

## Supplementary Information

### 1 Physico-chemical characteristics of studied pure liquids

	Molar mass (g/mol)	Density at 298 K (g/mL) [1]	Dynamic viscosity (mPa.s)	Surface tension (mN/m)	Refractive index [1]
Cyclopentanol	86.13	0.948	10.1	32.7	1.4530
Decane	142.28	0.730	0.8	23.7	1.4102
PDMS	≈116000	0.973	58 380 (from supplier)	20.5	1.4035

[1] David R. Lide. CRC Handbook of Chemistry and Physics, 75th edition. CRC Press, Boca Raton, FL, 1994.

### 2 Surface tension of different mixtures

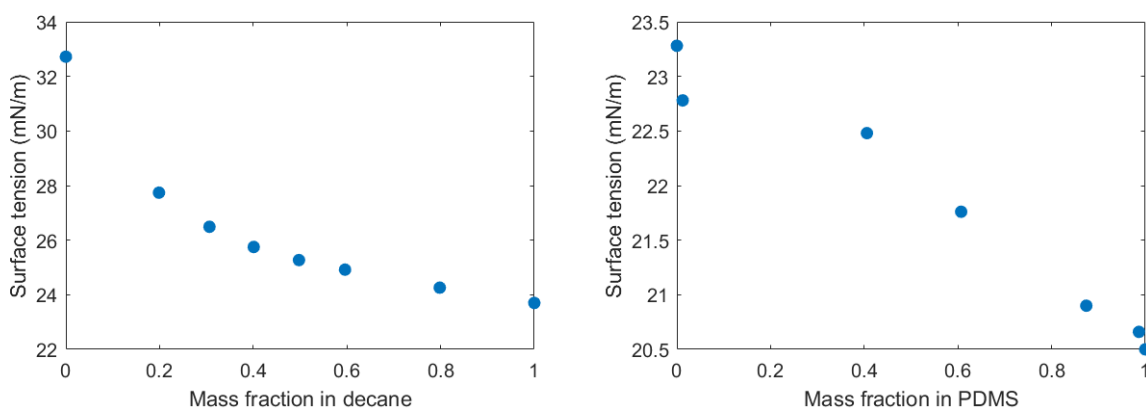


Figure 1 Surface tension of the decane/cyclopentanol mixture (left) and PDMS/decane mixture (right).

### 3 Viscosity of the decane/cyclopentanol mixture

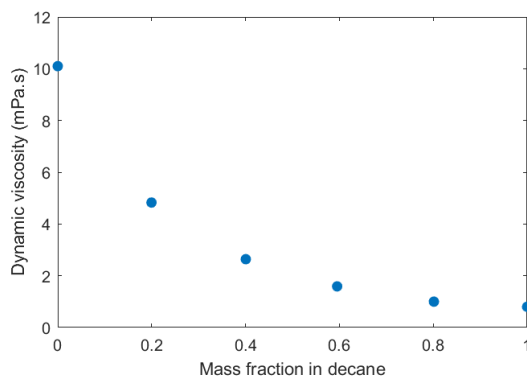
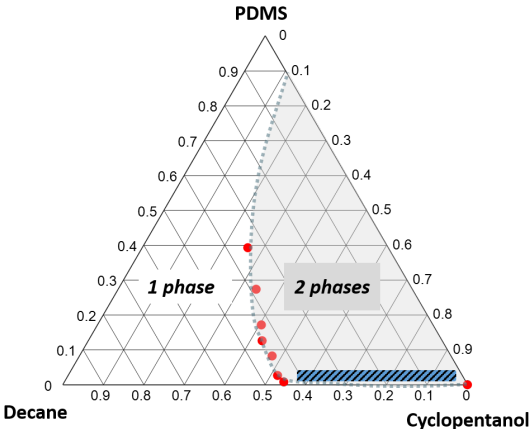


Figure 2 Viscosity of a decane/cyclopentanol mixture as a function of decane mass fraction. Measurements were done with a rheometer (Low Shear 400, Lamy Reology).

# 4 Phase diagram of the ternary mixture



**Figure 3** Phase diagram of the ternary mixture (mass fractions). Red dots correspond to experimental data. The dashed line is a guide for the eyes. The hatched zone represents the range of compositions used in the paper. To obtain experimental data, we first mix PDMS and decane at a given ratio and then add cyclopentanol until the solution becomes turbid. The solution is constantly stirred during the experiment. It is repeated for different PDMS / decane ratios. High PDMS ratios can not be explored as the solution becomes too viscous to be stirred easily.