* Average diameter of droplets: 100µm => average volume of droplets 0.5nL
* Average diameter of bilayers: 70µm => average area of droplets 4000 µm2
* Kd of IPTG to LacI: 0.8e-6, based on Xu, Reedstrom & Matthews, Journal of Biological Chemistry, 1998.
* Kd of IPTG inducing pLac: 26,29µM, according to my own screening in cells  
  n of IPTG inducing pLac: 3,342, according to my own screening in cells
* Diffusion constant: 6,81e-10 m2.s-1 calculated at 29°C from radius of Chem3D. 4,086e-6 dm2/min

LacI binding DNA

* Barkley, Salt Dependence of the Kinetics of the lac Repressor-Operator Interaction: Role of Nonoperator Deoxyribonucleic Acid in the Association Reaction. Biochemistry, 1981 (https://pubs-acs-org.eaccess.ub.tum.de/doi/pdf/10.1021/bi00516a026)

Kd=1e-13 M, kon=7.1e9 M-1.s-1, koff=6.1e-4 s-1 (Riggs et al.,1970a,b). Should be strongly affected by salt (ie, Kd increases, kon decreases, koff increases with higher salt)

* Hsieh & Brenowitz, Comparison of the DNA Association Kinetics of theLac Repressor Tetramer, Its Dimeric Mutant LacIadi,and the Native Dimeric Gal Repressor. Journal of Biological Chemistry, 1997 (<http://www.jbc.org/content/272/35/22092.full.pdf>)

kon=3e9 M-1.s-1, not affected by salt, within range of biological values http://book.bionumbers.org/what-are-the-concentrations-of-different-ions-in-cells/

* Xu et al., Kinetic and Thermodynamic Studies of Purine Repressor Binding to Corepressor and Operator DNA. Journal of Biological Chemistry, 1998. (<http://www.jbc.org/content/273/15/8958.full.pdf>)

Kd=7.2x1e-9 M, kon=5.1x1e6 M-1.s-1, koff=3.7x1e-1 s-1. Room T°, in buffer

LacI binding to IPTG

* Xu et al., Kinetic and Thermodynamic Studies of Purine Repressor Binding to Corepressor and Operator DNA. Journal of Biological Chemistry, 1998. (<http://www.jbc.org/content/273/15/8958.full.pdf>)

Kd=0.8x1e-6 M, kon=1.2x1e5 M-1.s-1, koff=2.1x1e-1 s-1