

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					Supplies for Remote Faculty Training
Items	# per student	# per classroom	vendor	catalog #	
Consumables					
Microcentrifuge tubes (Eppendorf)	100		Fisher	05-402-27	100 microcentrifuge tubes
Conical tubes (15mL)	10		Fisher	05 539 12	10 conical tubes
Conical tubes (50mL)	10		Fisher	06 443 18	10 conical tubes
Vented conical tubes	optional (3)	optional	Fisher	50-202-015	
Micropipet tips, box (p1000)		optional	Fisher	02-717-352	2 x 96 pipette tips
Micropipet tips, box (p20-200)	3		Fisher	02-717-351	6 x 96 pipette tips
Micropipet tips, box (p10)	1		Fisher	02-717-350	2 x 96 pipette tips
Serological pipette (5mL or 10 mL)	50		Fisher	13 678 11D	100 serological pipettes
Syringe (5mL)	10		ColePalmer	07944-02	20 syringes
Syringe filter (0.22um)	10		Fisher	09 927 43A	20 syringe filters
Sterile wooden sticks or loop		optional	Fisher	23 400 112	50 sterile sticks or loops
Tube top filtration system (requires a vacuum line)	5		Fisher; no HHMI discount	976134	8 units
Cryogenic Tubes		1	Fisher	03-337-7Y	
Glassware					
Culture tube	40		Fisher	14 961 27	100 tubes
Culture tube caps	40		Fisher	14 957 92	100 caps
Molecular Biology Supplies					
1kb ladder 50ng/uL, aliquot (100uL)		2	New England Biolabs	N3012S	1 unit
Concentrated DNA loading dye		1	Fisher	BP6455	1 unit
DNase 1		1	Fisher	ICN10057520	1 unit
RNase A		1	Fisher	BP25391	1 unit
Proteinase K		1	Fisher	E00491	1 unit
HaeIII + buffer (bacterial host-dependent)		2	New England Biolabs	R0108S	1 unit
NspI + buffer (bacterial host-dependent)		2	New England Biolabs	R0602S	1 unit
SacII + buffer (bacterial host-dependent)		2	New England Biolabs	R0157S	1 unit
Wizard DNA Clean-up System		1	Fisher	PR A7280	1 unit
EM Supplies					
200-400 mesh carbon-formvar coated copper grids	1		Ted Pella	01813	optional
Uranyl Acetate 2%, aliquot (100uL)		1	Fisher	NC1031425	optional
EM reverse forceps		2	Ted Pella	5377-NM	optional
Pelco tabs	1		Ted Pella	16084-1	optional
Whatman #3 filter paper wedges	2		Fisher	09 924 120	optional
Parafilm (5x5cm)		2	Fisher	13 374 10	optional
Grid storage box		1	Ted Pella	161-96	optional
Small bench equipment					
Rack (13mm)	1		Fisher	14 809 60	1 unit
Rack (30mm)	1		Fisher	14 809 36	1 unit
Rack (microcentrifuge tube)	1		Fisher	05 541 25	1 unit
Bunsen burner (if 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 line)	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	1 unit
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 (for 50 ml conical tubes)		optional	Fisher	75 063 839	access preferred
Shaking incubator (platform & clamps not included)		1	Fisher	14 285 732	access required
Heating block (inserts not included)		2	Fisher	88 860 021	or water bath
Heating block inserts			Fisher	88 860 113	or water bath
Water bath		2	Fisher	07 202 155	or heating blocks
Reach in incubator		1	Fisher	15-015-2645	access required
Imaging system		1	Fisher	UVP97019801	access required
Nanodrop or other Spectrophotometer		1	Fisher	ND200	access required
Gel Rig and Power Supply		1	Fisher	FB300Q	access required
Gel casting tray/comb (27 lanes)		2	Fisher	OWA6	or suitable precast gels
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 #	
Chemicals/Media/Reagents					
EDTA, disodium salt		optional	Fisher	BP120 500	20 g
Isopropanol		1L	Fisher	A451 1	20 ml
Ethanol			Fisher	BP2818500	
Agarose		25g	Fisher	BMA50001	5 g or 2 precast gels
Dextrose, anhydrous		500g	Fisher	D16 500	80 g
Glycerol		500mL	Fisher	AAA16205AP	
10X TAE/TBE		1L	Fisher	BMA50844	1 unit, or enough TBE to perform 2 gel electrophoresis
Tris Base		1kg	Fisher	AC167620010	13 g
Calcium chloride		1kg	Fisher	C77 500	15 g
Sodium chloride		1kg	Fisher	BP358 1	5 g or 2 precast gels
Sodium Dodecyl Sulfate		10g	Fisher	BP820010	1 g
Magnesium Sulfate Anhydrous		500g	Fisher	M65-500	15 g
Cycloheximide		1g	Fisher	ICN10018301	1 unit
Ethidium bromide		1	Fisher	BP1423 500	1 unit or precast gels
Agar, bacteriological		250g	Fisher	BP1423 500	40 g
Peptone		500g	Fisher	BP1420 500	60 g
Yeast extract		500g	Fisher	BP1422-500	5 g or 2 precast gels
CiDecon (disinfectant)		3L	Fisher	04 355 64	1 unit
Handsoap		1L	Fisher	435516	
Glassware/Consumables for Prep					
Baffled flasks, 250mL glass		4	Fisher	10-140-6A	at least 2, ideally more
Baffled flasks caps, 250mL glass		4	Fisher	14-957-85J	same quantity as flasks
Weight boats, small	optional	1	Fisher	02-202-101	1 pack/optional
Weight boats, large	optional	1	Fisher	02-202-103	1 pack/optional
Filtration units, 0.5 L		6	Fisher; no HHMI discount	FB12566504	2 units
Petri dishes, case of 500		2	Fisher	FB0875712	1 unit
Media bottles, 100mL		5	Fisher	FB800100	5
Media bottles, 250mL		5	Fisher	FB800250	
Media bottles, 500mL		5	Fisher	FB800500	2
Media bottles, 1L	optional		Fisher	FB8001000	2
Beakers, 250mL	optional		Fisher	02 555 2	
Beakers, 500mL	optional		Fisher	02 555 2	
Stir bars	optional		Fisher	14 513 61	2
Equipment for Prep					
Autoclave		access required			access required
Analytical balance		access required			access required
4deg C refrigerator		access required	Fisher	20LREETS A	access required
-20deg C freezer		access required	Fisher	05LFEETS A	access required
-80deg C freezer		access required	Fisher	956PM	access required
Stir plates		access required			access required
Thermometers		optional			