

Lab on a Chip - Supplementary information

Shear-enhanced sorting of non-spherical particles using Pinch Flow Fractionation

Guillaume de Timàry, Clothilde Rousseau, Laurence Van Melderén and Benoit Scheid

A Distribution of length of the two morphological types of cells studied

The cells are extracted from the same culture of *E. coli* in rich lysogeny broth (LB) medium culture. The length of the ovoidal cells corresponds to the length of the cells in the stationary phase of growth. Their major axis measures between 1.1 and 4.8 μm long with a median length of around 1.8 μm . These data are obtained after measuring 1251 ovoid cells. Filamentation is induced by adding 1 mM IPTG (isopropyl- β -D-thiogalactopyranoside) to the medium as the cells have been genetically modified to contain a plasmid with a copy of the gene *sula*. After one hour of treatment, most of the cells elongates and the median length is 21.91 μm for a sample of 303 filamentous cells.

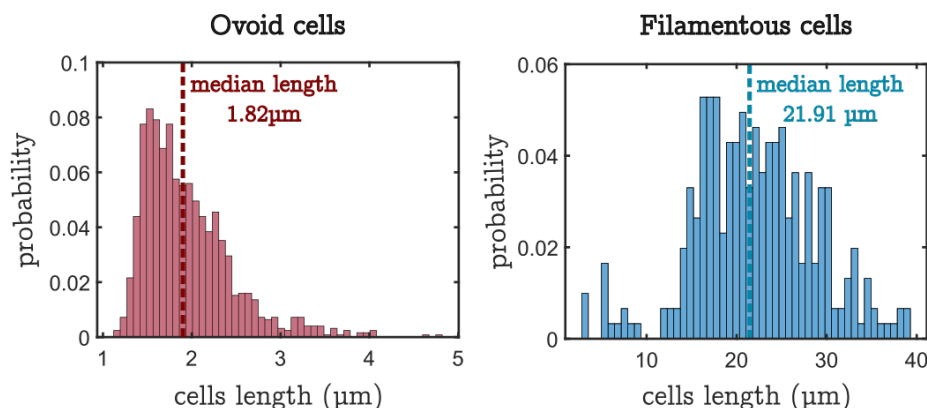


Fig. 1: Distribution of the length of the ovoidal and filamentous cells of *E. coli* studied in the experiment