

SEA PHAGES

Ordering Guide

Overview

This ordering guide provides information on vendors and lists all the **supplies, reagents and equipment** you will need to implement the Phage Discovery component of the course (see below). The supply list is tailored for the new SEA schools.

- To facilitate planning and ordering of the supplies necessary, and where appropriate, the *estimated* quantities for each item is included, either as per student or per class.
- Items listed as “optional” are not critical for implementing the course, though many would significantly simplify preparation for and implementation of the course.
- If you are considering substituting items listed in the list, check with the SEA Team for suitability of the substitutes. Some substitutes have been found to negatively impact experiments as described in SEA-PHAGES protocols.

Vendors

We have provided vendor information and catalog numbers for the supplies listed in this document. Note, however, that supplies can be purchased from any vendor of your choice, and that you should take advantage of better pricing on individual items when it is available.

- **Fisher Scientific**

HHMI has negotiated special pricing for supplies that are available from Fisher Scientific. These prices are listed in the “Fisher Scientific Quote” document available at seaphages.org. If you intend to take advantage of these pre-negotiated prices, please use the quote provided at the top of the document. *If the quote # provided does not work, or if your local Fisher representative is unable to apply the negotiated-prices, please contact the Thermo Fisher VAS Team to inform that you are part of the Science Education Alliance program with HHMI and would like to utilize an HHMI quote. Failing that, please contact us info@seaphages.org for assistance.*

Thermo Fisher VAS TEAM

Phone: 866-884-2019 | E-mail: cs.vastatlanta@thermofisher.com

Hours of operation: 7a.m. - 9p.m. eastern

- **New England Biolabs**

If you intend to purchase any reagents from New England Biolabs, remember to ask your local rep if there is an education discount available.

- **Ted Pella**

Electron Microscopy supplies can be purchased from this vendor.

Supplies for in-class Use

Items	# per student	# per classroom	vendor	catalog #	order by March 2020
Consumables					
Microcentrifuge tubes (Eppendorf)	100		Fisher	05-402-27	10 microcentrifuge tubes
Conical tubes (15mL)	10		Fisher	05 539 12	
Conical tubes (50mL)	10		Fisher	06 443 18	1-2 conical tubes
Vented conical tubes	optional (3)	optional	Fisher	50-202-015	
Micropipet tips, box (p1000)		optional	Fisher	02-717-352	1 box of pipettes tips
Micropipet tips, box (p20-200)	3		Fisher	02-717-351	1 box of pipettes tips
Micropipet tips, box (p10)	1		Fisher	02-717-350	
Serological pipette (5mL or 10 mL)	50		Fisher	13 678 11D	1 pack of serological pipettes
Syringe (5mL)	10		ColePalmer	07944-02	
Syringe filter (0.22um)	10		Fisher	09 927 43A	
Sterile wooden sticks or loop		optional	Fisher	23 400 112	1 pack
Tube top filtration system	5		Fisher; no HHMI discount	976134	1 pack
Cryogenic Tubes		1	Fisher	03-337-7Y	1 pack
Weigh boats small	optional	1	Fisher	02-202-101	1 pack
Weigh boats large	optional	1	Fisher	02-202-103	
Filtration units 1L		6	Fisher; no HHMI discount	09 761 141	2 units
Glassware					
Media bottle (100mL)		optional	Fisher	FB800100	
Baffled flasks, 250mL glass	2		Fisher	10-140-6A	
Baffled flasks caps, 250mL glass	2			14-957-85J	
Erlenmeyer flask		optional	Fisher	10 041 5D	
Culture tube	40		Fisher	14 961 27	
Culture tube caps	40		Fisher	14 957 92	
Molecular Biology Supplies					
1kb ladder 50ng/uL, aliquot (100uL)		2	New England Biolabs	N3012S	
DNase 1		1	Fisher	ICN10057520	
RNase A		1	Fisher	BP25391	
HaeIII + buffer (bacterial host-dependent)		2	New England Biolabs	R0108S	
NspI + buffer (bacterial host-dependent)		2	New England Biolabs	R0602S	
SacII + buffer (bacterial host-dependent)		2	New England Biolabs	R0157S	
Wizard DNA Clean-up System		1	Fisher	PR A7280	
EM Supplies					
200-400 mesh carbon-formvar coated copper	1		Ted Pella	01813	
Uranyl Acetate 2%, aliquot (100uL)		1	Fisher	NC1031425	
EM reverse forceps		2	Ted Pella	5377-NM	
Pelco tabs	1		Ted Pella	16084-1	
Whatman #3 filter paper wedges	2		Fisher	09 924 120	
Parafilm (5x5cm)		2	Fisher	13 374 10	
Grid storage box		1	Ted Pella	161-96	
Small bench equipment					
Rack (13mm)	1		Fisher	14 809 60	
Rack (30mm)	1		Fisher	14 809 36	
Rack (microcentrifuge tube)	1		Fisher	05 541 25	
Bunsen burner (is gas line is available)	0.5		Fisher	17-012823	1 unit
Mobile Bunsen burner (if no available gas line)	0.5		Fisher	S41872	1 unit, if gas line is not available
Butane Can Replacements (if no available gas)	1		Fisher	S41873	1 unit, if gas line is not available
Striker	0.5		Fisher	12 007	1 unit
Vortexer		optional	Fisher	see Fisher Site	
Microcentrifuge	0.25		Fisher	05 400 007	
Micropipettor (p20)	1		Fisher	FBE00020	1 unit
Micropipettor (p200)	1		Fisher	FBE00200	1 unit
Micropipettor (p1000)		optional	Fisher	see quote	1 unit
Pipette-aid	1		Fisher	13 683C	1 unit
Specialty and large equipment (access required)					
Balance		1	Fisher	01 912 407	access required
High speed centrifuge		optional	Fisher	75 063 839	
Shaking incubator (platform & clamps not)		1	Fisher	14 285 732	access required
Heating block (inserts not included)		2	Fisher	88 860 021	
Heating block inserts			Fisher	88 860 113	
Water bath		2	Fisher	07 202 155	access required
Reach in incubator		1	Fisher	15-015-2645	access required
Imaging system		1	Fisher	UVP97019801	

Nanodrop or other Spectrophotometer		1	Fisher	ND200	
Gel Rig and Power Supply		1	Fisher	FB300Q	
Gel casting tray/comb (27 lanes)		2	Fisher	OWA6	
4deg C refrigerator		access required	Fisher	20LREETSA	access required
-20deg C freezer		access required	Fisher	05LFEETSA	
-80deg C freezer		access required	Fisher	956PM	access required
Electron microscope		access required			
Archiving Supplies					
Barcoded tubes (provided by HHMI)	1				
DMSO (200uL)		1	Fisher	BP231 100	
Additional Supplies					
Labeling pen	1				
Laboratory Notebook	1				
Ruler	0.5				
Timer	0.5				
Computer/laptop		access required			
Latex or vinyl gloves, (S,M,L,XL)		1 each	Fisher	19 005 427	
Sealable plastic bag	4				
Microwave		optional			

Reagents / Equipment for Prep

Items	# per student	# per classroom	vendor	catalog #	order by March 2020
Chemicals/Media/Reagents					
DNase 1		1	Fisher	see quote	
RNase A		1	Fisher	see quote	
Proteinase K		1	Fisher	EO0491	
EDTA, disodium salt		optional	Fisher	BP120 500	
Isopropanol		1L	Fisher	A451 1	
Ethanol		1L	Fisher	BP2818500	
Agarose		25g	Fisher	BMA50001	
Dextrose, anhydrous		500g	Fisher	D16 500	1 unit
Glycerol		500mL	Fisher	AAA16205AP	1 unit
10X TAE/TBE		1L	Fisher	BMA50844	
Tris Base		1kg	Fisher	AC167620010	
Calcium chloride		1kg	Fisher	C77 500	1 unit
Sodium chloride		1kg	Fisher	BP358 1	
Sodium Dodecyl Sulfate		10g	Fisher	BP820010	
Magnesium Sulfate Anhydrous		500g	Fisher	M65-500	
Cycloheximide		1g	Fisher	ICN10018301	1 unit
Ethidium bromide		1	Fisher	BP1423 500	
Agar, bacteriological		250g	Fisher	BP1423 500	1 unit
CiDecon (disinfectant)		3L	Fisher	04 355 64	
Handsoap		1L	Fisher	435516	
Concentrated loading dye		1	Fisher	BP645 5	
Peptone		500g	Fisher	BP1420 500	1 unit
Yeast extract		500g	Fisher	BP1422-500	1 unit
Glassware/Consumables for Prep					
Baffled flasks, 1L		2	Fisher	10-140-6C	1 unit
Baffled flasks caps, 1L				14-957-85J	1 unit
Baffled flasks, 250mL glass		4	Fisher	10-140-6A	1 unit
Baffled flasks caps, 250mL glass				14-957-85J	1 unit
Filtration units, 0.5-1L		optional	Fisher; no HHMI discount	09-761-34	
Petri dishes, case of 500		2	Fisher	FB0875712	1 unit
Media bottles, 100mL		optional	Fisher	FB800100	
Media bottles, 250mL		optional	Fisher	FB800250	1 unit
Media bottles, 500mL		optional	Fisher	FB800500	
Media bottles, 1L		optional	Fisher	FB8001000	
Beakers, 250mL		optional	Fisher	02 555 2	
Beakers, 500mL		optional	Fisher	02 555 2	
Beakers, 2L		optional	Fisher	02 555 2	
Stir bars		optional	Fisher	14 513 61	
Equipment for Prep					
Autoclave		access required			access required
Analytical balance		access required			
Stir plates		access required			
Thermometers		optional			