A microfluidic device for digital manipulation of gaseous samples

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Electronic supplementary data

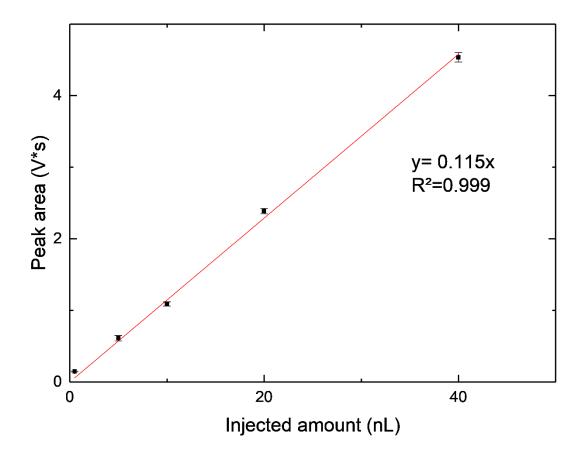


Figure 1 : Thermal conductivity detector (TCD) calibration curve. The TCD exhibits very good linearity between the area of the peaks and the amount of sample injected.

The experiment was made in a Perkins Elmer Clarus 500 gas chromatograph (GC) oven.

The TCD was connected using 1/32" unions to a GC column, SLB-5MS, 15m*250 μm i.d..

The oven was set at 50°C. The carrier gas was He, with an inlet pressure of 5 psi. The inlet temperature was 250°C.

Liquid n-heptane was directly injected inside the column. Injected volumes ranged from 0.5 to 40 nL.

Depending on the volume, the injection was either in split 20 mode (for 0.5 to 10 nL, meaning 10 nL, 100 nL, 200 nL respectively of liquid injected) or split 10 mode (for 20 and 40 nL, meaning 200 nL and 400 nL respectively of liquid injected).

Every measurement point was repeated twice, the result shown is the mean of both experiments.