

A Practical Guide to Phage- and Robotics-assisted Near-continuous Evolution

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jove.com/video/65974

Materials

Name	Company	Catalog Number	Comments
3D printed bacterial reservoir "waffle"	-	-	https://drive.google.com/file/d/16ELcvfFPzBzNSto0xUrBe-shi23J9Na7/view ; For Robot deck
3D printer	FormLabs	Form 3B+	3D printer components
3D printer resin (clear)	FormLabs	RS-F2-GPCL-04	consumable for 3D printer
8-1,000 µL head	Hamilton	10140943	For Liquid handling robot
96-1,000 µL pipetting head	Hamilton	10120001	For Liquid handling robot
Black polystyrene plate reader microplates	Millipore Sigma	CLS3603	For Robot deck
BMG Labtech Spectrostar FLUORstar Omega	BMG Labtech	10086700	For Liquid handling robot
Cleaning solution	Fluorochem Limited	F545154-1L	used to clean the liquid handling parts of the robot
Deep Well plates	Appleton Woods	ACP006	these are used to contain evolving bacteria on the deck of the robot
enclosure heater	Stego	13060.0-01	heats inside robot enclosure
Hamilton STAR	Hamilton	870101	For Liquid handling robot
Heater	Erbauer	BGP2108-25	For Liquid handling robot
HIG Bionex centrifuge	Hamilton	10086700	For Liquid handling robot
iSWAP plate gripper	Hamilton	190220	For Liquid handling robot
laboratory tubing	Merck	Z280356	to construct liquid handling manifold
luer to barb connector	AIEX	B13193/B13246	for connectorizing tubing
Magnetic stir plate	CamLab	SKU - 1189930	For Auxiliary Fridge
Molecular pipetting arm	Hamilton	173051	For Liquid handling robot
Omega	BMG labtech	5.7	plate reader control software
One way Check Valves	Masterflex	MFLX30505-91	to one way sections of liquid handling manifold
pyhamilton	MIT/Open source	https://github.com/dgretton/std-96-pace%20PRANCE	open source python robot control software
pymodbus	opensource	3.5.2	python pump software interface

Refrigerator	Tefcold	FSC175H	allows cooled bacteria to be used instead of turbidostat
S2060 Bacterial strain	Addgene	Addgene: #105064	<i>E. coli</i>
temperature controller	Digiten	DTC102UK	Used to control heaters thermostatically
Thermostat switch controller	WILLHI	WH1436A	WILLHI WH1436A 10 A Temperature Controller 110 V Digital Thermostat Switch Sous Vide Controller NTC 10K Sensor Improved Version; for Liquid handling robot
Venus	Hamilton	4.6	proprietary robot control software
Wash Station for MPH 96/384	Hamilton	190248	For Liquid handling robot
Suggested pump manufacturers			
Company	Catalog number	Notes	Documentation
Agrowtek	AD6i Hexa Pump		https://www.agrowtek.com/doc/im/IM_ADi.pdf
Amazon	INTLLAB 12V DC		
Cole-Parmer	EW-07522-3	Masterflex L/S Digital Drive, 100 RPM, 115/230 VAC	https://pim-resources.coleparmer.com/instruction-manual/a-1299-1127b-en.pdf
Cole-Parmer	EW-07554-80	Masterflex L/S Economy variable-speed drive, 7 to 200 rpm, 115 VAC	https://pim-resources.coleparmer.com/instruction-manual/a-1299-1127b-en.pdf