

Materials List for

Platform Incubator with Movable XY Stage: A New Platform for Implementing In-Cell Fast Photochemical Oxidation of Proteins

Danté Johnson¹, Benjamin Punshon-Smith², Jessica A. Espino¹, Anne Gershenson³, Lisa M. Jones¹

¹Department of Pharmaceutical Sciences, University of Maryland Baltimore ²Technology Research Center, University of Maryland Baltimore County

³Department of Biochemistry and Molecular Biology, University of Massachusetts

Corresponding Author

Lisa M. Jones

ljones@rx.umaryland.edu

Citation

Johnson, D., Punshon-Smith, B., Espino, J.A., Gershenson, A., Jones, L.M. Platform Incubator with Movable XY Stage: A New Platform for Implementing In-Cell Fast Photochemical Oxidation of Proteins. *J. Vis. Exp.* (171), e62153, doi:10.3791/62153 (2021).

Date Published

May 17, 2021

DOI

10.3791/62153

URL

jove.com/video/62153

Materials

Name	Company	Catalog Number	Comments
Ismatec Reglo ICC Peristaltic Pumps	Cole-Palmer	122270050	
Kinematic Mirror Mount for Ø2" Optics	Thor Labs		
10X trypsin-EDTA	Corning	AB00490-00005	
50.0mm 248nm 45°, Excimer Laser Line Mirror	Edmond Optics		
Acetone, HPLC Grade	Fisher Scientific		
Acetonitrile with 0.1% Formic Acid (v/v), LC/MS Grade	Fisher Scientific		
ACQUITY UPLC M-Class Symmetry C18 Trap Column, 100Å, 5 µm, 180 µm x 20 mm, 2G, V/M, 1/pkg	Waters	23275	other high resolution instruments (e.g. Q exactive Orbitrap or Orbitrap Fusion) can be used
ACQUITY UPLC M-Class System	Waters	A53225	
Afinia H480 3D Printer	(Innovation Space University of Maryland Baltimore Campus Library)		
air pump	OKOlabs	D12345	
Aluminum Foil	Fisher Scientific	Stock #63-120	
Aqua 5 µm C18 125 Å packing material	Phenomenex		
carbon dioxide unit	OKOlabs	MadMotor@-UHV	
Centrifuge	Eppendorf		
connectors (Y PP 1/16" and 1/16x1/8")	Cole-Palmer	116891000	
Delicate Task Wipers	Fisher Scientific	022625501	
Dithiothreitol (DTT)	AmericanBio		
DMSO, Anhydrous	Invitrogen	LS118-500	
Dulbecco's phosphate-buffered saline (DPBS)	Corning	SK-78001-82	

EX350 excimer laser	GAM Laser	PI89900	
Fetal bovine serum (FBS)	Corning	SK-12023-78	
Formic Acid, LC/MS Grade	Fisher Scientific	A929-4	4 L quantity is not necessary
HEK293T cells	Paul Shapiro Lab (University of Maryland Baltimore)		
humidifier	OKOlabs	Nano-LPMW stage	
HV3-2 VALVE	Hamilton	BP152-500	
Hydrogen Peroxide	Fisher Scientific	LS120-500	
Iodoacetamide (IAA)	ACROS Organics		
LABVIEW Professional 2018	National Instruments	86728	
MadMotor Positioning system and controllers	Mad City Labs	W6-4	
Methanol, LC/MS Grade	Fisher Scientific	01-213-100	any brand is sufficient
Microcentrifuge	Thermo Scientific	H301-T Unit-BL-PLUS	
N,N'-Dimethylthiourea (DMTU)	ACROS Organics		
Nanopositioning stage	Mad City Labs		
N-tert-Butyl- α -phenylnitron (PBN)	ACROS Organics		
OKO Touch Monitoring System	OKOlabs		
Orbitrap Fusion Lumos Tribrid Mass Spectrometer	Thermo Scientific	7Z02936	
PE50-C pyroelectric energy meter	Ophir Optronics		
Penicillin-streptomycin	Corning		
Pierce Quantitative Colorimetric Peptide Assay	Thermo Scientific		
Pierce Rapid Gold BCA Protein Assay Kit	Thermo Scientific		
Pierce Trypsin Protease, MS Grade	Thermo Scientific	75002436	
Pierce Universal Nuclease for Cell Lysis	Fisher Scientific	06-666A	
pressure gauge	OKOlabs	OKO-AIR-PUMP-BL	
PTFE filter	OKOlabs	CO2-UNIT-BL	
Six 33 mm PLA filament rings	(Innovation Space University of Maryland Baltimore Campus Library)		
sterile incubator	OKOlabs		
temperature unit	OKOlabs	OKO-TOUCH	
Thermo Scientific Pierce RIPA Buffer	Fisher Scientific	A117-50	
TINKERcad	(Innovation Space University of Maryland Baltimore Campus Library)		
Tris Base	Fisher Scientific	H325-100	any 30% hydrogen peroxide is sufficient
tubing (Tygon 3.18 and 1.59 ID)	Cole-Palmer	177350250	
Water with 0.1% Formic Acid (v/v), LC/MS Grade	Fisher Scientific	A454SK-4	4 L quantity is not necessary
Water, LC/MS Grade	Fisher Scientific	88702	
		90058	
		KM200	
		186007496	