

Ref: SPMS/SOP/13.0	Date of issue: 30 May 2019	Next review date: 30 May 2021
Title: SOP on Chemical Purchasing and Inventory Control		
Audience: All NTU Staff and Students who are users of SPMS laboratories		

1. Aim

This SOP defines the process of purchasing and controlling the inventory of chemicals in SPMS. All staff and students in SPMS shall adhere to the process to ensure that all chemicals used in SPMS are tracked and controlled according to the requirements stipulated.

2. Scope

This SOP shall cover the process of inventory control of chemical movement starting from incoming to the exit (disposal) in SPMS premises. Incoming chemicals shall include from new purchases, transferred from other schools or departments, samples from collaborators or suppliers, etc.

3. Definitions

- 3.1 **ARIBA system** is NTU's e-procurement system.
- 3.2 **CBC Chemical Store** is the one-stop receiving store for all incoming chemicals and lab consumables delivered to SPMS.
- 3.3 **CBC Store Administrator** refers to the store personnel who oversee the CBC chemical store.
- 3.4 **SPMS Online Chemical Inventory System (OCIS)** is an online system which users can order common chemicals from the CBC store.
- 3.5 **NSS Procurement** refers to NTU Shared Services Procurement Office who administer the procurement process in NTU.
- 3.6 **Safety Data Sheet (SDS)** is a document that provides information on the properties of hazardous chemicals and how they affect health and safety in the workplace.
- 3.7 **Verifier** in this document refers to the appointed person-in-charge of verifying if a chemical is regulated and need a license/permit to possess or handle prior to purchase or bring in.

4. Responsibilities

4.1 Principle Investigator (PI)

4.1.1 to ensure that his/her staff and students inventorize the chemicals purchased for the group and also regularly update the movement of the chemicals in the group's tracking sheet;

4.2 Requestor shall

4.2.1 ensure controlled items are marked as controlled items for verification in ARIBA system;

4.2.2 check to make sure they are not exceeding the MAQ set for their lab before purchasing the chemicals;

4.2.3 ensure the school has the necessary licenses to purchase the chemical by checking with the safety officers.

4.3 Verifier shall

4.3.1 check the chemical request put up to ARIBA system for license requirement, availability and limit prior to the release of order;

4.3.2 release the order if the necessary license is available and within licensing limits;

4.3.3 hold the order if the license is not available, notify requestor and SPMS Safety Officers to process the required license/permit.

5. Request of Common Chemicals/Gases

5.1 The CBC store administrator shall maintain the accounts of the PIs in the system.

5.2 SPMS staff may request for common chemicals/gases from the CBC Chemical Store via the SPMS Online Chemical system (OCIS), the request will be chargeable from respective PIs' research fund.

5.3 The system will send an email to the respective PI for approval.

5.4 Once approved, the requestor shall print the order form and bring to the CBC chemical store for collection.

5.5 The CBC store administrator shall check the form against the system for approval and release the chemicals.

- 5.6 The CBC store administrator shall generate the monthly invoices for the PIs and send to them for approval.
- 5.7 Once approved, the CBC store administrator shall send the invoice to SPMS Finance.

6. Chemical purchase via NSS Procurement System

- 6.1 SPMS staff may search the online catalogue for the chemicals they wish to purchase or request for a quotation through external vendors for their chemicals.
- 6.2 The purchase request shall be put up via the ARIBA system.
- 6.3 If the chemical being purchased is a controlled item, the requestor shall indicate that it is a "Controlled item" and the request will be routed to the Verifier for license and quantity verification.
- 6.4 If the required license is available and within quantity limits, the purchase will be released for processing to the vendor.
- 6.5 If the required license is not available, the verifier will inform the requestor and the purchase will be put on hold until a license is obtained.
- 6.6 The Purchase Order will be issued by the NSS Procurement Team.
- 6.7 All chemicals purchased shall be delivered to CBC Chemical Store for receiving except for Laboratories located in PAP.
- 6.8 The requestor will be notified by email for chemical collection at CBC Chemical Store.
- 6.9 SDS will be provided by the vendor; store admin shall pass the SDS to the requestor together with the chemicals upon collection.

7. Other Chemical Requisition

- 7.1 Incoming chemicals NOT from acquisition through purchasing route, such as chemicals transferred from other schools and samples from collaborators or vendors, shall be with the SPMS Safety Officers for required licenses before being brought in.
- 7.2 If the license is not available, the chemical cannot be brought in to SPMS until the license is obtained.

- 7.3 If the required license is available and within license limits, the chemicals shall be updated into the group's inventory list.

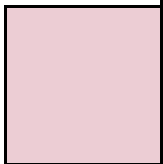
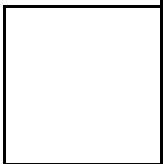
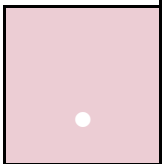
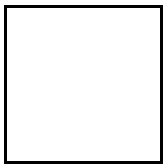
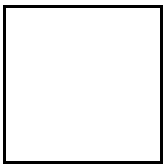
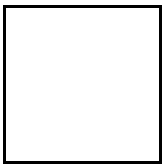
8. Chemical inventory

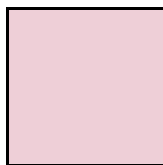
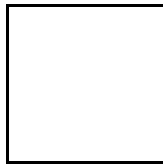
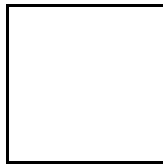
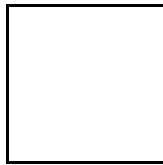
- 8.1 All groups are required to keep an inventory of the chemicals in possession.
- 8.2 This inventory should indicate at minimum the chemical name, quantity and be categorized into Petroleum & Flammable Materials (PFM), Hazardous Substances (HS), Explosive Precursors (EP) or Chemical Weapons Convention (CWC).
- 8.3 The inventory list shall be updated whenever a chemical is added, used up or disposed of with the exception of daily-use chemicals (i.e. chemicals that are bought and used up within a week do not need to be added and taken off the inventory list).
- 8.4 SPMS Safety Committee shall request the declaration of the inventory semi-annually.

9. Disposal of Chemical

- 9.1 All used chemical bottles and chemical waste shall be disposed of through licensed Toxic Industrial Waste (TIW) Collector.
- 9.2 The generated waste shall be segregated and stored in waste carboys and labeled with an appropriate waste label. The waste carboys and labels can be collected from the CBC Chemical Store. Some examples of the common waste labels are shown in Appendix 1.
- 9.3 All used empty chemical bottles and chemical waste shall be sent to the CBC Chemical Store waiting for TIW collector for collection.
- 9.4 For waste cylinders, a quotation should be sought from the TIW collector and disposal arranged by the lab user.
- 9.5 Reactive waste should be handled properly and killed by the lab users in advance of sending it to CBC store.
- 9.6 The group's inventory list shall be updated prior to transferring the empty chemical bottles to the CBC Chemical Store.
- 9.7 Proper procedures for transporting chemicals shall be adopted when transferring the chemicals to the CBC Chemical Store.
- 9.8 All hazardous waste disposed from the School shall be tracked and documented, inclusive of the consignment notes and NEA's e-tracking system fulfillment.

APPENDIX 1: Examples of Waste labels

NTU SPMS	Liquid Chemical Waste - Non-Halogenated Waste	
PI Name:		
Location:		
		
		

NTU SPMS	Liquid Chemical Waste - Halogenated Waste	
PI Name:		
Location:		
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Version History

This Table below reflects the summary of changes made to the document. The full change information is indicated with yellow highlight in the document content.

Revision	Section	Details of Change	Document Author	Effective Date	Approved
1.0	NA	Initial Release	Vijitha Peiris	30-May-2019	Assoc. Prof. Rei Kinjo

