

## Detailed description of scent measurements

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### *Collection of plants' emissions.*

Volatiles were collected by placing plants in odorless Nalophan cooking bags (Kalle GmbH). The bottom of each bag was tightened around the plant stem and the upper bag opening was closed with a twist-on seal. The headspace surrounding *Petunia* was dynamically sucked up through filter tubes containing SuperQ adsorbent (25 mg, 80-100 mesh, Alltech Associates Inc.). Individual air samplers (I. H. Pump model, A. P. Buck Inc.) ran during 3 to 4 hours, depending on the pump flow (850 to 650 cc/min) in order to standardize trapping parameters. Each Super-Q trap was inserted into a bag through a glass tube fitted with a screw cap containing an open Teflon-coated septum (see Degen et al., 2012). The collection occurred at ambient temperature

Volatiles retained by the SuperQ filters were desorbed with 150  $\mu$ l dichloromethane (Suprasolve, GC-grade, Merck KGaA). Each sample was stored at -80°C in individual amber glass vial (1.5 ml with PTFE lined screw cap, National Scientific Co.) until analysis.

### *Volatile analysis with GC-MS*

As internal standard, 10  $\mu$ l of a dichloromethane solution containing 200 ng of pure octane and 200 ng of nonyl acetate (Sigma-Aldrich Co. LLC.) was added to each 150  $\mu$ l sample. After agitation, 30  $\mu$ l of this blend were placed in 250  $\mu$ l conical glass inserts with plastic springs, then in 1.5 ml vials with screw caps with septa silicone rubber/PTFE (National Scientific Co.). Cooled tray kept samples at 2°C before a robotic multipurpose sampler (MPS2, Gerstel GmbH.) injected a 2  $\mu$ l aliquot into GC injector. The inlet was used in pulsed splitless mode, 220°C, 5.95 psi pressure, 5 ml/min septum purge flow, total flow of 225.9 ml/min, and with a purge flow to split vent of 220 ml/min at 0.65 min. A three minutes delay was set to let the dichloromethane solvent to evaporate.

Compounds were separated on an Agilent HP-1MS column (30 m length x 250  $\mu$ m i.d., and 0.25  $\mu$ m film thickness) starting at 40 °C for 3 min, then a ramp of 6°C/min to 220 °C (hold time 2 min) with a 3 min post run at 250 °C. Helium at constant flow (0.9 ml/min) was the carrier gas.

All analyses were done with a gas chromatograph (Agilent 7890A) coupled to a mass spectrometer detector (Agilent 5975C). In all cases, the MSD transfer line temperature was set at 280°C and the ion source and quadrupole temperatures were set at 230°C and 150°C respectively. Electron impact (EI) mode with an ionization potential of 70 eV was used with a scanning over the mass range of 33-250 amu.

Corresponding control collections for all treatments were carried out in order to exclude foreigner components, air contaminants, plasticizers, etc. from the data analyses. For this purpose we also ran analyses with pure dichloromethane.

### *Volatiles identification and quantification*

All the chromatograms were manually supervised to assess the presence of volatile components and to obtain preliminary identifications based on both NIST05 mass spectral library (U.S. Department of Commerce) and Probability Based Matching (PBM) library. Identifications were further based on

comparisons of relative retention times and spectra obtained with previous analyses of similar blends on the same equipment (Hoballah et al., 2005).

Quantifications were obtained by peak integrations, area calculations, and comparisons with the area corresponding to the known quantity of the second and well defined internal standard (nonyl acetate).

Degen, T., N. Bakalovic, D. Bergvinson, and T.C.J. Turlings (2012). Differential performance and parasitism of caterpillars on maize inbred lines with distinctly different herbivore-induced volatile emissions. ***PLoS One*** 7(10): e47589

Hoballah M. E., J. Stuurman, T.C.J. Turlings, P. Guerin, S. Connétable and C. Kuhlemeier (2005). The composition and timing of flower odour emission by wild *Petunia axillaris* (Solanaceae) are in tune with the antennal perception and nocturnal activity of the pollinator *Manduca sexta* (Lepidoptera: Sphingidae). ***Planta*** 222: 141-150