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Composition of citrus phloem sap and honeydew produced by the citrus phloem sap feeder, the Asian citrus psyllid, *Diaphorina citri* (Homopetera: Psyllidae)

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The honeydew composition of Asian citrus psyllids (ACP), the vector of citrus Huanglongbing (HLB), was studied using gas chromatography-mass spectrometry (GC-MS). Honeydew samples were collected from healthy ACP that were reared on one-year Valencia trees inside an insectary at a University of Florida's Citrus Research and Education Center (CREC) grove in Lake Alfred, FL, USA. Dried samples (1 mg) were mixed with 30 µL of methoxyamine hydrochloride solution in pyridine (2%) and allowed to react for 17 h at room temperature. After methoximation, silylation reactions were induced by adding 80 µL of N-methyl-N-trimethylsilyl) trifluoracetamide (MSTFA) for 2 h at room temperature and 0.5 µL of derivatized sample was injected into the GC-MS running in the full scan mode. To check for amino acids, a 10 mg of alkaline honeydew sample was reacted with methylchloroformate (MCF) in a mixture of pyridine and methanol. The MCF derivatives were extracted with chloroform and analyzed with GC-MS. The moisure content was determined by drying the honeydew samples to a constant weight at a 100 °C. The major honeydew composition was as follows: 74.5 ± 2.8 sucrose, 12.4 ± 0.5 D-fructose, 6.4 ± 3.0 mannose, 1.8 ± 0.6 trehalose, myo-inositol 2.8 ± 0.8, ribitol 0.5 ± 1, galactose 0.4 ± 0.2, quinic acid 0.4± 0.3, and malic acid 0.3 ± 0.1. The moisture content of honeydew was 22.6 ± 2.6 No amino acids were detected as TMS or as MCF derivatives.