexico.