Purchasing and Receiving Laboratory Chemicals and Supplies

1. Scope

This document is a standard operating procedure (SOP) for purchasing and receiving laboratory supplies and chemicals. The SOP covers some of the rules and definitions for purchasing commodities and services from vendors. Refer to DEP Directive 300 for an overview of purchasing and related requirements.

2. Definitions

a. Blanket Purchase Order – an arrangement under which a purchaser contracts with a vendor to provide the agency's requirements for an item or a group of items or for a service, ordered on an as-needed basis. It prescribes the contract terms and the maximum amount of money that may be spent. No purchase may be divided for the purpose of evading the competitive bidding requirement. Blanket Purchase Orders may not exceed $35,000.

b. Emergency Purchase – a purchase necessitated by a sudden unexpected turn of events (e.g., acts of God, riot, fires, floods, accidents or any circumstances or cause beyond the control of the agency in the normal conduct of its business) where an immediate danger to the public health, safety or welfare or substantial loss to the state requires emergency action.

c. Invitation to Bid (ITB) – a written solicitation for competitive sealed bids, specifically defining the commodity, group of commodities, or contractual services for which bids are sought. The invitation to bid is used when the agency is capable of specifically defining the scope of work for which a contractual service is required or when the agency is capable of establishing precise specifications defining the actual commodity or group of commodities required. The title, date and hour of the public bid opening must be specified in the solicitation.

d. Minority Business Enterprise – any small business concern organized to engage in commercial transactions, which is domiciled in Florida, is at least 51 percent owned by a minority person(s), and whose management and daily operations are controlled by such a person(s).

e. Operating Capital Outlay (OCO) – equipment, fixtures, and other tangible personal property of a non-consumable and non-expendable nature, the value or cost of which is $1,000 or more and the normal expected life of which is one (1) year or more; and hardback-covered bound books, the value or cost of which is $400 or more.

f. Non-OCO - are consumable items such as chemicals, glassware, gloves, and office supplies.

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g. Single Source Purchase – a purchase of a commodity or contractual service that is available from only one source.

h. E-Quote - the sourcing system which is used for projects/purchases up to $35,000 to ensure all fairness in the purchasing of consumables and commodities. Although NOT statutorily required, only one quote is needed for purchases under $2,500 and two independent quotes are needed for purchases over $2,500.

3. Procedure for Purchasing OCO and Non-OCO items.

Purchases of commodities/contractual services with a value of $2,500 or less will be carried out using good purchasing practices that may include but are not limited to written quotations or written records of telephone quotations (DEP 55-315 (telephone/verbal quotes) forms are no longer in use). Purchases which exceed $2,500 but less than $20,000 require written quotes unless the item is on a state contract.

Please contact the purchasing agent to verify whether the items you plan to purchase are on the state contract.

Unit supervisors are responsible for ensuring that all supplies ordered are of sufficient quality and purity for the intended purpose. Laboratory SOPs and reference methods should be consulted when necessary. The laboratory maintains an inventory list of chemicals and supplies found to be suitable for the analyses commonly performed. The inventory of existing chemicals and supplies must be consulted prior to placing orders for routine supplies.

3.1 Obtain a blank *DEP Laboratories Purchasing Request (Prior Approval) and PCard Receipt Form* from the Laboratory's server (\\fldep1\dear\labs\lab5\Admin\Purchasing and PCARD forms-Admin), the purchasing agent or your supervisor.
3.2 Fill in vendor name, mailing address, telephone and contact person.
3.3 Verify if vendor is a registered minority vendor. A minority vendor shall be used if the commodity is available at a comparable price.
3.4 Fill in your name for the 'Requested by' field.
3.5 Enter catalog number, item description, and unit price and total price.
3.6 It is the requester's responsibility to identify the purchased items will meet the laboratory's analytical requirements for their specific uses as defined in appropriate methods, the method SOPs and the Quality Manual before submitting the purchase requisition.
3.7 State the justification for purchasing the item(s).
3.8 Sign your name and date the request form.
3.9 Submit the purchase request form to your supervisor for approval.

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4. Procedure for Receiving Purchased Chemicals from Vendors

4.1 Purchasing agent will check the packing list and the items purchased with the requested form to make sure items meet the requester's specifications. If all items are accountable in the packing list, purchasing agent will write the date received on the chemical containers and check to make sure that the chemicals will not expire within 3 months from the date purchased.

4.2 If the items don't match with the request forms, the purchasing agent will contact the vendor to clarify the order. If the chemical(s) will expire within the next 3 months, the purchasing agent will contact the appropriate supervisor to determine whether it can be used. If it cannot, the purchasing agent will contact the vendor to arrange a replacement.

4.3 The dry chemicals are then stored in a ventilated air-conditioned room. Solvents and acids are stored in solvent storage and acid storage rooms respectively.

4.4 Purchasing agent will enter the orders into the inventory program or contact the requester if the chemical(s) is to be stored in the requester's lab area.

Note: The Biology Program uses a different inventory system, and the orders are checked by the purchasing agent. Each group in Biology keeps track of their own inventory.

5. Procedure for Receiving Non-Chemicals Items from Vendors

5.1 Purchasing agent will check the vendor's packing list to verify the received items match with the purchase order.

5.2 If the items don't match, the purchasing agent will call the vendor to clarify the order.

5.3 Purchasing agent will note the date and time on the requested form, enter the orders into the inventory program or notify the appropriate staff that the items are in for picking up.

5.4 It is the requester's responsibility to verify the items purchased meet their intended uses and specifications including requirements for sensitivity and selectivity as determined by the requester and the methods for which the equipment is intended.

6. Specifications for Standards, Chemicals and Reagents

All standards, chemicals and reagents, including acids and organic solvents purchased by the lab need to meet specified standards of purity for their use in analytical procedures. When the purchase of standards, chemicals, reagents and all other supplies is initiated by lab personnel, senior lab managers review and approve all purchase requests only if the material ordered is of sufficient quality for the intended purpose. The bulk of the lab's chemicals and reagents are purchased from Thermo Fisher Scientific, the current contract

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supplier of chemicals for the State of Florida. A list of approved vendors in included in the appendix of this SOP.

Standards: All standards are procured from reputable, certified vendors supplying traceable chemical standards. Where possible, they are traceable to certified national or international reference standards from certifying bodies such as NIST or ASTM.

Chemicals and Reagents: Dry chemicals (solids), reagents and solvents ordered by the lab meet a range of purity grades depending on the analytical procedure for which they are employed. Details about the required purity of chemicals and reagents are specified in the lab's preparation and analysis SOPs. At a minimum, chemicals and reagents used in the lab conform to the Reagent Grade specification defined by the American Chemical Society (ACS). Table 1 includes a list of commonly used grades of chemicals and reagents used in the lab.

Table 1 Commonly Used Grades of Chemicals and Reagents

Chemical or Reagent	Grade / Purity
Dry Chemicals	ACS Reagent
Acids	ACS Reagent, Trace Metal Grade, Optima
Organic Solvents	ACS Reagent, HPLC Grade, Pesticide Grade, Optima

7. Storage of Standards, Chemicals and Reagents

Standards, chemicals and reagents are stored in the lab under conditions that maintain their integrity between arrival and use.

Standards: Standards are ordered by the lab on a just-in-time basis for use. Purchased standards are typically stored in the lab or in lab refrigerators or freezers following the manufacturer's guidelines for storage and shelf life.

Chemicals and Reagents: The laboratory has a climate-controlled repository for storing shelf-stable reagents and chemicals that are frequently used. These tend to be bulk chemicals or solvents that are consumed in moderate to large amounts that either have no expiration date or can be stored for extended periods (> 2-5 years) under ambient conditions. These chemicals are generally stored in their original shipping containers (cases or packages). Dry chemicals are stored in a ventilated air-conditioned room. Solvents and acids are stored in separate solvent storage and acid storage rooms respectively.

The laboratory maintains an electronic inventory of items in the repository, both chemical consumables and other non-perishable consumables such as gloves, glassware and sampling containers. When the quantity of chemicals or other supplies in storage drops below pre-set thresholds, the lab's inventory management software report indicates that additional supplies should be ordered.

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Some of chemicals (e.g., hydrogen peroxide that is light and/or temperature sensitive and has a limited shelf life), are also ordered on a just-in-time basis, similar to standards. They are stored, under refrigeration if necessary, following the manufacturer's guidelines.

8. Safety

8.1 When handling equipment and chemicals one must wear the appropriate safety equipment such as rubber gloves, safety eyewear, lab coat, and long pants.

8.2 If any doubts arise in the handling of chemicals, lab personnel should consult the Laboratory's *Chemical Hygiene Plan & Safety Manual* for proper procedures.

Appendix of Changes

03/10/2020 Added an appendix of approved vendors of lab supplies and services.

Appendix: Approved Vendors, 2015 – Present

Vendor/Supplier	Biology	Chemistry	Scientific Services and Support	Notes
AB Sciex		X		a, c
Abraxis		X		b
Absolute Standards		X	X	b
AccuStandard	X	X		b
AEL	X			f
Affinisep, USA, LLC		X		a
Agilent Technologies	X	X	X	a, c
Air Tech Inc.			X	d
Airgas			X	d
Alfa Aesar		X		b
ALS Environmental	X	X	X	f
Analytical West Inc.		X	X	a
Applied Research			X	d
Aqua Solutions		X		a, c
Aquatic Indicators	X			b
Artel, Inc	X			a, c
ASTM		X		e
Atlas Copco			X	d

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Vendor/Supplier	Biology	Chemistry	Scientific Services and Support	Notes
Beckman	X			a, c
Benchmark	X			b
Big Bend Restaurant Supply	X			d
BioQuip Products	X			b, c
Brown's Refrigeration	X		X	d
Burgener		X		a
Calico			X	d
Cambridge Isotope Laboratories		X		b
Carolina Biological Supply	X			b
CBG BioTech	X			c
CDN Isotopes		X		b
CDW Government			X	d
Chem Service Inc.		X		b
Chiminfo Software, Inc		X		d
Cobblestone			X	d
Cole-Palmer		X		a
Component Source			X	a
CPI International		X		a
Crescent Chemical Co.		X	X	b
Dade Paper Company	X			a
Dell Marketing			X	d
Electrical Services of Tallahassee			X	d
Elemental Scientific		X		a, c
Environmental Express		X	X	a, c
Environmental Resource Associates	X	X	X	b
Enzo Life Sciences, Inc		X		b
ERD	X			
Eurofins Genomics LLC	X			a, b
Eurofins Test America	X		X	f
Evoqua			X	d
Exaxol		X		b
FDOH			X	e
FedEx			X	e
Florida Spectrum	X			f
Flowers Laboratories	X			f
Fluke Corporation	X			c
General Building Maintenance			X	d
Georgia Valve & Fitting		X		d
Gilmore Services		X		e

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Vendor/Supplier	Biology	Chemistry	Scientific Services and Support	Notes
Grainger	X	X	X	a, c, d
Greenwater Laboratories	X			f
Hach		X		a, b, c
High Purity Standards		X	X	b
Hydrosphere	X			b
Idexx Laboratories	X			a
Inorganic Ventures		X	X	b
Integrated DNA Tech	X			a, b
Interstate Fire			X	d
IVG Invitrogen Corporation	X			a, b
Kelly Brothers Fabrication		X		d
Life Tech	X			
Lowes		X		d
MAC Papers			X	d
MadgeTech	X			c
ManSci Inc.		X	X	c
Marinco Bioassay Laboratory	X			b
Martin Microscopes	X			a, c
Masters Company	X			a
Mesa Monitoring		X		c, d
Mettler Toledo		X		c
Micro Optics of Florida	X			c
Milestone Inc.		X	X	a, c
Millipore Sigma	X	X	X	a, b
MoldPro, Inc		X		a
National Leak Test Center			X	d
National Research Council Canada		X		b
NIST		X		b
Northgate			X	d
O2Si		X		b
Occupational Healthy Dynamic			X	d
Office Depot	X	X	X	d
OI Analytical		X		a, c
Omicron Scientific		X	X	a
Online Labels			X	d
Organic Standard Solutions International		X	X	b
Organomation		X		c
PACE Analytical	X		X	f
Pentair Aquatic EcoSys	X			a, c

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Vendor/Supplier	Biology	Chemistry	Scientific Services and Support	Notes
Perkin Elmer	X	X	X	a, c
Phenomenex		X		a
PhycoTech Inc	X			f
Presidio			X	d
Publix	X			d
Qiagen Inc	X			a, b
RDS Drywall & Acoustics			X	d
Restek Corporation		X	X	a, b
Sanders Laboratories	X			f
SCP Science		X		a
Seal Analytical		X	X	a, c
Secure-Tek Systems		X		d
Shamrock			X	a
Shepherd Technical Services			X	e
Shimadzu Scientific Instruments Inc.		X	X	a, c
Short Environmental Laboratories	X			f
Southeast Solutions			X	d
Standard Methods		X		e
Staples		X	X	d
Steris				c
Strem		X		b
Suncom			X	d
TCI America		X		b
Tekran Instruments		X		a, c
Teledyne Tekmar		X	X	a, c
TFS Fisher Sci Atl	X			a, b
The Home Depot		X		d
The NELAC Institute (TNI)		X		e
Thermo Electron		X	X	c
Thermo Fisher Scientific	X	X	X	a, b, c
Toronto Research Chemical		X		a, b
Uline			X	a
United Chemical Technologies (UCT)		X		a
University of West Florida	X			f
UPS			X	e
VWR International	X	X		a
Water Spigot	X			
Waters Corporation		X	X	a, c
Watt's Cooling, Heating & Plumbing			X	d

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Vendor/Supplier	Biology	Chemistry	Scientific Services and Support	Notes
Wellington Laboratories		X		b
Wilt Industries		X		c
Xylem		X		a, c

a: Lab supplies and consumables (solvents, reagents, glassware, plasticware, GC & HPLC columns etc.)

b: Standards and organisms (WETT)

c: Instruments and instrument service contracts

d: Lab Infrastructure services and supplies

e: Transportation, documentation and other services

f: Outsourcing contractor for analytical services

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