Standard Operating Procedure for 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 from vendors, registered minority businesses and state contract vendors. Refer to DEP Directive 300 for explicit details regarding purchasing and related requirements. This SOP is not intended to cover all aspects and details of the purchasing process but instead provides a broad overview.

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 into two or more purchases for the purpose of evading the competitive bidding requirement, and each purchase made under a blanket purchase order must be of the kind that could be made without competitive bidding if there were no blanket purchase order.

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 – 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 minority person, and whose management and daily operations are controlled by such persons.

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 $250 or more.

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f. Non-OCO - are consumable items such as chemicals, glassware, gloves, and etc. These items can be purchased from state contract vendors, minority vendors, and non-state contract vendors.

g. Single Source Purchase – a single source purchase is the 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 over $2,500 as well as purchases/projects over $35,000 to ensure all fairness in the purchasing of consumables and commodities.

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. Purchases which exceed $2,500, but less than $20,000 are required to go through the E – Quote system unless the item is on a state contract. Purchases of commodities with a dollar value of more than $20,000 but not exceeding $35,000 also are required to go through the E-Quote System. Specifications will be furnished to all companies from whom written quotations are to be attached to the requisition form and submitted to the Purchasing Section for issuance of the purchase order.

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 purchasing request form from 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 Enter catalog number, item description, and unit price and total price.
3.5 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.
3.6 State the justification for purchasing the item(s).
3.7 Sign your name and date the request form.

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3.8 Submit the purchase request form to your supervisor for approval.
3.9 Supervisors will check the request form and e-mail it to Purchasing Agent.
3.10 Purchasing Agent will determine if the items can be purchased using the State P-card or by regular Purchase Order.

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.
4.2 If the items don't match with the request forms, the purchasing agent will contact the vendor to clarify the order.
4.3 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.
4.4 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.
4.5 Purchasing agent will input the orders into the inventory program or contact the requester if the chemical(s) is to be stored in requester's lab area.

Note: The biology section uses a different inventory program, and the orders are checked by biology's purchasing agent (Frances). Each group in biology keeps track of their own inventory.

5. Procedure for Receiving Non-Chemicals Items From Vendors

5.1 All purchased items must be checked-in by purchasing agent.
5.2 Purchasing agent will check the vendor's packing list to verify the received items match with the purchase order.
5.3 If the items don't match, the purchasing agent will call the vendor to clarify the order.
5.4 Purchasing agent will note the date and time on the requested form, input the orders into the inventory program or notify the "requester" that the items are in for picking up.
5.5 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

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chemicals and reagents are purchased from Thermo Fisher Scientific, the current contract supplier of chemicals for the State of Florida.

Standards: All standards are procured from reputable, certified vendors supplying traceable chemical standards. The standards 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 in 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 consumed in the lab conform to the Reagent Grade specification defined by the American Chemical Society. 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 at the lab.

Standards: Standards are ordered by the lab on a just-in-time basis for use in the lab. Since standards have shelf lives that range from six months to two years, they are generally used immediately, or shortly after arrival in the laboratory. Purchased standards are typically stored in the lab or in lab refrigerators or freezers following the manufacturer's guidelines for storage.

Chemicals and Reagents: The lab has a climate controlled, storage repository for storing shelf-stable reagents and chemicals that are frequently used by the laboratory. These tend to be bulk chemicals or solvents that are consumed in moderate to large volumes 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

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below pre-set thresholds, the lab's inventory management software triggers the purchase of a 2-month supply of these chemicals or supplies.

A small sub-set of chemicals such as hydrogen peroxide that are light and/or temperature sensitive and have limited shelf lives, are also ordered on a just-in-time basis, similar to standards. They are stored under refrigeration following the manufacturer's guidelines.

8. Safety

8.1 When accepting equipment and chemicals one must wear the appropriate safety equipment such as rubber gloves, safety eyewear, lab coat, and long pants. Do not handle any equipment and chemicals with bare hands.

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

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