

Materials List for:

Multi-scale Analysis of Bacterial Growth Under Stress Treatments

Julien Cayron¹, Christian Lesterlin¹

¹Molecular Microbiology and Structural Biochemistry (MMSB), University of Lyon 1, CNRS, Inserm

Correspondence to: Christian Lesterlin at christian.lesterlin@ibcp.fr

URL: <https://www.jove.com/video/60576>

DOI: [doi:10.3791/60576](https://doi.org/10.3791/60576)

Materials

Name	Company	Catalog Number	Comments
Agarose	BioRad	1613100	Certified molecular biology agarose
Attune NxT Acoustic Focusing Cytometer	ThermoFisher scientific	A24858	Cytometer
CellASIC ONIX Microfluidic System	Merck Millipore	CAX2-S0000	Microfluidic system
CellASIC ONIX2 FG	Merck Millipore	ONIX2 1.0.1	Microfluidic software
CellASIC ONIX2 Manifold Basic	Merck Millipore	CAX2-MBC20	Manifold system
CytoOne 96-well plate with lid	Starlab	CC7672-7596	Microplate with 0,2 mL well working volume and clear flat bottom, for automated plate reader
<i>E. coli</i> strain carrying a chromosomal insertion for a <i>hupA-mCherry</i> fusion			Created by P1 transduction of <i>hupA-mCherry</i> in <i>E. coli</i> MG1655
Fiji	ImageJ	https://fiji.sc/	Image software. Cite Schindelin et al. if used in publication
Gene Frame	Thermo Scientific	AB-0578	Blue frame (125 µL, 1,7 x 2,8 cm)
Luria-Broth agarose medium	MP Biomedicals	3002232	Growth medium for plating assay
MicrobeJ	ImageJ/Fiji plugin	https://www.microbej.com/	Microscopy image analysis plugin. Cite Ducret <i>et al.</i> If used in publication; Detection settings: For bacteria : Area (µm ²): 0,1-max; Length (µm): 0,5-max; Width (µm): 0,6-max; Range (µm): 0,5-max; Angularity (rad): 0-0,3; 0-max for all other parameters. For nucleoid: Tolerance: 500; Threshold: Local; 0-max for all other parameters
Microfluidic Plates CellASIC ONIX	Merck Millipore	B04A-03-5PK	Plate for Microfluidic system
Microscope Nikon eclipse Ti	Nikon		Fluorescence microscope
MOPS EZ Rich Defined Medium (RDM)	Teknova	M2105	Growth rich medium, 10x MOPS Mixture, 0,132 M K ₂ HPO ₄ , 10x AGCU, 5x Supplement EZ, 20% Glucose. Filtered at 0,22 µm
SYTO9 Green Fluorescent Nucleic Acid Stain	ThermoFisher scientific	S34854	DNA fluorescent dye
TECAN Infinite M1000	TECAN	30034301	Automated plate reader