

5.13 P**Composition of citrus phloem sap and honeydew produced by the citrus phloem sap feeder, the Asian citrus psyllid, *Diaphorina citri* (Homoptera: 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 μ L 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 μ L of N-methyl-N-trimethylsilyl) trifluoroacetamide (MSTFA) for 2 h at room temperature and 0.5 μ L 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 moisture 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.