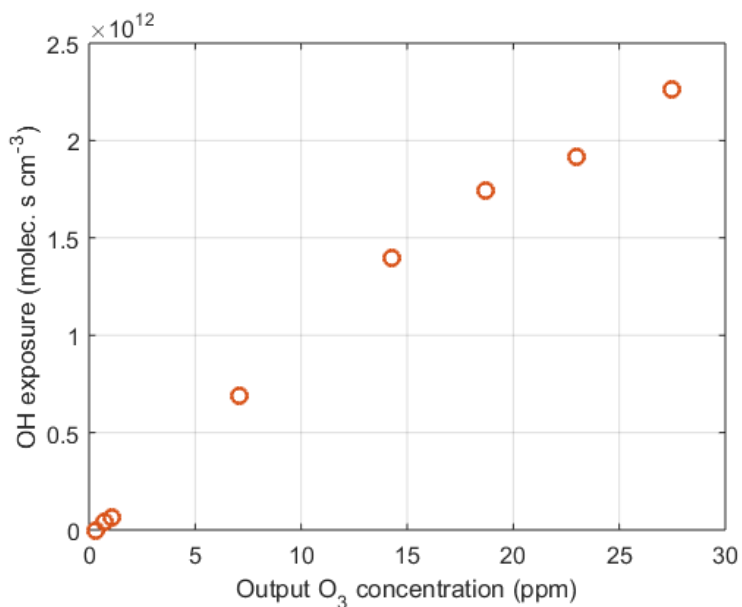
The PAM OH exposure as a function of ozone concentration measured after the PAM is presented in Fig. S1. The OH exposure was determined by measuring the SO_2 loss as in Sect. 2.4, and the different ozone concentrations are achieved by varying the lamp voltage.

5   **Figure S1. PAM OH exposure as a function of output ozone concentration at relative humidity of 27 – 29 %.**

Figure S2 shows the sampling setup for engine exhaust measurements. The primary dilution ratio is adjusted by the amount of dilution air for the porous tube diluter and by the flow rate to the vacuum after the residence time chamber.

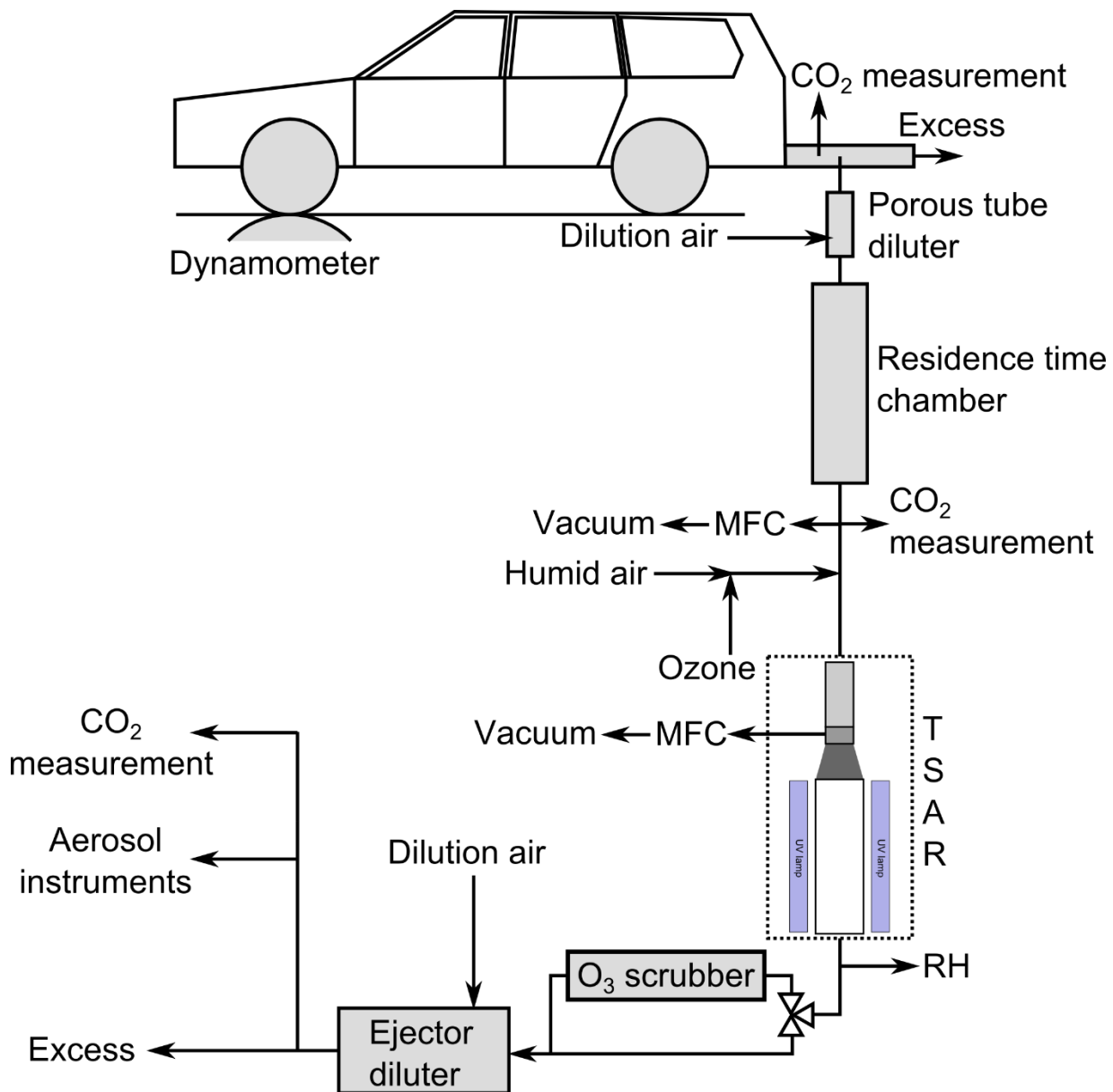



Figure S2. Engine exhaust sampling setup.

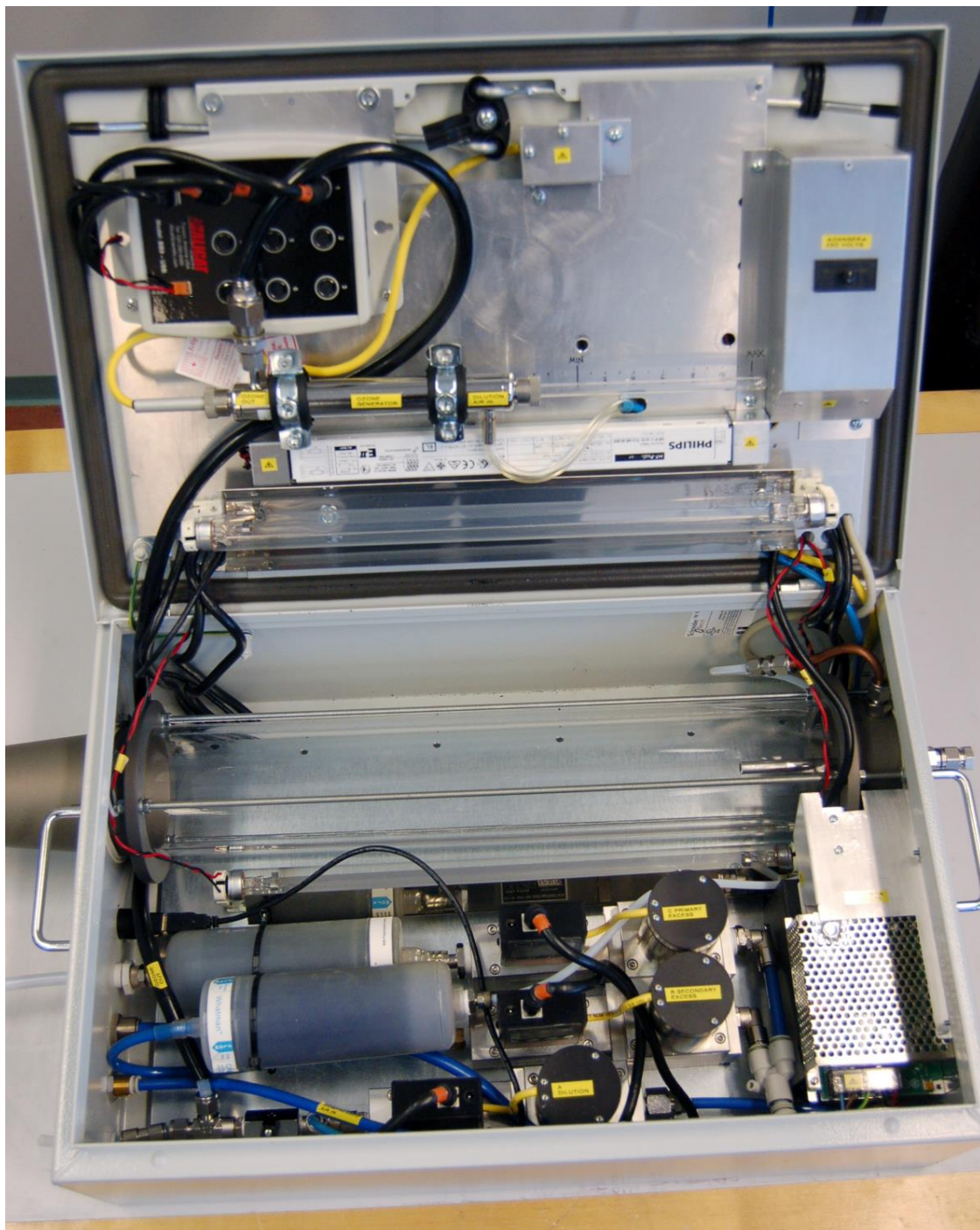



Figure S3. A photograph of TSAR