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Yeast Cell Encapsulation in Microfluidic Devices[1] ISABELLA GRIFFIN, Norfolk State University, AMY ROWAT, Harvard University, WEITZ LAB TEAM — Polydimethylesiloxane (PDMS) microfluidic devices were used to encapsulate single S. cerevisiae cells that contained a protein tagged with green fluorescent protein for studies on cell growth rates. It was observed that drops stored in PDMS devices shrank over time due to the permeability of water in PDMS. Drop shrinkage was characterized and alternative methods to storing drops were tested. Pre-saturating PDMS devices were also tested and found that drop volume decreases much less that unsaturated PDMS devices. Cells were found to bud in pre-saturated PDMS devices.

[1]NSF Harvard REU

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