

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 schools new to the program.

- To facilitate planning and ordering of the necessary supplies, 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

NOTE: If your order from Fisher makes us of both the HHMI-Fisher quote as well as another quote, please ensure that your sales representative is able to apply both quotes to the order.

- **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. In

- **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 April 2018 |
|--|---------------|-----------------|--------------------------|-----------------|--------------------------------------|
| 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 |
| 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 | 1-2 syringe filters |
| 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 | | | | | |
| Baffled flask (250mL), glass or PETG | 2 | | Fisher | 10 041 5B | 1 flask |
| Media bottle (100mL) | | optional | Fisher | FB800100 | |
| Erlenmeyer flask | | optional | Fisher | 10 041 5D | |
| Culture tube | 40 | | Fisher | 14 961 27 | ~10 culture tubes |
| Culture tube caps | 40 | | Fisher | 14 957 92 | ~10 culture tubes caps |
| 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 April 2018 |
| Chemicals/Media/Reagents | | | | | |
| DNase 1 | | 1 | Fisher | see quote | |
| RNase A | | 1 | Fisher | see quote | |
| 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 | 1 unit |
| Magnesium Sulfate Anhydrous | | 500g | Fisher | M65-500 | 1 unit |
| 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 | | | |