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 Lab adheres to the rules and definitions for purchasing for the Department. Reference Guide for State Expenditures

2. Terms to know when purchasing for Lab

- Perquisites - those things, or the use thereof, or services that confer on the officers or employees receiving them a benefit that is in the nature of additional compensation, or that reduce to some extent the normal personal expenses of the officer or employee receiving the same. The term includes, but is not limited to, such things as quarters, subsistence, utilities, laundry services, medical service, and the use of state-owned vehicles for other than state purposes.

- Property Tags - The Finance and Accounting Property Section will assign identification numbers (Property Tags) for all property items that are capitalized. Please see: https://www.floridadep.net/resources/capitalization-guidelines

- Purchasing Card (P-Card) - restricted use, non-revolving credit card that is issued to an Accountholder by the Contractor, is controlled by the Card Account created by the Scoped Administrator and which creates a liability against an Agency's Corporate Account.

- State Term Contract - a term contract that is negotiated and executed by the Department of Management Services and that is used by agencies and eligible users pursuant to s. 287.056, F.S.

- Works – an internet-based application hosted and maintained by Bank of America (the State of Florida purchasing card provider). The application is used by State agencies to administer card maintenance and transaction approval with daily file interchanges to FLAIR.

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. When a purchase request is received, you first need to determine whether the item is available on a state contract. If so, you may proceed with the purchase per the terms of the contract. If not, the cost of the item will determine what steps need to be taken.

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If the cost of the order exceeds $2,500.00, you will need at least two quotes from two different vendors unless the item is a single source item (meaning it cannot be purchased from any other vendor). If it is a single source item, you will need to follow the Single Source Process.

Orders should be placed through MFMP (MyFloridaMarketPlace Next Gen), however, the p-card may be used for one-time purchases under the p-card limit of $5,000.00.

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 of chemicals and supplies found to be suitable for the analyses commonly performed in InFlow Cloud (inventory software). The inventory of existing chemicals and supplies must be used prior to placing orders for routine supplies.

It is the requester's responsibility to ensure 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 their request. The requester should also provide a justification for the purchase.

A list of approved vendors of laboratory supplies and services can be found in the appendix at the end of this document.

4. Procedure for Receiving Purchased Chemicals from Vendors

4.1 The stockroom custodian will check the packing list and ensure the items on the packing list match the items received If all items are accounted for in the packing list, the stockroom custodian will provide the packing list to the purchasing agent for use in receiving the items in MFMP and processing the invoice. The stockroom custodian 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 Stockroom custodian will enter the orders into InFlow Cloud or contact the requester if the chemical(s) is to be stored in the requester's lab area.

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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 The stockroom custodian will check the vendor's packing list to verify the received items match with the packing list. The stockroom custodian will provide the packing list to the purchasing agent. If the items don't match, the stockroom custodian will notify the purchasing agent who will call the vendor to clarify the order.

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

5.3 The stockroom custodian will note the date and time on the packing slip, enter the orders into InFlow Cloud or notify the appropriate staff that the items are in for picking up.

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 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. Standards typically have manufacturer expiration dates printed on the container label or in the certificate of analysis (COA).

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.

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If a chemical or reagent container and its certificate of analysis have no explicit expiration date, then,

(a) dry inorganic and organic solids are assigned an expiration date ten years from the day they were received in the lab;

(b) all concentrated inorganic acids and organic solvents are assigned an expiration date five years from the day they are received in the lab;

(c) all other liquid reagents are assigned an expiration date five years from the day they are received in the lab;

(d) shorter expiration dates than the ones listed above may be assigned based on historical experience and the discretion of the supervisor. They are documented in the applicable SOPs.

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 (InFlow Cloud), 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.

9. References:

9.1 https://www.floridadep.net/resources/next-gen-mfmp

9.2 https://www.floridadep.net/resources/purchasing-card

9.3 https://www.floridadep.net/resources/property

Appendix of Changes

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

08/31/2021 Updated the appendix of approved vendors.

11/28/2023 Updated procedures and appendix of approved vendors.

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Appendix: Current Approved Vendors

Vendor/Supplier	Biology	Chemistry	Scientific Services and Support	Notes
A Wright Welding			X	d
AB Sciex		X		a, c
Absolute Standards		X	X	b
AccuStandard	X	X		b
Affinisep, USA, LLC		X		a
Agilent Technologies	X	X	X	a, b, c
AGS Scientific Inc.		X		a, c
Air Tech Inc.			X	d
Airgas			X	d
ALS Environmental		X	X	f
Alfa Aesar		X		b
Amazon			X	a, d
Antylia Scientific	X	X		a
Analytical West Inc.		X	X	a
Applied Research			X	d
Aqua Solutions		X		a, c
Aquatic Indicators	X			b
Aquatic Biosystems	X			b
Artel, Inc	X			a, c
ASTM		X		e
Atlas Copco			X	d
Beckman	X			a, c
Benchmark	X			f
Big Bend Restaurant Supply	X			a
BioQuip Products	X			a
Brown's Refrigeration	X		X	d
Burgener		X		a
Calico			X	a
Cambridge Isotope Laboratories		X		b
Capital Flooring			X	d
Carolina Biological Supply	X			a
CBG BioTech	X			a, c
CDN Isotopes		X		b
CDW Government			X	g
Chem Service Inc.		X		b
Chiminfo Software, Inc		X		d
Cobblestone			X	a

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Vendor/Supplier	Biology	Chemistry	Scientific Services and Support	Notes
Cole-Palmer	X	X		a
Component Source			X	g
CPI International		X		a
Crescent Chemical Co.		X	X	b
Culligan			X	c, d
Dade Paper Company	X			d
Dell Marketing			X	g
Digital River			X	g
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
Eurofins Genomics LLC	X			b
Eurofins Environmental Testing Southeast, LLC	X		X	f
Evoqua			X	d
Exaxol		X		b
Fast Reports			X	g
FDOH			X	e
FedEx			X	e
Fire Professionals of Tallahassee			X	d
Florida Spectrum	X			f
Fluke Corporation	X			c
General Building Maintenance			X	d
Georgia Valve & Fitting		X		d
Getinge USA Sales, LLC		X		a, c
Gilmore Services		X		e
Glass Service Center of Tallahassee			X	d
Glastron		X		a
Gold Standard Diagnostics		X	X	b
Grainger	X	X	X	a, c, d
Greenwater Laboratories	X			f
Hach		X		a, b, c
Harrington Industrial Plastics			X	d
High Purity Standards		X	X	b
Idexx Laboratories	X			a, b
InFlow Inventory (Archon Systems)			X	e, g
Inorganic Ventures		X	X	b

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Vendor/Supplier	Biology	Chemistry	Scientific Services and Support	Notes
Integrated DNA Tech	X			b
Interstate Fire			X	d
IVG Invitrogen Corporation	X			c
Keith Lawson Services			X	d
Kelly Brothers Fabrication		X		d
Kelly Brothers Sheet Metal, Inc.			X	d
Konica Minolta			X	e
Kyocera			X	e
LGC Standards		X		b
Life Technologies Corporation	X			c
Lowes		X	X	d
MAC Papers			X	d
MadgeTech	X			c
MANTECH (USA)		X	X	c
Marinco Bioassay Laboratory	X			b
Marpan Supply Co., Inc.			X	d
Martin Microscopes	X			a, c
Masters Company	X			a
Mathers Electric			X	d
Mesa Laboratories	X			c
Mesa Monitoring	X	X		c, d
Mettler Toledo		X		c
Mettler Toledo Rainin LLC		X		a
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	a
Nova Tech	X			c
O2Si		X		b
Occupational Healthy Dynamic			X	d
Office Depot	X	X	X	d
OI Analytical		X		a, c
Omicron Scientific		X	X	a
OMS (Oregon Manufacturing Support)		X		a
Online Labels			X	d

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Vendor/Supplier	Biology	Chemistry	Scientific Services and Support	Notes
Organic Standard Solutions International		X	X	b
Organomation		X		c
PACE Analytical			X	f
Pentair Aquatic EcoSys	X			a
Perkin Elmer	X	X	X	a, c
Petsmart	X			a
Pfaltz & Bauer		X		b
Phenomenex		X		a
Phoenix Fire Protection			X	d
PhycoTech Inc	X			a
Publix	X			a, d
Pye Barker Fire & Safety			X	d
Qiagen Inc	X			a
RDS Drywall & Acoustics			X	d
Reliable Paper Inc.	X			a
Restek Corporation		X	X	a, b
Retail Resource			X	d
Sanders Laboratories	X			f
Scott Burnett Inc.			X	d
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
Siemens			X	d
Sigma Aldrich Inc.		X		a
Southeast Solutions			X	g
Spex Certiprep		X		b
Standard Methods		X		e
Staples		X	X	d
Steris				c
Strem		X		b
Sunbelt Rentals			X	d
Suncom			X	d
Target	X			a
TCI America		X		b
Teledyne Tekmar		X	X	a, c

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Vendor/Supplier	Biology	Chemistry	Scientific Services and Support	Notes
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
The Shoe Box			X	e
Thomas Scientific Holdings Inc.	X			c
Toronto Research Chemical		X		a, b
Uline			X	a
Unifirst			X	e
United Chemical Technologies (UCT)		X		a
University of West Florida	X			f
UPS			X	e
US Plastics			X	a
VWR International	X	X		a, d
Walmart			X	d, e
Water Environment Federation			X	b, g
Waters Corporation		X	X	a, c
Watt's Cooling, Heating & Plumbing			X	d
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

g: Computer supplies and software

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