

Document Authorization:

	Name	Date	Signature
Owner	YueWei Zhao	20Jan2023	
Operation Management	Baozhong Zhao	20Jan2023	
Quality Assurance	Xibo Li	20Jan2023	

Changes from previous version:

Section	Summary of Changes	Change Control Number
ALL	1. New document	

1. PURPOSE

The purpose of this document is to describe the requirements for management of laboratory regulated and non-regulated waste.

2. SCOPE

This SOP applies to the waste disposal requirements of the Synoligo laboratory.

3. INTERNAL REFERENCES

Document ID	Title

4. EXTERNAL REFERENCES

Document ID	Title

5. RESPONSIBILITIES

Job Function and/or Department	Responsibility
All Personnel	It is the responsibility of all employees who generate regulated waste to comply with this procedure.

6. DEFINITION

Term	Definition
EH&S	Environmental Health and Safety
PPE	Personal Protective Equipment
Regulated Waste	Universal, hazardous and biohazardous waste
SDS	Safety Data Sheets

7. PROCEDURE

7.1. General

7.1.1. All employees are responsible for handling regulated waste according to Synoligo Regulated Waste Management Plan.

7.1.2. The laboratory produces different kinds of regulated waste. Correct disposal of waste reduces the risk of contamination, potential risk to health and minimizes any impact on the environment

7.1.3. Conditions for waste disposal and classification of waste can also be located in the SDS. Ask a member of EH&S if you are unclear about any aspect of waste disposal.

7.1.4. All forms of waste should be handled using appropriate PPE, (such as gloves, goggles, and lab coat, but in some cases special equipment may be required) and bodily contact avoided.

7.2. Universal waste

7.2.1. Universal waste is described as spent bulbs/lamps (including fluorescent, high intensity discharge, neon, mercury vapour, high-pressure sodium, and metal halide) and batteries (including alkaline, lead, acid, nickel, cadmium, and lithium).

7.2.1.1. Spent bulbs/lamps are placed in an appropriately sized box located in the receiving area. When the box is full, a member of EH&S is notified for removal.

7.2.1.2. Used batteries are placed in approved containers located throughout the facility. When the container is full, a member of EH&S is notified for removal.

7.3. Hazardous (including Biohazardous) waste

7.3.1. Biohazardous waste is collected in containers that are red in color and/or has red labelling. Hazardous waste is collected in containers that are red in color.

- 7.3.2. Hazardous waste containers have a primary and secondary container.
- 7.3.3. The descriptions of each waste stream and their percent composition ranges are found in document.
- 7.3.4. Solid and liquid hazardous waste containers are requested from EH&S using form.
- 7.3.5. All waste containers are assigned a waste container number (WC#) and a defined location. Waste containers are not relocated without prior approval from the EH&S department.
- 7.3.6. Containers are correctly labelled, legible and stain free. Contents are correct for the waste type, well sealed, funnels are closed when not in use, waste lines are connected (no cracks or breaks), lids are secure and the exteriors are clean and dry before collection.
- 7.3.7. Secondary containers are also clean and spill free (no cracks, leaks or breaks).
- 7.3.8. All containers are placed in such a way that the hazardous waste label faces outward and can be read without the need to move the container.
- 7.3.9. There is pre-printed hazardous waste label that is compliant with regulatory requirements. Refer to Synoligo Regulated Waste Management Plan and EH&S to obtain the correct label.
- 7.3.9.1. Never physically write the word "Waste" on any container.
 - 7.3.9.2. Only use an approved hazardous waste label.
 - 7.3.9.3. Labels shall not be laminated.
 - 7.3.9.4. Law requires use of the hazardous waste labels.
- 7.3.10. Do not overfill waste containers. If waste containers are full please contact the EH&S department for assistance.
- 7.3.11. Waste containers are inspected on a regular basis and taken to the temporary waste area.
- 7.3.12. Containers being transported must be closed. The ported cap or funnel shall be removed from the container and replaced by a standard container cap. The standard container caps are located within each respective secondary container. Once closed, hazardous waste containers may be transported on a lipped cart or hand truck.
- 7.3.12.1. If a lipped cart is used, it acts as a secondary container and no additional secondary container is required.
 - 7.3.12.2. If a hand truck is used, the primary waste container must be transported in a secondary container.

8. WASTE STREAM DESCRIPTION

8.1. Oligo solvent waste

Waste component	%Range	
Acetonitrile	60	70
Dichloromethane	10	15
Tetrahydrofuran	5	10
Pyridine	5	10
Acetic anhydride	3	5
1-methylimidazole	1	2
Dichloroacetic acid	1	2
Water	1	2
Others: (Xanthane Hydride, 5-ethyl-1H-tetrazole etc)	Trace	
Total %organics	>=98%	

8.2. HPLC aqueous waste

Waste component	%Range	
Water	65	75
Acetonitrile	10	20
Methanol	10	15
Triethylammonium acetate	1	5
Inorganic salts (sodium acetate, sodium chloride, sodium perchlorate)	1	2

Total %organics	<=35%
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8.3. Solid waste

Waste component	%Range	
Filter paper	5	15
Controlled pore glass	30	40
Molecular sieves	30	40
Flammable liquid	0	1
Total %organics	<=1%	

8.4. Lab debris waste

Waste component	%Range	
Spent lab consumables (pipettes, gloves, empty bottles, kimwipes, syringe (without needle))	100	100
Total %organics	0%	

8.5. Used vacuum pump oil

Waste component	%Range	
Used vacuum pump oil	100	100

8.6. Waste stream properties

Waste stream	Physical state	Hazards
Oligo solvent	Liquid	Flammable, toxic
HPLC waste	Liquid	Flammable, toxic
Solid waste	Solid	Flammable, toxic
Lab debris	Solid	-
Used vacuum pump oil	Liquid	Flammable, corrosive