

NBP
Science Equipment/Systems Allocation
ANALYTICAL INSTRUMENTS AND EQUIPMENT

Product(s)	Quantity on Hand
Autoclave	
Autoclave, sterilizer, top-loading, 50 L capacity, 105 °C to 135 °C sterilization temp, timer, programmable, Hirayama HV-50.	1
Autoclave, sterilizer, top-loading, 75 L capacity, 115 °C to 135 °C sterilization temp, timer, programmable, Sanyo MLS-3781L.	1
Aquarium	
Aquarium, glass, 10 gallon, 20" L x 10" W x 12" H.	5
Balance	
Balance, analytical, w/ draft shield, digital, 310 g x 0.0001 g (max capacity x readability), 8.9 cm diameter pan, Scientech SA-310 (for use in port at Punta Arenas, Chile unless otherwise requested).	1
Balance, analytical, w/ draft shield, digital, 320 g x 0.0001 g (max capacity x readability), 9 cm diameter pan, Mettler New Classic MF, MS304S/03 (for use in port at Punta Arenas, Chile unless otherwise requested).	1
Balance, analytical, w/ draft shield, digital, 320 g x 0.0001 g (max capacity x readability), 9 cm diameter pan, Mettler MS304TS/00 (for use in port at Punta Arenas, Chile unless otherwise requested).	1
Balance, marine scale, motion compensated, digital, max capacity 1.5 kg, resolution 0.1 g to 0.3 kg; 0.2 g to 0.6 kg; 0.5 g to 1.5 kg, 12 cm x 12 cm pan, POLS S-182.	1
Balance, marine scale, motion compensated, digital, max capacity 3 kg, dual resolution, resolution 0.5 g to 1.5 kg, resolution 1 g from 1.5-3 kg, 25 cm x 30 cm pan, Marel M1100 PL2262.	1
Balance, topload, digital, 3200 g x 0.01 g (max capacity x readability), 17 cm x 20 cm diameter pan, Mettler MS3002S (for use in port at Punta Arenas, Chile unless otherwise requested).	1
Balance, topload, digital, 2100 g x 0.01 g (max capacity x readability), 16.5 cm x 16.5 cm pan, Mettler PG2002-S.	1
Balance, triple beam, mechanical, 2610 g x 0.1 g (max capacity x readability), 13 cm diameter pan, Ohaus 2610G/710-00.	2
Scale, cargo, digital, 400 lbs x 0.5 lbs / 180 kg x 0.2 kg, 12" x 12".	1
Scale, hanging, 110 lbs x 8 oz / 50 kg x 200 g, accurate to one part in 250, Salter 235-6S.	1
Scale, hanging, spring with clip, 100 g x 1 g division, Pesola Micro-Line 20100.	1
Scale, hanging, spring with clip, 600 g x 5 g division, Pesola Medio-Line 40600.	2
Scale, hanging, spring with hook, 1000 g x 10 g division, Pesola Medio-Line 41000 (this item originally came with a clip. The clip was modified to a hook).	1
Scale, hanging, spring with hook, 2500 g x 20 g division, Pesola Medio-Line 42500.	1
Bath, Circulating	

Bath, circulating, digital, -24 °C to +150 °C, stability +/- 0.01 °C, ID 8.8" x 9.4" x 9", 18.1 L, Neslab RTE-17.	3
Bath, circulating, digital, -25 °C to +150 °C, stability +/- 0.01 °C, ID 9.3" x 10" x 6", 12.1 L, Neslab RTE-211D.	1
Bath, circulating, digital, -20 °C to +100 °C, ID 5.3" x 4.8" x 5", 5.4-6.5 L, Polystat 1C6.	1
Bath, circulating, digital, -28 °C to +100 °C, ID 6.8" x 7.2" x 5", 6.8-8.6 L, Polystat 1C15.	2
Bath, circulating, digital, -30 °C to +130 °C, 5 L, Polyscience 9101.	1
Bath, circulating, digital, -25 °C to +150 °C, stability 0.02 °C, ID 7.2" x 6.8" x 8", 12 L, Thermo Scientific SC150-A25.	1
Bath, non-circulating, analog, +5 °C above ambient to +99 °C, uniformity +/-0.2 °C at 37 °C, ID 11" x 12" x 6", 12 L, VWR 1212.	1
Bath, Dri	
Bath, dri, modular, holds six blocks, ambient to +150 °C, accuracy: +/- 0.5% repeatability, with 50, 15, 1.5 ml and 25 mm tube size blocks (request below), VWR 13259-038.	3
Heat block, 12 x 15 ml conical bottom centrifuge tubes, 0.672" diameter, VWR 13259-250.	2
Heat block, 20 x 1.5 ml non-graduated (smooth sided) microtubes, tapered, VWR 13259-286.	3
Heat block, 5 x 50 ml conical bottom centrifuge tubes, 1.14" diameter, VWR 13259-254.	1
Heat block, 6 x 25 mm test tubes, VWR 13259-210.	2
Bath, dri, modular, holds three blocks, ambient to +110 °C, stability +/- 0.1 °C, uniformity +/- 0.5 °C, with 6, 13, 16 mm tube size blocks (request below), Thermolyne DB16525.	2
Heat block, 12 x 16 mm tube size, max tube size 16.75 mm, Thermolyne K165X7A.	1
Heat block, 20 x 13 mm tube size, max tube size 13.75 mm, Thermolyne BK165X5A.	1
Heat block, 30 x 6 mm tube size, max tube size 6.5 mm, Thermolyne BK165X3A.	2
Bath, dri, modular, holds two blocks, ambient to 130 °C, uniformity +/- 0.5 °C, with 6, 12, 13, 25 mm tube size blocks (request below), Fisher Model 2052FS, p/n 11-718-2Q.	1
Heat block, 6 x 6 mm test tubes, 5 x 12 mm & 13 mm test tubes, 3 x 25 mm test tubes, Fisher 11-718-22Q.	4
Bath, Ultrasonic	
Bath, shaking, heated, +5 °C above ambient to +70 °C, accuracy +/- 0.1 °C, uniformity +/-0.3 °C, ID 14" x 10" x 5", 7 L, 50-150 oscillations/min/60Hz, timer to 60 min, Yamato YB521.	1
Bath, ultrasonic cleaner, ID 11.5" x 6" x 6", 5.7 L, Branson 3200R-1.	1
Bath, ultrasonic cleaner, ID 11.5" x 9.5" x 5.8", 10.4 L, heat, adjustable power burst and degassing, timer to 20 min, Ney ULTRASONIK 300.	1
Burner	
Burner, alcohol, 4 oz.	1
Calipers	
Calipers, electronic, digital, 0-200 mm, resolution 0.01 mm, accuracy +/- 0.03 mm, stainless steel, traceable to NIST Standards, VWR 12777-830.	1
Calipers, dial, 0-150 mm, dial gradation 0.1 mm, 10 mm per revolution, Super Polymid (fiberglass-reinforced polymer), Swiss Precision Instruments 31-415-3.	1

Centrifuge	
Centrifuge, micro, non-refrigerated, variable speed up to 13,200 rpm / 16,110 x g rcf, timer to 99 min, Eppendorf 5415D.	2
Rotor, fixed angle, 45°, 24-place x 1.5/2 mL microfuge tubes, conical, 11 mm bore, 13,200 rpm max / 16,110 x g rcf max, F-45-24-11 for Eppendorf 5415D.	3
Centrifuge, micro, non-refrigerated, variable speed up to 15,060 rpm / 21,300 x g rcf, timer to 9 hr 59 min, Eppendorf 5425.	2
Rotor, fixed angle, 45°, 24-place x 1.5/2 ml microfuge tubes, conical, 11 mm bore, aerosol-tight, 15,060 rpm max / 21,300 x g rcf max, FA-24x2 for Eppendorf 5425.	2
Centrifuge, micro, refrigerated, -11 °C to +40 °C, variable speed up to 16,220 rpm / 25,001 x g rcf, timer to 9 hr 59 min, Eppendorf 5427R.	2
Rotor, fixed angle, 45°, 30-place x 1.5/2 ml microfuge tubes, conical, 11 mm bore, aerosol-tight, 14,000 rpm max / 20,817 x g rcf max, FA-45-30-11 for Eppendorf 5427R.	1
Centrifuge, micro, refrigerated, -9 °C to +40 °C, variable speed up to 16,400 rpm / 25,000 x g rcf, timer to 99 min, Eppendorf 5417R.	1
Rotor, fixed angle, 45°, 24-place x 1.5/2 mL microfuge tubes, conical, 11 mm bore, aerosol-tight, 16,400 rpm max / 25,000 x g rcf max, FA-45-24-11 for Eppendorf 5417R.	2
Rotor, fixed angle, 45°, 30-place x 1.5/2 mL microfuge tubes, conical, 11 mm bore, aerosol-tight, 14,000 rpm max / 20,800 x g rcf max, FA-45-30-11 for Eppendorf 5417R.	2
Centrifuge, benchtop, refrigerated, -20 °C to +40 °C, variable speed up to 18,000 rpm, timer to 9 hr 59 min, Beckman Allegra X-30R.	1
Rotor, fixed angle, 25°, 10-place x 15 mL conical bottom tubes, 10,000 rpm max / 10,416 x g rcf max, C1015 for Beckman Allegra X30-R.	1
Rotor, fixed angle, 25°, 6-place x 50 mL conical bottom tubes, 10,000 rpm max / 10,304 x g rcf max, C0650 for Beckman Allegra X-30R.	1
Rotor, fixed angle, 25°, 8-place x 50 mL round bottom tubes, 11,400 rpm max / 13,682 x g rcf max, F0850 for Beckman Allegra X-30R.	1
Rotor, fixed angle, 30°, 6-place x 30 mL round bottom tubes, 18,000 rpm max / 28,305 x g rcf max, F0630 for Beckman Allegra X-30R.	1
Rotor, fixed angle, 45°, 24-place x 1.0/1.5/2.0 mL, 18,000 rpm max / 29,756 x g rcf max, F2402H for Beckman Allegra X-30R.	1
Rotor, fixed angle, 45°, 30-place x 1.5/2.0 mL, 16,000 rpm max / 28,672 x g rcf max, FX301.5 for Beckman Allegra X-30R.	2
Rotor, swinging bucket, microplate/microtiter, 2-6 x microplate, 3,000 rpm max / 1,109 x g rcf max, S2096 for Beckman Allegra X-30R.	1
Centrifuge, benchtop, non-refrigerated, variable speed up to 16,000 rpm, timer to 99 hr 59 min, Thermo Scientific Sorvall ST 8.	1
Rotor, swinging bucket, 8-place x 50 mL conical bottom tubes, 4,500 rpm max / 3,260 x g rcf max, TX-150 for Thermo Scientific Sorvall ST 8.	1
Rotor, fixed angle, 45°, 6-place x 50 mL conical bottom tubes, 9,500 rpm max / 12,108 x g rcf max, HIGHConic III for Thermo Scientific Sorvall ST 8.	1
Rotor Adapter, 1-place x 15 mL conical bottom tube, for use with TX-150 and HIGHConic III rotors for Thermo Scientific Sorvall ST 8.	1
Conductivity	

Conductivity Meter, benchtop, range: 0.000 to 3000 mS/cm, cell constant: 0.001 to 199.9 cm ⁻¹ , temperature: -5 °C to +105 °C, Orion 3 Star.	1
Conductivity Cell, DuraProbe, 4 electrode, range: 1 µS/cm to 200 mS/cm, cell constant: 0.475 cm ⁻¹ , epoxy/graphite, built-in ATC temperature sensor, Thermo Orion 013005MD.	1
Conductivity Meter, portable, range: 0 to 199.9 mS/cm, cell constant: 0.07 to 14.99 cm ⁻¹ , temperature: -5 °C to +105 °C, Orion 115.	1
Conductivity Cell, 2 electrode, range: 1 µS/cm to 20 mS/cm, cell constant: 1.0 cm ⁻¹ , epoxy/platinum, w/ thermistor, Orion 011050.	2
Counter	
Counter, hand held, 1 place, 4 digits (0 - 9999).	6
Counter, laboratory, 1 place, 3 digits (0 - 999).	1
Counter, laboratory, 2 place, 3 digits (0 - 999).	1
Counter, laboratory, 5 place, 3 digits (0 - 999).	1
Counter, laboratory, 5 place, 3 digits (0 - 999), with totalizing place.	2
Counter, laboratory, 8 place, 3 digits (0 - 999), with totalizing place.	1
Crimper	
Crimper, hand operated, for 20 mm seals, Alltech 666020, Wheaton 224303, W225303.	3
Decapper, hand operated, for 20 mm seals, Wheaton W225353.	1
Decapper, plier, for 20 mm seals, Alltech 6663.	1
Dessicator	
Dessicator, vacuum, polycarbonate with plate, inside diameter 19.7 cm, plate diameter 19 cm, volume 0.2 cu ft, holds 29.9" Hg vacuum at room temp for 24 hrs, Scienceware F42020.	1
Dewar	
1 L Liquid Nitrogen Dewar, for liquid nitrogen storage. Lid fastens with clips so can be used as a transportable vessel for use in the field.	1
4 L Liquid Nitrogen Dewar, for liquid nitrogen storage.	2
35 L Liquid Nitrogen Dewar, with sample canisters/cryo canes for sample storage.	6
50 L Liquid Nitrogen Dewar, for liquid nitrogen storage.	5
60 L Liquid Nitrogen Dewar, with sample canisters/cryo canes for sample storage.	2
160 L Liquid Nitrogen Dewar, for liquid nitrogen storage.	8
DI Water	
Water Purification System, Aqua Solutions RODI-C-12AL, Reverse osmosis + Type I Ultra-low TOC Analytical grade DI system, installed in Aft Dry Lab.	1
Water Purification System, Aqua Solutions RODI-C-12AL, Reverse osmosis + Type I Ultra-low TOC Analytical grade DI system, installed in Hyrdo Lab.	1
Dispenser	
Dispenser, bottle top, 0.5 mL fixed vol, Barnstead/Thermolyne Repipet Jr., w/ glass and PP (polypropylene) bottles, for aqueous solutions and dilute acids/bases.	4
Dispenser, bottle top, 1 mL fixed vol, Hirschmann Ceramus 9312100. Glass bottle included.	2
Dispenser, bottle top, 0.2-1 mL, Hirschmann Ceramus 9312000. Glass bottle included.	10

Dispenser, bottle top, 0.4-2 mL, Hirschmann Ceramus 9322000. Glass bottle included.	7
Dispenser, bottle top, 1-5 mL, Hirschmann Ceramus 9332000, Brinkmann 022-22-010-1, Brinkmann Chemsaver 022-22-100-1. Glass bottle included.	10
Dispenser, bottle top, 2-10 mL, Hirschmann Ceramus 9342000, Eppendorf Varispenser Plus 4961 000.039. Glass bottle included.	3
Dispenser, bottle top, 5-25 mL, Brinkmann Chemsaver 022-22-120-5, Brinkmann 022-22-030-6. Glass bottle included.	3
Dispenser, bottle top, 5-30 mL, Hirschmann Ceramus 9352000. Glass bottle included.	5
Dispenser, bottle top, 10-60 mL, Hirschmann Ceramus 9362000. Glass bottle included.	6
Dispenser, bottle top, 0-0.5 mL, glass, Labindustries Repipet 3001/2AL.	1
Dispenser, bottle top, 0-5 mL, glass, Barnstead/Thermolyne L/I Repipet.	1
Filtration	
Base, glass, 25 mm, glass frit support, with clamp.	32
Funnel, glass, 25 mm, 100 mL.	7
Funnel, glass, 25 mm, 1000 mL.	7
Funnel, glass, 25 mm, 15 mL.	27
Funnel, glass, 25 mm, 300 mL.	19
Base, glass, 25 mm, SS screen support, with clamp.	8
Funnel, glass, 25 mm, 100 mL.	7
Funnel, glass, 25 mm, 1000 mL.	7
Funnel, glass, 25 mm, 15 mL.	27
Funnel, glass, 25 mm, 300 mL.	19
Base, glass, 47 mm, glass frit support, with clamp.	8
Funnel, glass, 47 mm, 1000 mL.	1
Funnel, glass, 47 mm, 300 mL.	19
Base, glass, 47 mm, SS screen support, with clamp.	15
Funnel, glass, 47 mm, 1000 mL.	1
Funnel, glass, 47 mm, 300 mL.	19
Base, polysulfone, 25 mm, twist-lock, autoclavable, Pall-Gelman 4203.	54
Funnel, polysulfone, 25 mm, 200 mL, twist-lock, autoclavable, Pall-Gelman 4203.	54
Base, polyphenylsulfone, 47 mm, magnetic, autoclavable, Pall-Gelman 4247.	6
Funnel, polyphenylsulfone, 47 mm, 150 mL, magnetic, autoclavable, Pall-Gelman 4247.	6
Base, polysulfone, 47 mm, with clamp, autoclavable, Nalgene DS0315-0047.	10
Funnel, polysulfone, 47 mm, 250 mL, with clamp, with polypropylene cover, autoclavable, Nalgene DS0315-0047.	10
Base, polysulfone, 47 mm, Gravi-Seal, autoclavable, GE/Osmonics.	6
Funnel, polysulfone, 47 mm, 350 mL, Gravi-Seal, autoclavable, GE/Osmonics.	6
Manifold, vacuum, 3-place, PVC. Request 3/8" ID tubing in the Consumables and Supplies section: "Tubing" - "Rubber, Vacuum" - "3/8" ID, 7/8" OD, 1/4" wall, black", Cole-Parmer 96143-08.	2
Manifold, vacuum, 3-place, stainless steel. Request 3/8" ID tubing in the Consumables and Supplies section: "Tubing" - "Rubber, Vacuum" - "3/8" ID, 7/8" OD, 1/4" wall, black", Cole-Parmer 96143-08.	8

Manifold, vacuum, 6-place, PVC. Request 3/8" ID tubing in the Consumables and Supplies section: "Tubing" - "Rubber, Vacuum" - "3/8" ID, 7/8" OD, 1/4" wall, black", Cole-Parmer 96143-08.	6
Manifold, vacuum, 6-place, aluminum. Request 3/8" ID tubing in the Consumables and Supplies section: "Tubing" - "Rubber, Vacuum" - "3/8" ID, 7/8" OD, 1/4" wall, black", Cole-Parmer 96143-08.	1
Pump, vacuum, oil-less, diaphragm, max pressure 60 psi, max vacuum 25.5" Hg, w/ gauges, Gast DOA-P104-AA, GAST DOA-P704-AA. Request 3/8" ID tubing in the Consumables and Supplies section: "Tubing" - "Rubber, Vacuum" - "3/8" ID, 7/8" OD, 1/4" wall, black", Cole-Parmer 96143-08.	13
Pump, vacuum, oil-less, piston, max pressure 100 psi, max vacuum unknown, w/ gauges, Gast 1HAB-25-M100X. Request 3/8" ID tubing in the Consumables and Supplies section: "Tubing" - "Rubber, Vacuum" - "3/8" ID, 7/8" OD, 1/4" wall, black", Cole-Parmer 96143-08.	1
Pump, vacuum, oil lubricated, rotary vane, max pressure 10 psi, max vacuum 26.0" Hg, w/ gauges, Gast 0523-V4A-G180DX. Request 3/8" ID tubing in the Consumables and Supplies section: "Tubing" - "Rubber, Vacuum" - "3/8" ID, 7/8" OD, 1/4" wall, black", Cole-Parmer 96143-08.	1
Vacuum Trap, carboy, 20 L, glass. Request 3/8" ID tubing in the Consumables and Supplies section: "Tubing" - "Rubber, Vacuum" - "3/8" ID, 7/8" OD, 1/4" wall, black", Cole-Parmer 96143-08. (Glass filtration flasks are available in the Consumables and Supplies section).	6
Vacuum Trap, carboy, 20 L, PP (polypropylene), heavy duty, with quick vent caps, Nalgene 2226-0050. Request 3/8" ID tubing in the Consumables and Supplies section: "Tubing" - "Rubber, Vacuum" - "3/8" ID, 7/8" OD, 1/4" wall, black", Cole-Parmer 96143-08. (Glass filtration flasks are available in the Consumables and Supplies section).	4
Filtration, Other	
Filter Holder, in-line, 47 mm, polypropylene, Millipore XX4304700. Request 3/8" ID tubing in the Consumables and Supplies section: "Tubing" - "Rubber, Vacuum" - "3/8" ID, 7/8" OD, 1/4" wall, black", Cole-Parmer 96143-08.	6
Filter Holder, in-line, 47 mm, polycarbonate, Pall-Gelman 1119. Request 1/4" ID tubing in the Consumables and Supplies section: "Tubing" - "Rubber, Vacuum" - "1/4" ID, 1/2" OD, 1/8" wall, red", VWR 62995-059.	4
Filter Holder, vacuum, with funnel (500 mL) & receiver (1000 mL) for 47 mm membrane filters, polysulfone, autoclavable, Thermo Scientific Nalgene 300-4100. Request 1/4" ID tubing in the Consumables and Supplies section: "Tubing" - "Rubber, Vacuum" - "1/4" ID, 1/2" OD, 1/8" wall, red", VWR 62995-059.	4
Flowmeter	
Flowmeter, mechanical, with standard rotor, for net sampling, speed range approx. 1/5 knots to 15 knots, General Oceanics 2030R.	6
Fluorometer	

Fluorometer, 10-AU, benchtop/field, water-tight case, digital, configured for discrete samples, spreadsheet interface software, Turner Designs 10-AU-005. Please select required accessories. Request Chlorophyll standards in Stocked Chemicals section: "Chlorophyll". Disposable borosilicate cuvettes can be requested in the Consumables and Supplies section: "Culture tubes: glass disposable" - "13 x 100 mm, for fluorometers", VWR 47729-572.	2
Cuvette Adapter, for 25mm and 13mm tubes, Turner Designs 10-AU-030, 016-1050.	4
Cuvette, tube, 13 mm x 100 mm, borosilicate, reusable, Turner Designs 10-031.	91
Cuvette, tube, 13 mm x 100 mm, borosilicate, screw top, reusable, Turner Designs 10-031.	17
Cuvette, tube, 13 mm x 100 mm, quartz, reusable, Turner Designs 10-299.	6
Cuvette, tube, 25 mm x 150 mm, borosilicate, reusable, Turner Designs 10-028A.	47
Individual filters available upon request.	
Optical Kit, ammonium/CDOM, Turner Designs 10-303. Turner Designs optical kits include excitation and emission filters, lamp, and attenuator plate when required.	3
Optical Kit, chlorophyll-a, extractive (acidification method) and chlorophyll in vivo, Turner Designs, 10-037R. Turner Designs optical kits include excitation and emission filters, lamp, and attenuator plate when required.	2
Optical Kit, chlorophyll-a, extractive (non-acidification method), Turner Designs, 10-040R. Turner Designs optical kits include excitation and emission filters, lamp, and attenuator plate when required.	5
Optical Kit, fluorescein, Turner Designs, 10-086R. Turner Designs optical kits include excitation and emission filters, lamp, and attenuator plate when required.	1
Optical Kit, long wavelength (crude) oil, Turner Designs, 10-302R. Turner Designs optical kits include excitation and emission filters, lamp, and attenuator plate when required.	1
Optical Kit, rhodamine WT, Turner Designs, 10-041R. Turner Designs optical kits include excitation and emission filters, lamp, and attenuator plate when required.	1
Solid Standard, secondary, red, for chlorophyll a and rhodamine analysis, Turner Designs 10-AU-904.	6
Fluorometer, 10-AU, benchtop/field, water-tight case, digital, configured for continuous flow, spreadsheet interface software, Turner Designs 10-AU-005. Please select required accessories. Request Chlorophyll standards in Stocked Chemicals section: "Chlorophyll".	1
Continuous flow cuvette system, 25mm, Turner Designs 10-AU-020.	4
Individual filters available upon request.	
Optical Kit, ammonium/CDOM, Turner Designs 10-303. Turner Designs optical kits include excitation and emission filters, lamp, and attenuator plate when required.	3
Optical Kit, chlorophyll-a, extractive (acidification method) and chlorophyll in vivo, Turner Designs, 10-037R. Turner Designs optical kits include excitation and emission filters, lamp, and attenuator plate when required.	2
Optical Kit, chlorophyll-a, extractive (non-acidification method), Turner Designs, 10-040R. Turner Designs optical kits include excitation and emission filters, lamp, and attenuator plate when required.	5
Optical Kit, fluorescein, Turner Designs, 10-086R. Turner Designs optical kits include excitation and emission filters, lamp, and attenuator plate when required.	1
Optical Kit, long wavelength (crude) oil, Turner Designs, 10-302R. Turner Designs optical kits include excitation and emission filters, lamp, and attenuator plate when required.	1
Optical Kit, rhodamine WT, Turner Designs, 10-041R. Turner Designs optical kits include excitation and emission filters, lamp, and attenuator plate when required.	1

Fluorometer, Trilogy, benchtop, color touch screen, for discrete samples, sample chamber accepts snap-in optical modules (modules accommodate 10 mm x 10 mm cuvettes), USB interface, Trilogy spreadsheet interface software, Turner Designs 7200-002. Please select required accessories. Request Chlorophyll standards in Stocked Chemicals section: "Chlorophyll".	1
Cuvette Adapter, for 12 mm tubes, Turner Designs 016-0810. Request 12 x 75 mm tubes in Basic Supplies and Consumables section: "Culture tubes, Glass disposable".	1
Cuvette, square, 10 mm x 10 mm, borosilicate, reusable, 3.5 mL capacity, Turner Designs 7000-955.	2
Cuvette, square, 10 mm x 10 mm, methacrylate, disposable, 3.5 mL capacity, Turner Designs 7000-959.	300
Optical Module, for chlorophyll-a extracted (acidification), w/ light source and filters, Turner 7200-040-W, use with glass or quartz only, Turner 7000-955 recommended.	1
Optical Module, for chlorophyll-a extracted (non-acidification), w/ light source and filters, Turner 7200-046-W, use with glass or quartz only, Turner 7000-955 recommended.	1
Optical Module, for chlorophyll-a in vivo, qualitative analysis only, w/ light source and filters, Turner 7200-043, methacrylate cuvettes, Turner 7000-959, recommended.	1
Optical Module, for ammonium, w/ light source and filters, Turner 7200-067, methacrylate cuvettes, Turner 7000-959, recommended.	1
Solid Standard, secondary, red, adjustable, for use with chlorophyll, rhodamine, phycocyanin and phycoerythrin modules, Turner Designs 8000-952.	1
Freezer/Refrigerator	
Freezer, flammable storage, -20 °C to -12 °C, upright, 20.6 cu ft, Aft Dry Lab, Fisherbrand Isotemp, 20FFEEFSA, 13-986-149.	1
Freezer, flammable storage, -20 °C to -12 °C, upright, 20.6 cu ft, Aft Dry Lab,, Fisherbrand Isotemp, 20FFEEFSA, 13-986-149.	1
Freezer, flammable storage, -20 °C to -12 °C, upright, 20.6 cu ft, Helo Hangar Workshop, Fisher Scientific Isotemp, 13-986-149.	1
Freezer, flammable storage, -20 °C to -12 °C, upright, 20.6 cu ft, Helo Hangar Workshop, Fisher Scientific Isotemp, Isotemp 149.	1
Freezer, ultra-low, -86 °C to -50 °C, upright, 19.4 cu ft, Aft Dry Lab, Thermo Scientific Revco RLE Series, RLE40086A.	1
Freezer, ultra-low, -86 °C to -50 °C, upright, 19.4 cu ft, Aft Dry Lab, Thermo Scientific Revco UxF Series, UXF40086D.	1
Freezer, ultra-low, -86 °C to -50 °C, chest, 20 cu ft, Aft Dry Lab, Thermo Scientific Revco CxF Series, ULT2090-10-D.	1
Freezer, ultra-low, -86 °C to -50 °C, chest, 20 cu ft, Aft Dry Lab,, Thermo Scientific Revco CxF Series, ULT2090-10-D.	1
Refrigerator, +1 °C to +12 °C, flammable storage, undercounter, 5.5 cu ft, Hydro Lab, Thermo Scientific 05FREETSA.	1
Refrigerator, +1 °C to +12 °C, flammable storage, undercounter, 5.5 cu ft, Bio Lab, Thermo Scientific 05FREETSA.	1
Refrigerator, +1 °C to +12 °C, flammable storage, upright, 20.9 cu ft, Aft Dry Lab, Fisher Scientific Isotemp 20FREEFSA, 13-986-152.	1
Furnace	

Muffle Furnace, digital, programmable temperature control, 4 programs, 16 segments per program, +204 °C to +982 °C continuous (3 hours), +982 °C to +1093 °C (intermittent), ID 14" W x 14" D x 14" H, 1.6 cu ft, 45L, Aft Dry Lab, Thermolyne 30400, Model F30438CM.	1
Homogenizer	
Homogenizer, w/ stand, variable speed range from 10,000 to 30,000 rpm, PRO Scientific, PRO 250.	2
Generator, 10 mm diameter x 150 mm long saw tooth bottom, capacity 1.5 to 100 mL, 13 m/s max peripheral speed in medium, PRO Scientific 02-10150.	1
Generator, 5 mm diameter x 75 mm long flat bottom, capacity 0.03 to 5.0 mL, 6 m/s max peripheral speed in medium, PRO Scientific 02-05075.	1
Homogenizer, ultrasonic, w/ stand, variable power output from 0-300 watts, timer 1-15 min, constant and pulse modes, 20 kHz output frequency, Omni International Omni-Ruptor 400.	1
Intermediate tip, titanium, 3/8" (9.5 mm) diameter, 4" length, 10 mL - 250 mL processing volume, Omni International OR-T-375.	1
Micro-tip, titanium, 5/32" (3.9 mm) diameter, 10.01" length, 350 µL -10 mL processing volume, Omni International OR-T-156.	1
Hood	
Hood, fume absorber, portable, 31.5x25" working space, 87 cu ft/min, Captair Labx. Request appropriate filter below.	1
Filter for Acid Vapors.	
Filter for Ammonia/Amines.	
Filter for Formaldehyde use.	
Filter for Organic Vapors.	
Hood, fume, 32" D x 48" W working area, installed in Bio Lab, Fisher Hamilton SafeAir.	2
Hood, vertical laminar flow workstation, bench model, interior dimensions 31" W x 23" D x 18" H, w/ HEPA filters, ISO 5/class 100, AirClean Systems AC600 Series, AC632LF.	2
Hood, vertical laminar flow workstation, bench model, tall, interior dimensions 31" W x 23" D x 27" H, w/ HEPA filters and UVtect Automatic Safety Controller, ISO 5/class 100, AirClean Systems AC600 Series, AC632TLFC.	1
Hood, vertical laminar flow workstation, bench model, interior dimensions 31" W x 23" D x 20" H, w/ HEPA filters, UVtect Automatic Safety Controller, and 254 nm short-wave UV light, ISO 5/class 100, AirClean Systems AC600 Series, AC632LFUVC.	1
Hood, laminar flow, Envirco Mac 10 HEPA, 2' x 4', 120 V, for Trace Metal Use.	2
Filter, HEPA for MAC 10, 9" thickness, standard filter, Envirco 69600S-001HAPXX (HEPA).	
Hood, Laminar Flow, Enclosure w/ Blower, LM Air Technology.	1
Hood, snorkel, portable, ceiling mounted, 3-joint, Alsident System 100, Model 100-10585-3-5.	3
Hot Plate/Stirrer	
Hot Plate/Stirrer, 7" x 7", 50 °C to 500 °C, digital temperature display, ceramic top, VWR VMS-C7.	1
Hot Plate/Stirrer, 7" x 7", 5 °C to 540 °C, digital temperature display, ceramic top, Barnstead/Thermolyne, Cimarec Model SP131325.	1
Stir Plate, 7" x 7", ceramic top, VWR/Henry Troemner LLC Model 620-S Standard, 12365-380.	1
Stir Plate, 10" x 10", ceramic top, Corning Model PC-610.	1
Stir Plate, 5" x 7", ceramic top, digital speed display, Corning Model PC-410D.	1

Ice Maker	
Ice maker - shaved ice - installed in Hydro Lab.	1
Incubator	
Incubator, lab, upright, lighted, low-temp, -10 °C to +44 °C (with lights on), -12 °C to +44 °C (with lights off), +/- 0.5 °C, 300 µmol/m ² /s, fluorescent lights, 37.2 cu ft interior space, 13.6 sq ft shelf space, Aft Dry Lab, Percival Model LT-41VLC8.	1
Incubator, lab, upright, lighted, low-temp, -10 °C to +44 °C (with lights on), -15 °C to +44 °C (with lights off), +/- 0.5 °C, 515 µmol/m ² /s, LED lights, 29.7 cu ft interior space, 10.8 sq ft shelf space, Aft Dry Lab, Percival Model LT-36VLC8.	1
Incubator, ice scoop for deck incubators, large, heavy duty, 30 inch handle, Frabill.	1
Incubator, ice scoop for deck incubators, small, 12" lightweight aluminum handle, Frabill.	1
Irradiance	
Irradiance sensor, scalar, quantum, for PAR measurement, handheld, w/ 1.9 cm diameter spherical irradiance collector, calibrated for use in water or air, digital output, w/ laptop and software, Biospherical Instruments QSL-2100.	2
Irradiance sensor, scalar, quantum, for PAR measurement, handheld, w/ 1.9 cm diameter spherical irradiance collector, calibrated for use in water or air, w/ meter, Biospherical Instruments QSL-100.	1
Light meter, digital, three-range: 0 to 200/2000/20,000 lux (0 to 20/200/2000 foot-candles), accuracy +/-3% of reading in two narrowest ranges; +/-5% of reading in widest range, max resolution 10 lux (1 foot-candle), General DLM2000.	1
Light Table	
Bench Light, UV-A, Spectroline X-15A.	1
Magnifier Lamp, 2X magnification, swing arm, Fisher Scientific 12-071-10.	1
Liquid Scintillation Counter	
Liquid Scintillation Counter, Perkin Elmer Tri-Carb B2910TR, w/ laptop and QuantaSmart software. Computer controlled, for detecting low activity alpha, beta and gamma radioactivity. If requested, you must also request a rad van under the Systems tab.	4
Rack Adapters, vented microtube holders, for 1.5 mL tubes, 11 mm diameter, Perkin Elmer 6013402. For use with racks for 20 mL scintillation vials.	300
Racks for 20 mL scintillation vials, each rack holds 12 vials.	32
Racks for 7 mL scintillation vials, each rack holds 18 vials.	57
Standards, quenched, 14C, set of 10, 5 mL, Perkin Elmer 6008402.	1
Standards, quenched, 3H, set of 10, 5 mL, Perkin Elmer 6008401.	1
Standards, unquenched, set of 3 (blank, 3H, 14C), 15 mL, Perkin Elmer 6008500A.	1
Microscope	
Cold Stage, for compound scope, used with slides, Instec, Inc., STC200, TS62.	3
Cold Stage, for dissecting scope, used with petri dishes, Instec, Inc., STC200, TS62.	1
Hematocytometer, 1/400 SQ MM, 1/10 MM deep, Spotlite B3175.	1

Illuminator, Dolan-Jenner Fiber-Lite 181-1, w/ 150 watt halogen lamp, EEG2823 dual gooseneck fiber optic light guides, LH-759 focusing lenses.	8
Illuminator, LED, 6 watt cool light, variable intensity, w/ dual 23-1/4" long gooseneck illuminators (3 watts each) and intensity control box, AmScope LED-6W.	4
Imaging, digital camera, Nikon, Coolpix 5000, w/ microscope adapters for Nikon Eclipse Ni-L, Nikon E800, Zeiss Axioskop 50, Zeiss Standard 25, Leica/Wild M3C, Nikon SMZ1270.	1
Imaging, digital camera, SLR, Canon, EOS 60D, w/ microscope adapters for Nikon Eclipse Ni-L, Nikon E800, Zeiss Axioskop 50, Zeiss Standard 25, Leica/Wild M3C, Nikon SMZ1270.	1
Speedlite, round head camera flash, 76 Ws output, rechargeable 2600 mAh Li-ion battery, 480 full power shots on one charge, maximum 1.5 second recycling time, 1/8000s high speed sync (HSS), 330 degrees rotation, 120+ degrees tilt, Godox V1-C, for use with Canon EOS 60D Digital SLR. Comes with 2 m long, TTL off-camera flash sync cord (PHOLSY), and dual hot shoe mount (Vbestlife).	2
Imaging, digital camera, high definition, 4k resolution, 8.0 Mp, w/ 1/1.8" Sony IMX334 CMOS sensor, VIEW4K, w/ microscope adapters for Leica/Wild M3C and Nikon SMZ1270.	2
Imaging, digital camera, Spot Insight Color Mosaic, 4.0 Mp, IN1420. Comes with computer, monitor and current software. Installed on Zeiss Axioskop 50.	1
Imaging, digital camera, Spot Insight Color Mosaic, 4.0 Mp, IN1420. Comes with computer, monitor and current software. Installed on Nikon E800.	1
Imaging, digital camera, Spot RT3 Slider, monochrome and color (-43 °C diff. cooling w/o IR filter), 2.0 Mp, RT2540. Comes with computer, monitor and current software. Installed on Nikon E800.	1
Imaging, digital camera, Spot Insight, color mosaic, 12 Mp, w/ Sony Pregius CMOS sensor, IN42C12IR. Comes with computer, monitor and current software. Installed on Nikon Eclipse Ni-L.	2
Imaging, digital camera, Spot RT, monochrome cooled (-45 °C differential cooling w/o IR filter), 5 Mp, w/ Sony Pregius CMOS sensor, RT39M5. Comes with computer, monitor and current software. Installed on Nikon Eclipse Ni-L.	2
Imaging, smart phone camera adapter, SnapZoom Universal Digiscoping Adapter.	2
Micrometer, stage, 0.01 mm, Mikro-Zubehor 3401 45.	1
Micrometer, stage, 0.01 x 100 = 1 mm (1 mm scale subdivided into 100 divisions of 0.01 mm), for reflected light, Graticules Ltd S78.	1
Micrometer, stage, 0.02 mm - 0.1 mm - 1.0 mm = 22 mm, Leica 13K27970.	1
Micrometer, stage, 0.02 mm - 0.1 mm - 1.0 mm = 25 mm (25 mm scale: 0-20 mm in 1 mm increments; 20-24 mm in 0.1 mm increments, 24-25 mm in 0.02 mm increments), Klarmann Rulings KR-812.	1
Micrometer, stage, 0.02 mm - 0.1 mm - 1.0 mm = 25 mm (25 mm scale: 0-20 mm in 1 mm increments; 20-24 mm in 0.1 mm increments, 24-25 mm in 0.02 mm increments), Klarmann Rulings KR-812-C (calibrated with Certificate).	1
Microscope, compound, brightfield, darkfield, DIC, epi-fluorescence, phase contrast, polarizing, Nikon Eclipse Ni-L.	2
Epi-Fluorescent Filter, DAPI, premium ET filter with sputtered coating, zero pixel shift and blocking, Nikon 96360, Chroma 49000.	2
Epi-Fluorescent Filter, EGFP (enhanced green fluorescent protein) (FITC/Cy2), premium ET filter with sputtered coating, zero pixel shift and blocking, Nikon 96362, Chroma 49002.	2
Epi-Fluorescent Filter, DsRed (TRITC/Cy3), premium ET filter with sputtered coating, zero pixel shift and blocking, Nikon 96364, Chroma 49005.	2

Epi-Fluorescent Filter, TRITC/Cy3 LP (Long Pass), AT filter, Nikon 96228, Chroma 19004.	2
Epi-Fluorescent Filter, mCherry, Texas Red, premium ET filter with sputtered coating, zero pixel shift and blocking, Nikon 96365, Chroma 49008.	2
Epi-Fluorescent Filter, DAPI/FITC/TRITC, premium ET filter with sputtered coating, zero pixel shift and blocking, Nikon 96383, Chroma 69000.	2
Epi-Fluorescent Filter, DAPI/Green/Orange #1 FISH, premium ET filter with sputtered coating, zero pixel shift and blocking, Nikon 70774913, Chroma 69013v2.	2
Eyepiece, CFI UW 10X/25 (field number: 25), wide-field eyepiece, Nikon MAK30105.	4
Objective, 2X/0.10, INF/0-0.17, WD = 8.5, Plan Apo, Nikon MRD70020.	2
Objective, 4X/0.20, INF/0-0.17, WD = 20, Plan Apo, Nikon MRD70040.	2
Objective, 10X/0.45, INF/0.17, WD = 4. Plan Apo, Nikon MRD70170.	2
Objective, 20X/0.80, INF/0.17, WD = 0.8, Plan Apo, Nikon MRD70270.	2
Objective, 40X/0.95, INF/0.11-0.23, WD = 0.21, Plan Apo, Nikon MRD70470.	2
Objective, 60X/1.42 Oil, INF/0.17, WD = 0.15, Plan Apo, Nikon MRD71670.	2
Objective, 100X/1.45 Oil, INF/0.17, WD = 0.13, Plan Apo, Nikon MRD71970.	2
Objective, 4X/0.13, INF/-, WD = 17.2, Plan Fluor, Nikon MRH00045.	2
Objective, 10X/0.30/Ph1/DL, INF/1.2, WD = 15.2, Plan Fluor, Nikon MRH20105.	2
Objective, 20X/0.45/Ph1/ADM, INF/0-2, ELWD (Extra Long Working Distance), WD = 8.2-6.9, Super Plan Fluor, Nikon MRH48230.	2
Objective, 40X/0.60/Ph2/ADM, INF/0-2, ELWD (Extra Long Working Distance), WD = 3.6-2.8, Super Plan Fluor, Nikon MRH48430.	2
Objective, 60X/0.70/Ph2/ADL, INF/0.1-1.3, ELWD (Extra Long Working Distance), WD = 2.6-1.8, Super Plan Fluor, Nikon MRH48600.	2
Microscope, compound, brightfield, darkfield, DIC, epi-fluorescence, phase contrast, polarizing, Zeiss Axioskop 50.	1
Epi-Fluorescent Filter, DAPI, Chroma/Carl Zeiss CZ702.	1
Epi-Fluorescent Filter, DAPI, Chroma/Carl Zeiss CZ709.	1
Epi-Fluorescent Filter, DAPI, Chroma/Carl Zeiss CZ902, installed on Zeiss Axioskop 50.	1
Epi-Fluorescent Filter, FITC, Chroma/Carl Zeiss CZ909, installed on Zeiss Axioskop 50.	1
Eyepiece, E-PL10X/20, (field number 20), for eyeglass wearers, Carl Zeiss 444232, installed on Zeiss Axioskop 50.	2
Filter, 18mm, green interference, for phase contrast, Zeiss 467859-9901.	1
Filter, 42mm, color balance, blue daylight, Zeiss 467851-0000, 467850-9901.	3
Filter, 42mm, heat dispersion, Zeiss 467828-0001, 467830-9902.	3
Objective, 10X/0.30/Ph1, INF/0.17, Plan Neofluar, Zeiss 440331, installed on Zeiss Axioskop 50.	1
Objective, 20X/0.50/Ph2, INF/0.17, Plan Neofluar, Zeiss 440341, installed on Zeiss Axioskop 50.	1
Objective, 40X/0.75/Ph2, INF/0.17, Plan Neofluar, Zeiss 440351, installed on Zeiss Axioskop 50.	1
Objective, 100X/1.30 Oil/Ph3, INF/0.17, Plan Neofluar, Zeiss 440481, installed on Zeiss Axioskop 50.	1
Reticle, diameter 26 mm, full crosshairs, Klarmann Rulings KR-301.	1
Reticle, diameter 26 mm, grid, 10 mm x 10 mm, 100 squares total, 1 mm x 1 mm each, top and left side of grid are numbered, Klarmann Rulings KR-406A.	2
Reticle, diameter 26 mm, scale 10 mm in 100 divisions (No. 0 thru 100), Klarmann Rulings KR-207A.	2

Stage, circular, rotating, Zeiss 453550.	1
Microscope, compound, brightfield, darkfield, DIC, epi-fluorescence, phase contrast (10X), polarizing, Nikon E800.	1
Epi-Fluorescent Filter, BLUE LP (Long Pass), Chroma 11001, installed on Nikon E800.	1
Epi-Fluorescent Filter, DAPI, Chroma 31000, installed on Nikon E800.	1
Epi-Fluorescent Filter, DAPI/FITC/TRITC, Nikon 96165, Chroma 61000v2.	1
Epi-Fluorescent Filter, FITC, Chroma 31001, installed on Nikon E800.	1
Epi-Fluorescent Filter, Texas Red, Nikon 96109M Y-2E/C, Chroma 31004.	1
Epi-Fluorescent Filter, TRITC(Rhodamine)/Dil, Chroma 31002, installed on Nikon E800.	1
Eyepiece, CFI UW 10X/25 (field number: 25), installed on Nikon E800.	2
Objective, 10X/0.30/PH1/DLL, INF/0.17, Plan Fluor, Nikon, installed on Nikon E800.	1
Objective, 20X/0.75/DIC M, INF/0.17, Plan Apo, Nikon, installed on Nikon E800.	1
Objective, 40X/0.95/DIC M, INF/0.11-0.23, Plan Apo, Nikon, installed on Nikon E800.	1
Objective, 60XA/1.40 Oil/DIC H, INF/0.17, Plan Apo, Nikon, installed on Nikon E800.	1
Objective, 100X/1.30 Oil/DIC H, INF/0.17, Plan Fluor, Nikon, installed on Nikon E800.	1
Reticle, diameter 27 mm, grid, 10 mm x 10 mm, 100 squares total, 1 mm x 1 mm each, top and left side of grid are numbered, Klarmann Rulings KR-406A.	1
Reticle, diameter 27 mm, scale, 10 mm in 100 divisions.	1
Microscope, compound, brightfield, epi-fluorescence, phase contrast, Zeiss Standard 25.	1
Epi-Fluorescent Filter, DAPI, Semrock DAPI-1160B-000, installed on Zeiss Standard 25.	1
Epi-Fluorescent Filter, FITC/Acridine orange, Zeiss 487709.	1
Epi-Fluorescent Filter, Rhodamine, Zeiss 487715.	1
Filter, 18mm, green interference, for phase contrast, Zeiss 467859-9901.	1
Filter, 42mm, color balance, blue daylight, Zeiss 467851-0000, 467850-9901.	3
Filter, 42mm, heat dispersion, Zeiss 467828-0001, 467830-9902.	3
Objective, 10X/0.25/Ph1, 160/-, A-Plan, Zeiss 460418, installed on Zeiss Standard 25.	1
Objective, 20X/0.45/Ph2, 160/0.17, Plan, Zeiss 460633, installed on Zeiss Standard 25.	1
Objective, 40X/0.65/Ph2, 160/0.17, Achromat, Zeiss 4454383, installed on Zeiss Standard 25.	1
Objective, 40X/0.65/Ph2, 160/0.17, Plan, Zeiss 460733, installed on Zeiss Standard 25.	1
Objective, 40X/0.75/Ph2 W, 160/-, for water, Achromat, Zeiss 4462856.	1
Microscope, stereo, dissecting, parallel-optics type optical system, zoom ratio 12.7:1, zoom range 0.63-8X (0.63X, 1X, 2X, 3X, 4X, 6X, 8X stops), total magnification with 10X eyepiece and 1X objective 6.3-80X, Nikon SMZ1270. Comes with P-DSL32 LED Diascopic Illumination Stand, 10X eyepieces and 1X objective (details below).	2
Base, P-DSL32 LED Diascopic Illumination Stand, w/post, Nikon MND51520, installed on scope.	2
Eyepiece, C-W10XB/22 (field number: 22), wide-field eyepiece, Nikon MMK30102, installed on scope.	4
Illuminator, Dolan-Jenner Fiber-Lite 181-1, w/ 150 watt halogen lamp, EEG2823 dual gooseneck fiber optic light guides, LH-759 focusing lenses.	8
Illuminator, LED, 6 watt cool light, variable intensity, w/ dual 23-1/4" long gooseneck illuminators (3 watts each) and intensity control box, AmScope LED-6W.	4
Objective, 1X, WF (wide field), WD = 70 mm, Plan Apo, Nikon MNH54100, installed on scope.	2
Microscope, stereo, dissecting, w/ 5 step (0.64X, 1.0X, 1.6X, 2.5X, 4.0X) magnification changer, Leica/Wild M3C. Comes with standard base, 10X eyepieces and 1.0X objective (details below).	2

Analyzer, rotating, 66mm diameter, Leica 10367929, for use with transmitted light base.	1
Base, standard, incident light base, w/ 320 mm post, Leica 424300, installed on scope.	2
Base, transmitted light base, for brightfield/darkfield, illuminated, w/ 320 mm post, Leica TL4000 BDFD, 10450124.	2
Eyepiece, 10X/21B (field number: 21), wide-field eyepiece for eyeglass wearers, Leica 445111, installed on scope.	4
Eyepiece, 16X/14B (field number: 14), wide-field eyepiece for eyeglass wearers, Leica 445301.	2
Eyepiece, 25X/9.5B (field number: 9.5), wide-field eyepiece for eyeglass wearers, Leica 445302.	2
Illuminator, Dolan-Jenner Fiber-Lite 181-1, w/ 150 watt halogen lamp, EEG2823 dual gooseneck fiber optic light guides, LH-759 focusing lenses.	8
Objective, 0.32X, WD = 297 mm, Leica 370759.	1
Objective, 1.0X, WD = 89 mm, PlanApo, Leica 445355, installed on scope.	2
Objective, 1.5X, WD = 49 mm, Leica 10422562.	3
Objective, 2.0X, WD = 27 mm, Leica 422561.	1
Reticle, scale, 12 mm x 120 divisions, full crosshairs, Leica 376119.	5
Vibration Free Slab/Platform, tabletop isolation platform, max 270 lbs @ 80 psi, 20" x 24" surface, Kinetic Systems Inc., Vibraplane Model 2210 Benchmate.	3
Vibration Free Table, Micro-g vibration isolation table, Technical Manufacturing Corp 63-533, installed in Microscope Room under Zeiss Axioskop 50.	1
Vibration Free Table, Micro-g vibration isolation table, Technical Manufacturing Corp 63-2708601, installed in Microscope Room under Nikon E800.	1
Oven	
Oven, forced air, +40 °C above ambient to +240 °C, uniformity +/- 0.9 °C @ 150 °C, ID 18.25" W x 19" D x 16.5" H, 4 cu ft, installed in Bio Lab, VWR 1350FM.	2
Oven, gravity convection, +5 °C above ambient to +200 °C, uniformity +/- 4.0 °C, ID 20" W x 19" D x 28" H, 6.1 cu ft, VWR 1326.	1
Oven, gravity convection, +40 °C to +260 °C, uniformity +/- 3 °C @ 100 °C, ID 19" W x 15" D x 18" H, 3.0 cu ft, 85 L, Thermo/Lindberg/Blue M GO1390A-1.	1
Oven, vacuum, +6 °C above ambient to +260 °C, uniformity +/- 3.5 °C, ID 12" W x 18" D x 12" H, 1.5 cu ft, 42.5 L, Thermo/Lindberg/Blue M VO1218C-1.	1
Oxygen Titrator	
Oxygen Titrator, Langdon automated amperometric. Comes as kit w/ burette and stepper motor, dual platinum titration electrode (Accumet 13-620-123), stir plate, Socorex bottle-top dispensers (0.25-2.0 mL, Calibrex 520.002; 1-10 mL, Calibrex 520.010; or equivalent), 1000 mL amber glass bottles, laptop and software, and other necessary items (please request chemicals under 'Chemicals' section)	2
Sample Flasks, glass, 125mL, calibrated, Pyrex 5400.	144
pH Meter	
pH Meter, portable, measures pH/mV/RmV/ORP/temperature, pH range -2.000 to 20.000, resolution 0.1/0.01/0.001 pH, 1-5 point calibration, automatic (w/ ATC probe) or manual temperature compensation, Thermo Scientific, Orion Star A221.	1

pH Electrode, pH/ATC triode, gel filled, pH range 0 - 14, BNC and Mini-DIN connectors, 3 meter cable, Thermo Scientific, Orion ROSS Ultra, 8107UWMMD. Temperature connector is compatible with the Orion Star A221 meter to provide automatic temperature compensation. Request buffers in Stocked Chemicals section: "Buffers, PH 4, 7 and 10".	2
pH Meter, benchtop, measures pH/mV/temperature, pH range 0.00 - 14.00, resolution 0.1, 0.01 pH, 1-2 point calibration, digital LogR technology allows temperature compensated measurements without separate ATC probe, Thermo Scientific, Orion 320, Basic PerpHecT LogR.	2
pH Electrode, combination, Sure-Flow, refillable Ag/AgCl, pH range 0 - 14, BNC connector, Thermo Scientific, Orion 9165BNWP. If used with the Orion320 meter, digital LogR technology provides temperature compensation. Request buffers in Stocked Chemicals section: "Buffers, PH 4, 7 and 10".	2
Pipettor	
Pipettor, adjustable volume, 0.2-2 µL, Gilson P2N.	1
Pipettor, adjustable volume, 0.5-10 µL, Eppendorf Research 10.	1
Pipettor, adjustable volume, 1-10 µL, Gilson P10, Gilson P10N.	8
Pipettor, adjustable volume, 2-20 µL, Gilson P20, Gilson P20N.	7
Pipettor, adjustable volume, 10-100 µL, Gilson P100, Gilson P100N, Eppendorf Reference 100.	6
Pipettor, adjustable volume, 20-200 µL, Gilson P200, Gilson P200N, Eppendorf Research 200.	6
Pipettor, adjustable volume, 200-1000 µL, Gilson P1000.	11
Pipettor, adjustable volume, 500-2500 µL, Eppendorf 4810/2244025-0, Autoclavable.	1
Pipettor, adjustable volume, 500-5000 µL, Eppendorf Research 5000.	1
Pipettor, adjustable volume, 1000-5000 µL, Gilson P5000.	7
Pipettor, adjustable volume, 1-10 mL, Gilson P10 mL, Eppendorf Research 10 mL.	4
Pipettor, repeater, digital, 1 µL-10 mL, Eppendorf Repeater Plus, 22260201, use with Combitip reservoir tips.	6
Pipettor, repeater, 2-5000 µL, Eppendorf 4780, 22260006, use with Combitip reservoir tips.	4
Pump	
Pump, aeration, aquarium air pump, assorted, with various sizes of air diffusing stones.	3
Pump, peristaltic, Masterflex L/S drive (motor and controller are one unit; request head below), variable speed, digital, 0.02 to 100 rpm, reversible, dispense by volume or time, accepts 4 pump heads, Masterflex 07523-90. Note that flow rate depends on drive rpm, pump head and tubing size.	1
Peristaltic Pump Head, Masterflex L/S Easyload II, for High-Performance Precision pump tubing, w/ adjustable occlusion, fits the following tubing sizes (flow rates in mL/min with 100 rpm drive): L/S 15: 0.033-170, L/S 24: 0.057-280, L/S 35: 0.077-380, L/S 36: 0.096-480, Masterflex 77201-62. Request L/S 24 PharMed BPT, opaque, autoclavable tubing in the Consumables and Supplies section: "Tubing"- "Masterflex"- "1/4" ID (size 24) for Masterflex L/S peristaltic pumps", Cole Parmer 06508-24.	25
Peristaltic Pump Head, Masterflex L/S Easyload II, for High-Performance Precision pump tubing, w/ fixed occlusion, fits the following tubing sizes (flow rates in mL/min with 100 rpm drive): L/S 15: 0.033-170, L/S 24: 0.057-280, L/S 35: 0.077-380, L/S 36: 0.096-480, Masterflex 77200-62. Request L/S 24 PharMed BPT, opaque, autoclavable tubing in the Consumables and Supplies section: "Tubing"- "Masterflex"- "1/4" ID (size 24) for Masterflex L/S peristaltic pumps", Cole Parmer 06508-24.	4

Pump, peristaltic, Masterflex L/S modular drive (motor and controller are separate; request head below), variable speed, 6 to 600 rpm, reversible, accepts 2 pump heads, Masterflex 07753-70. Note that flow rate depends on drive rpm, pump head and tubing size.	1
Peristaltic Pump Head, Masterflex L/S Easyload II, for High-Performance Precision pump tubing, w/ adjustable occlusion, fits the following tubing sizes (flow rates in mL/min with 600 rpm drive): L/S 15: 10-1000, L/S 24: 17-1700, L/S 35: 23-2300, L/S 36: 29-2900, Masterflex 77201-62. Request L/S 24 PharMed BPT, opaque, autoclavable tubing in the Consumables and Supplies section: "Tubing" -"Masterflex"-1/4" ID (size 24) for Masterflex L/S peristaltic pumps", Cole Parmer 06508-24.	25
Peristaltic Pump Head, Masterflex L/S Easyload II, for High-Performance Precision pump tubing, w/ fixed occlusion, fits the following tubing sizes (flow rates in mL/min with 600 rpm drive): L/S 15: 10-1000, L/S 24: 17-1700, L/S 35: 23-2300, L/S 36: 29-2900, Masterflex 77200-62. Request L/S 24 PharMed BPT, opaque, autoclavable tubing in the Consumables and Supplies section: "Tubing" -"Masterflex"-1/4" ID (size 24) for Masterflex L/S peristaltic pumps", Cole Parmer 06508-24.	4
Pump, peristaltic, Masterflex L/S precision process drive with integrated open-head sensor (motor and controller are one unit; request head below), variable speed, digital, 6 to 600 rpm, reversible, accepts 2 pump heads, Masterflex 07528-50. Integrated open head sensor stops the drive motor when pump head is opened; drive must be used with pump head model 77200-32 for this function to work. Note that flow rate depends on drive rpm, pump head and tubing size.	4
Peristaltic Pump Head, Masterflex L/S Easyload II, for High-Performance Precision pump tubing, w/ fixed occlusion, with open-head sensor, fits the following tubing sizes (flow rates in mL/min with 600 rpm drive): L/S 15: 10-1000, L/S 24: 17-1700, L/S 35: 23-2300, L/S 36: 29-2900, Masterflex 77200-32. Request L/S 24 PharMed BPT, opaque, autoclavable tubing in the Consumables and Supplies section: "Tubing"-Masterflex"-1/4" ID (size 24) for Masterflex L/S peristaltic pumps", Cole Parmer 06508-24.	4
Peristaltic Pump Head, Masterflex L/S Easyload II, for High-Performance Precision pump tubing, w/ adjustable occlusion, fits the following tubing sizes (flow rates in mL/min with 600 rpm drive): L/S 15: 10-1000, L/S 24: 17-1700, L/S 35: 23-2300, L/S 36: 29-2900, Masterflex 77201-62. Request L/S 24 PharMed BPT, opaque, autoclavable tubing in the Consumables and Supplies section: "Tubing"-Masterflex"-1/4" ID (size 24) for Masterflex L/S peristaltic pumps", Cole Parmer 06508-24. Note that this head does not support the open-head sensor function of the 07528-50 pump, but should still fit on that pump.	25
Peristaltic Pump Head, Masterflex L/S Easyload II, for High-Performance Precision pump tubing, w/ fixed occlusion, fits the following tubing sizes (flow rates in mL/min with 600 rpm drive): L/S 15: 10-1000, L/S 24: 17-1700, L/S 35: 23-2300, L/S 36: 29-2900, Masterflex 77200-62. Request L/S 24 PharMed BPT, opaque, autoclavable tubing in the Consumables and Supplies section: "Tubing"-Masterflex"-1/4" ID (size 24) for Masterflex L/S peristaltic pumps", Cole Parmer 06508-24. Note that this head does not support the open-head sensor function of the 07528-50 pump, but should still fit on that pump.	4
Pump, vacuum, oil-less, diaphragm, max pressure 60 psi, max vacuum 25.5" Hg, w/ gauges, Gast DOA-P104-AA, GAST DOA-P704-AA. Request 3/8" ID tubing in the Consumables and Supplies section: "Tubing" - "Rubber, Vacuum" - "3/8" ID, 7/8" OD, 1/4" wall, black", Cole-Parmer 96143-08.	13

Pump, vacuum, oil-less, piston, max pressure 100 psi, max vacuum unknown, w/ gauges, Gast 1HAB-25-M100X. Request 3/8" ID tubing in the Consumables and Supplies section: "Tubing" - "Rubber, Vacuum" - "3/8" ID, 7/8" OD, 1/4" wall, black", Cole-Parmer 96143-08.	1
Pump, vacuum, oil lubricated, rotary vane, max pressure 10 psi, max vacuum 26.0" Hg, w/ gauges, Gast 0523-V4A-G180DX. Request 3/8" ID tubing in the Consumables and Supplies section: "Tubing" - "Rubber, Vacuum" - "3/8" ID, 7/8" OD, 1/4" wall, black", Cole-Parmer 96143-08.	1
Pump, vacuum, hand-operated, 15 cc/stroke, w/o gauge, attains and holds vacuum of 25" Hg, fits 1/4" ID tubing (some tubing is supplied), Nalgene 6131-0010.	3
Pump, vacuum, hand-operated, 36 cc/stroke, w/ gauge, attains and holds vacuum of 25" Hg, fits 1/4" ID tubing (some tubing is supplied), Nalgene 6130-0020, 6132-0020.	6
Refractometer	
Refractometer, clinical, handheld, temperature compensated, Schuco 5711-2021.	1
Refractometer, salinity, handheld, temperature compensated, 0-160 ppt, Reichert-Jung (Leica) 10419.	1
Regulators	
CGA 346 for breathing air, double stage.	3
CGA 320 for Carbon Dioxide, double stage.	4
CGA 180 for carbon dioxide, single stage, for lecture bottle.	1
CGA 350 for hydrogen, double stage.	4
CGA 590 for industrial air, double stage.	13
CGA 580 for inert gases, nitrogen, helium, double stage.	14
CGA 326 for nitrous oxide, double stage.	1
CGA 540 for Oxygen, double stage.	2
CGA 510 for Propane, double stage.	4
Salinometer	
Salinometer, w/ tubing, stoppers, laptop and software, and other necessary items. Measurement range 0.004 to 76 mS/cm, 0.0001:1.15 conductivity ratio; accuracy +/- 0.003 equivalent PSU; resolution 0.0003 mS/cm @ 15 °C and 35 PSU, 0.0003 equivalent PSU. Guildline Instruments, Portasal, 8410A.	2
External Sample Pump, peristaltic, w/ tubing, Guildline Instruments, 84105.	4
Sample Bottles, 250 mL, square, glass, w/ caps and inserts.	288
Sealer	
Sealer, pouch/bag, multi-purpose, 10", Kapak Corp, 9062.	1
Shaker	
Shaker, orbital, 4 mm orbit, digital, 80 to 800 rpm, timer 1 - 599 min or continuous, 10" x 12" platform, IKA KS 130 Control.	3
Platform, wooden.	1
Shaker, orbital, 19 mm orbit, digital, 15 to 500 rpm, timer 1 sec - 160 hrs, 13" x 11" platform, VWR 3500 Advanced, 89032-096.	1
Platform, 13" x 11", universal, stainless steel, VWR 89027-702.	1

Platform, 13" x 13", w/ holders for 12 x 250 mL flasks, VWR 97003-618.	1
Platform, 13" x 13", w/ holders for 16 x 125 mL flasks, VWR 97003-616.	1
Sieve	
Sieve, 3" diameter, 25 µm mesh, No. 500, stainless steel.	2
Sieve, 3" diameter, 38 µm mesh, No. 400, stainless steel.	3
Sieve, 3" diameter, 63 µm mesh, No. 230, stainless steel.	1
Sieve, 3" diameter, 125 µm mesh, No. 120, stainless steel.	2
Sieve, 3" diameter, 150 µm mesh, No. 100, brass.	1
Sieve, 3" diameter, 212 µm mesh, No. 70, brass.	1
Sieve, 3" diameter, 250 µm mesh, No. 60, brass.	1
Sieve, 3" diameter, 250 µm mesh, No. 60, stainless steel.	1
Sieve, 3" diameter, 500 µm mesh, No. 35, stainless steel.	1
Sieve, 3" diameter, 1.00 mm mesh, No. 18, stainless steel.	2
Sieve, 3" diameter, 2.00 mm mesh, No. 10, stainless steel.	2
Sieve, 3" diameter, top and bottom, brass.	1
Sieve, 8" diameter, 25 µm mesh, No. 500, stainless steel.	1
Sieve, 8" diameter, 38 µm mesh, No. 400, stainless steel.	2
Sieve, 8" diameter, 63 µm mesh, No. 230, brass.	2
Sieve, 8" diameter, 63 µm mesh, No. 230, stainless steel.	2
Sieve, 8" diameter, 125 µm mesh, No. 120, brass.	1
Sieve, 8" diameter, 125 µm mesh, No. 120, stainless steel.	1
Sieve, 8" diameter, 150 µm mesh, No. 100, brass.	1
Sieve, 8" diameter, 250 µm mesh, No. 60, brass.	3
Sieve, 8" diameter, 250 µm mesh, No. 60, stainless steel.	1
Sieve, 8" diameter, 300 µm mesh, No. 50, stainless steel.	2
Sieve, 8" diameter, 425 µm mesh, No. 40, brass.	1
Sieve, 8" diameter, 500 µm mesh, No. 35, brass.	1
Sieve, 8" diameter, 600 µm mesh, No. 30, brass.	1
Sieve, 8" diameter, 859 µm mesh, No. 20, brass.	1
Sieve, 8" diameter, 1.00 mm mesh, No. 18, brass.	2
Sieve, 8" diameter, 1.18 mm mesh, No. 16, brass.	1
Sieve, 8" diameter, 2.00 mm mesh, No. 10, brass.	2
Sieve, 8" diameter, 2.36 mm mesh, No. 8, brass.	1
Sieve, 8" diameter, 3.35 mm mesh, No. 6, brass.	1
Sieve, 12" diameter, 1.0 mm mesh, No. 18, brass.	1
Spectrophotometer	
Spectrophotometer, Lambda 365+, UV/VIS, dual-beam optics, spectral bandwidth capability 0.5 to 20 nm, wavelength range 190 to 1100 nm, w/ computer, Perkin Elmer N4100022.	1
Cell changer, 8-position, water-jacketed (requires external bath for sample temperature control), for 10 mm pathlength cells, Perkin Elmer N4101006.	1
Cell, 10 mm pathlength, UV Quartz Suprasil, 3.5 mL, PTFE lid, Perkin Elmer B0631009.	1
Cell, 10 mm pathlength, UV Quartz Suprasil, 3.5 mL, PTFE stopper, Perkin Elmer B0631027.	1

Integrating Sphere, high sensitivity 50 mm transmission-reflectance accessory, spectral range 230~1100 nm (UV and visible), for measuring diffuse reflectance (specular component included – SCI), total transmittance or hemispherical transmittance, and performing color analysis. Recommended for solid color analysis. Perkin Elmer N4100219.	1
Integrating Sphere, powder cell holder kit, for reflectance measurement of paste and powder samples. Includes a powder cell, two quartz windows for trapping light, and two quartz caps for the white standard. Perkin Elmer N4101049.	1
Integrating Sphere, standard, white.	1
Spectrophotometer, USB UV/VIS absorbance spectrophotometer system (USB2000 Spectrometer with USB-ISS-UV/VIS light source and integrated 1 cm cuvette holder), 200-1100 nm, w/ laptop, Ocean Optics ChemUSB2-UV/VIS.	2
Cell Holder, single, adjustable 10-100 mm pathlength, accommodates filters up to 2 mm thickness, Ocean Optics CUV-VAR, no temperature control.	2
Cell Holder, single, cylindrical, 100 mm pathlength, temp controlled with additional water bath.	2
Cell Holder, single, square, 10 mm pathlength, filter slot accommodates filters up to 1/4" thickness, Ocean Optics CUV-UV, temp controlled with additional water bath requested separately.	2
Cell, 10 mm pathlength, Spectrosil Far UV quartz windows, 170 to 2700 nm, 1.4 mL volume, semi-micro, black masked, PTFE stopper, Starna Cells 29B-Q-10.	2
Cell, cylindrical long pathlength, 100 mm pathlength, Spectrosil quartz or equivalent windows, 170 to 2700 nm, 28.2 mL volume, PTFE stoppers (2 ea), Starna Cells 34-Q-100.	1
Cell, flow-through, 10 mm light path, Quartzglass Suprasil, 0.08 mL volume, Hellma Analytics 178.710.QS.	1
Cell, flow-through, 10 mm pathlength, Spectrosil Far UV quartz windows, 170 to 2700 nm, 0.420 mL volume, wide aperture, short window, black masked, Starna 583.65.65-Q-10/Z15.	2
Cell, rectangular, 100 mm pathlength, quartz, Far UV, 170 to 2200 nm, 7.0 mL volume, open top, PTFE lid, Spectrocell ML-3100.	2
Polystyrene Calibration Film, International Crystal Laboratories 0009-7676.	1
Thermometer	
Thermometer, analog, red spirit, -20 °C to +150 °C, 1 °C division, total immersion.	1
Thermometer, analog, green spirit, -20 °C to +110 °C, 1 °C division.	1
Thermometer, analog, blue spirit, alcohol, -20 °C to +110 °C, 1 °C division.	1
Thermometer, analog, blue spirit, kerosene, -20 °C to +110 °C, 1 °C division, 76 mm immersion.	1
Thermometer, analog, red spirit, kerosene, -100 °C to +50 °C, 1 °C division, total immersion.	1
Thermometer, analog, blue spirit, -10C to +260C, 1 °C division, 76 mm immersion, Fisherbrand 13-201-555.	1
Thermometer, analog, blue spirit, -100C to +50C, 1 °C division, 76 mm immersion, Fisherbrand 13-201-521.	1
Thermometer, analog, blue spirit, -20C to +110C, 1 °C division, 76 mm immersion, Fisherbrand 13-201-644.	2
Thermometer, analog, green spirit, -1C to +61C, 0.1 °C division, 76 mm immersion, H-B Envirosafe 20527, NIST Traceable.	2
Thermometer, analog, green spirit, -35C to +50C, 1 °C division, 76 mm immersion, H-B Envirosafe 20509, NIST Traceable.	1

Thermometer, digital platinum resistance, waterproof, -180 °C to +240 °C, 0.001 °C and °F resolution, measures in both °C and °F, Guildline 9540.	1
Thermometer, digital, K, waterproof, -200 °C to +1300 °C, 0.1 °C resolution, accuracy +/-0.3 °C, measures in both °C and °F, type K thermocouple, traceable to NIST Standards, Fisherbrand Traceable 15-078-186. Accepts all type K thermocouple probes.	4
Timer	
Timer, digital, 1 channel, 10 hour, 1 second resolution, 0.01% accuracy, traceable to NIST Standards, Fisherbrand Traceable 06-662-50.	5
Tissue Grinder	
Tissue grinder, 10 mL, Wheaton USA.	1
Torch Kit	
Torch, propane.	1
Vortex	
Vortex, various models. Fisher Scientific 232, variable speed; Scientific Industries, Genie 1, SI-0136, single speed; Scientific Industries, Genie II, G-560/S8223-1, variable speed.	4
Large Sample Set, for beakers, flasks, and large tubes, for Vortex Genie II. Consists of recessed platform w/ elastic bands, tube foam inserts for tubes w/ diameters from 9 mm to 37 mm. Scientific Industries H302.	2
LABORATORY AND SCIENCE VANS AND WALK-IN COOLERS	
Radioisotope Van	
Radioisotope Van #2. Designed for radioisotope research involving carbon (¹⁴ C) and tritium (³ H).	1
Radioisotope Van #4. Designed for radioisotope research involving carbon (¹⁴ C) and tritium (³ H).	1
Trace Metal Clean Van	
Trace Metal Clean Van #7. Contains a garage section for the deployment of a Trace Metal Clean rosette and a lab section for sample processing.	1
Walk-In Cooler (Constant Temperature Room)	
Constant Temperature Room, opens to main corridor and to Biolab, temperature to -10 °C +/- 1 °C, "Big Antarctica".	1
Constant Temperature Room, opens to main corridor, temperature to -10 °C +/- 1 °C, "Little Antarctica".	1