

Figure 1: Spectral line intensity of CH₄ (red), NH₃ (green), N₂O (purple) and H₂O (blue) in the specific G2103 and G2509 wavenumber detection range.

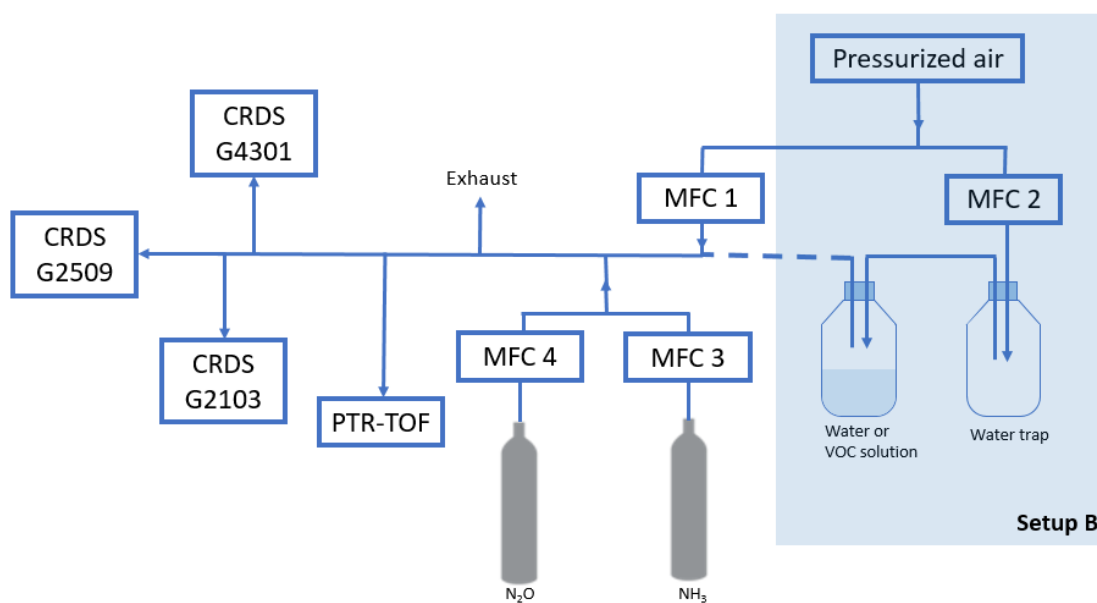


Figure 2: Experimental setup for all tests and instruments. Setup B was used for water and VOCs interferences.

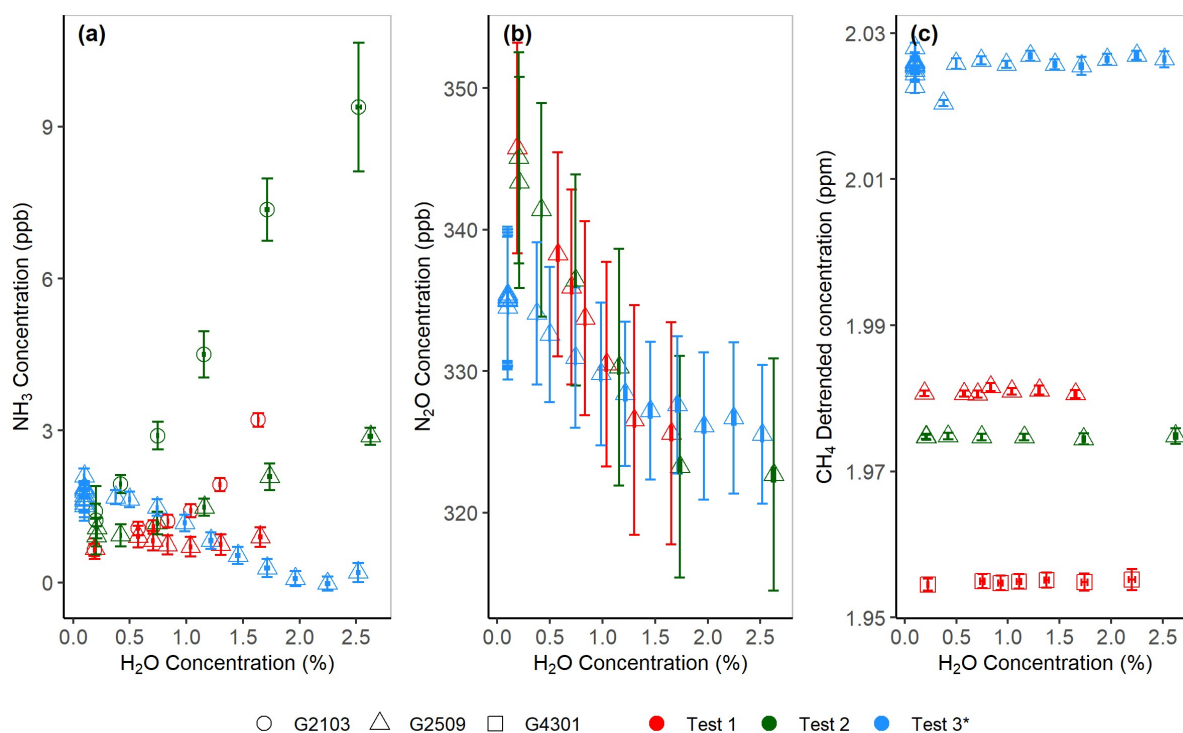


Figure 3: Effect of absolute water concentration measured with the CRDS on (a) NH₃, (b) N₂O, and (c) CH₄ under laboratory conditions at room temperature. Horizontal and vertical error bars represent the standard deviation of water and the target gas, respectively.

*Test 3 is measured with a different G2509 analyzer than Tests 1 and 2

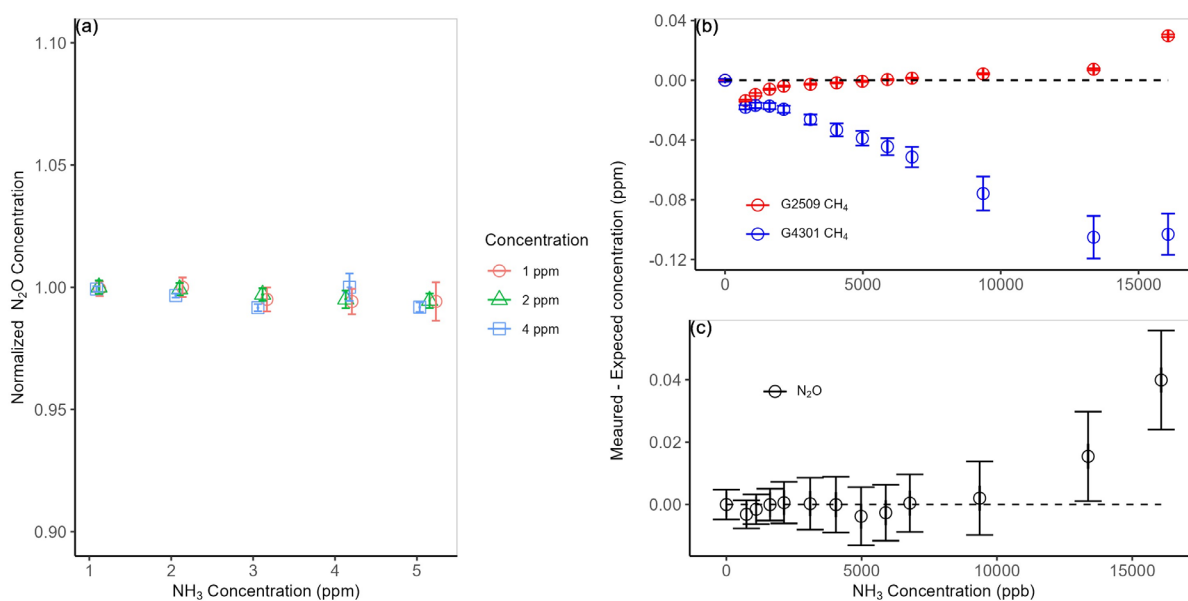


Figure 4: a) Effect of NH_3 on a fixed N_2O concentration of 1, 2, and 4 ppm. Vertical error bars represent the standard deviation divided by the maximum N_2O concentration; horizontal error bars represent the NH_3 standard deviation. Effect of NH_3 on background levels of b) CH_4 (and c) N_2O . Vertical error bars represent the standard deviation of CH_4 and N_2O . Horizontal error bars represent the standard deviation of NH_3 .

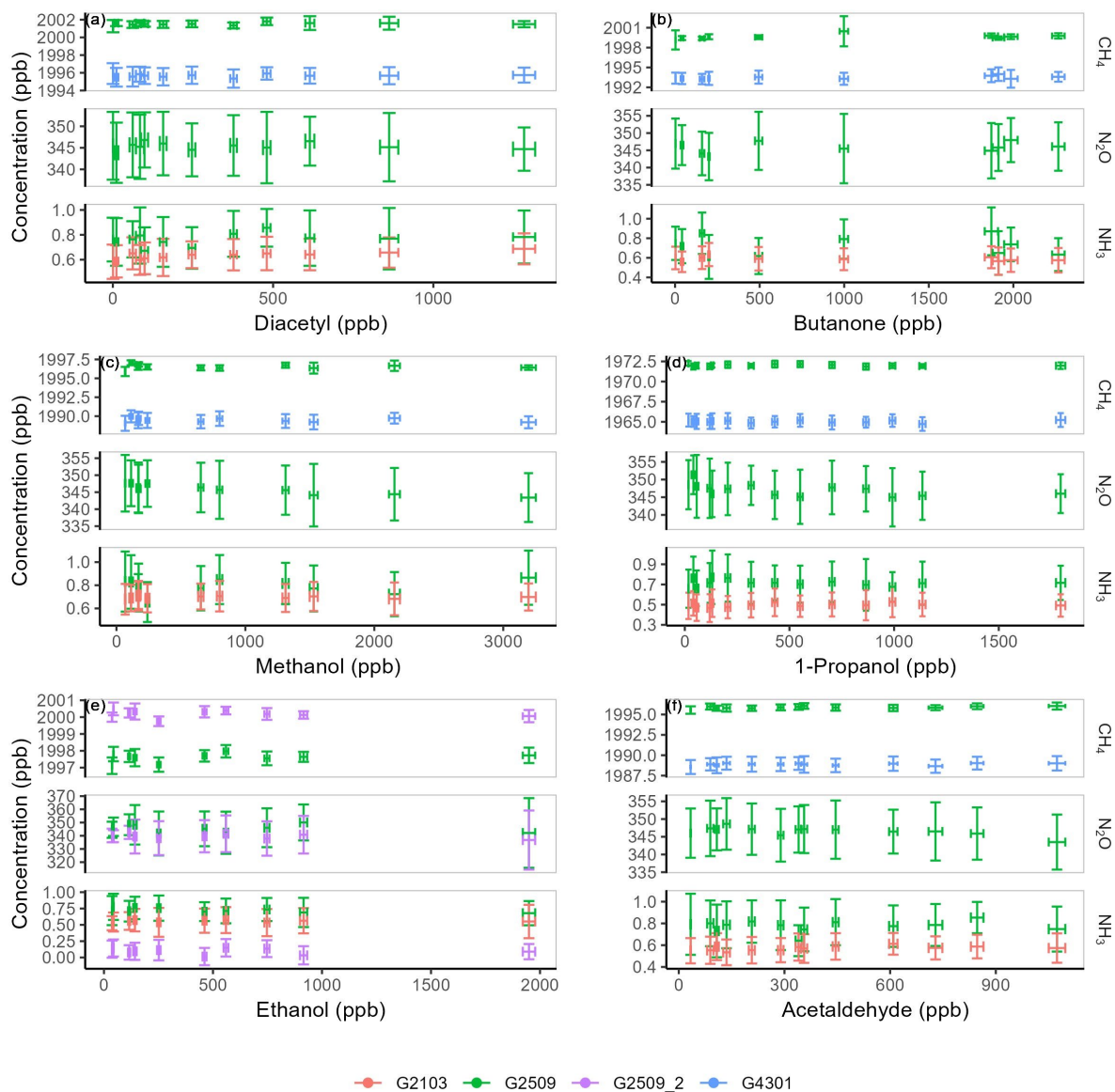


Figure 5: Interferences of a) diacetyl, b) butanone, c) methanol, d) 1-propanol, e) ethanol, and f) acetaldehyde on CH_4 , N_2O , and NH_3 . Vertical and horizontal error bars are the standard deviation of the target gas and the tested VOC respectively.