Chemical Inventory Register

Analytical Chemistry Laboratory • Building 4, Rooms 210–220

Meridian Life Sciences

Environmental Health & Safety Office

Purpose. This register is the controlled, site-wide record of every hazardous chemical held in the Analytical Chemistry Laboratory at or above the reporting threshold set by institutional policy EHS-P-03. It supports hazard communication, storage segregation, emergency response planning, and periodic reconciliation against purchase and disposal records in the laboratory information management system (LIMS).

Scope. All containers of neat chemicals and concentrated stock solutions stored in Rooms 210 (gas cage), 212 (cold/cryo store), 214 (bench laboratory), and 216 (secure toxics and explosives store). Working aliquots below 50 mL dispensed for same-day bench use are exempt from individual line entries but remain covered by the parent container record.

Regulatory basis. Classification and pictogram assignment follow the UN Globally Harmonized System of Classification and Labelling of Chemicals [1], implemented domestically through the OSHA Hazard Communication Standard [2]. Segregation distances and cabinet ratings reference NFPA 704 [3] and the ACS guidelines for chemical laboratory safety [4].

Field	Value
Document No.	CHM-INV-REG-014
Revision	6
Effective date	03 Feb 2026
Next review	03 Feb 2027
Register owner	Dr. Elena Marsh, Lab Manager
Approved by	Dr. Farhan Iqbal, EHS Officer
Reconciliation cycle	Quarterly
Retention	7 years post-disposal

This document supersedes Revision 5 (11 Sep 2025). Any container not listed here, or held in a location that differs from the entry below, must be reported to the EHS Officer within one working day and quarantined pending reclassification.

GHS Pictogram Legend

Every pictogram reproduced below is drawn to the proportions of Annex V of the GHS Purple Book [1]: a black symbol centred on a white field inside a red-bordered diamond. The Inventory Register (page 2) prints a scaled-down copy of the relevant pictogram(s) beside each entry.

GHS01 • Explosive

Unstable explosives, self-reactives, organic peroxides.

GHS02 • Flammable

Flammable liquids, gases, solids, and pyrophorics.

GHS03 • Oxidizing

Oxidizing liquids, solids, and gases.

GHS04 • Compressed Gas

Gases under pressure, refrigerated or dissolved.

GHS05 • Corrosive

Skin/eye damage; corrosive to metals.

GHS06 • Acute Toxicity

Fatal or toxic if swallowed, inhaled, or absorbed.

GHS07 • Irritant
Irritant, harmful, sensitiser, narcotic effects.

GHS08 • Health Hazard
Carcinogen, mutagen, reproductive or organ toxin.

GHS09 • Environmental
Hazardous to aquatic life, short or long term.

Hazard-class shorthand used in the register.

F	Flammable	**Ox**	Oxidizing
F+	Extremely / highly flammable	**C**	Corrosive
T	Toxic	**T+**	Very toxic
Xn	Harmful	**Xi**	Irritant
N	Environmentally hazardous	**E**	Explosive

Storage Locations & Segregation Groups

Cabinets are physically separated by at least 3 m or a fire-rated partition wherever an incompatibility is marked below, per NFPA 704 [3] and site policy EHS-P-07. Locked cabinets require a two-person checkout logged in the LIMS.

Code	Cabinet / Store	Location	Rated Capacity	Segregated From
FL-1	Flammables safety cabinet	Rm 214, bay A	115 L, self-closing	Oxidizers (OX-4), toxics (TX-5)
AC-2	Acid corrosives cabinet	Rm 214, bay B	60 L, poly-lined	Bases (BC-3), oxidizers (OX-4)
BC-3	Base / caustic corrosives cabinet	Rm 214, bay B	60 L, poly-lined	Acids (AC-2)
OX-4	Oxidizer cabinet	Rm 214, bay C	40 L, vented	Flammables (FL-1), organics
TX-5	Toxics secure cabinet (locked)	Rm 216	45 L	Flammables (FL-1), food/drink
GC-1	Compressed gas cage	Rm 210 (exterior)	12 cylinder bays, chained	Direct sun, heat sources
CR-7	Cryogenic Dewar store	Rm 212	3 Dewar bays, ventilated	Confined, unventilated space
EX-6	Explosive / peroxide-forming locker	Rm 216, blast-relief panel	15 L, wetted stock only	Heat, friction, shock, all oxidizers

⚠ **Peroxide-forming stock.** Diethyl ether (item 12) and any ether-class solvent older than 6 months from date of opening must be peroxide-tested before use; a positive test routes the container directly to EX-6 pending waste pickup, never back to FL-1.

Chemical Inventory Register

No.	Chemical Name	CAS No.	Formula	Quantity	Container	GHS	Class	Storage	Received	Expiry	Custodian
1	Acetone	67-64-1	C_3H_6O	4 × 2.5 L	Amber glass		**F**	FL-1, shelf 2	14 Jan 2026	14 Jan 2028	C. Reyes

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Chemical Inventory Register (continued)

No.	Chemical Name	CAS No.	Formula	Quantity	Container	GHS	Class	Storage	Received	Expiry	Custodian
2	Methanol	67-56-1	CH_4O	2 × 1 L	Amber glass		**F, T**	FL-1, shelf 1	14 Jan 2026	14 Jan 2028	C. Reyes
3	Ethanol, 96%	64-17-5	C_2H_6O	6 × 1 L	Amber glass		**F**	FL-1, shelf 3	20 Jan 2026	20 Jan 2028	A. Tanaka
4	Sulfuric acid, 98%	7664-93-9	H_2SO_4	1 × 2.5 L	Glass Winchester		**C**	AC-2, shelf 1	03 Feb 2026	03 Feb 2029	P. Natarajan
5	Hydrochloric acid, 37%	7647-01-0	HCl	3 × 1 L	Poly bottle		**C, Xi**	AC-2, shelf 2	03 Feb 2026	03 Feb 2028	P. Natarajan
6	Sodium hydroxide, pellets	1310-73-2	NaOH	1 × 500 g	HDPE jar		**C**	BC-3, shelf 1	10 Feb 2026	10 Feb 2031	P. Natarajan
7	Nitric acid, 70%	7697-37-2	HNO_3	1 × 1 L	Amber glass		**Ox, C**	AC-2, shelf 1*	12 Feb 2026	12 Feb 2028	P. Natarajan
8	Hydrogen peroxide, 30%	7722-84-1	H_2O_2	1 × 1 L	Vented poly		**Ox, C**	OX-4, shelf 2	12 Feb 2026	12 Aug 2026	P. Natarajan
9	Potassium permanganate	7722-64-7	$KMnO_4$	1 × 250 g	Amber glass		**Ox, Xi, N**	OX-4, shelf 1	18 Feb 2026	18 Feb 2031	M. Webb
10	Toluene	108-88-3	C_7H_8	4 × 1 L	Amber glass		**F, Xn**	FL-1, shelf 2	24 Feb 2026	24 Feb 2028	A. Tanaka
11	Chloroform, stabilised	67-66-3	$CHCl_3$	1 × 1 L	Amber glass		**T, Xn**	TX-5, shelf 1	02 Mar 2026	02 Mar 2027	F. Iqbal
12	Diethyl ether	60-29-7	$C_4H_{10}O$	2 × 1 L	Amber, tested monthly†		**F+**	FL-1, shelf 1	05 Mar 2026	05 Sep 2026	M. Webb
13	Phenol, crystalline	108-95-2	C_6H_6O	1 × 500 g	Amber glass		**C, T**	TX-5, shelf 2	11 Mar 2026	11 Mar 2029	F. Iqbal
14	Formaldehyde solution, 37%	50-00-0	CH_2O	1 × 1 L	Amber poly		**C, T**	TX-5, shelf 1	16 Mar 2026	16 Sep 2026	F. Iqbal
15	Dichloromethane	75-09-2	CH_2Cl_2	2 × 1 L	Amber glass		**Xn**	TX-5, shelf 3	22 Mar 2026	22 Mar 2028	C. Reyes
16	Ammonium hydroxide, 28%	1336-21-6	NH_4OH	1 × 1 L	Vented poly		**C, Xi, N**	BC-3, shelf 2	02 Apr 2026	02 Oct 2026	P. Natarajan
17	Sodium azide	26628-22-8	NaN_3	1 × 100 g	Amber glass, locked		**T, N**	TX-5, shelf 4‡	07 Apr 2026	07 Apr 2031	F. Iqbal
18	Silver nitrate	7761-88-8	$AgNO_3$	1 × 100 g	Amber glass		**Ox, C, N**	OX-4, shelf 3	13 Apr 2026	13 Apr 2029	M. Webb
19	Isopropanol	67-63-0	C_3H_8O	4 × 1 L	Amber glass		**F**	FL-1, shelf 2	20 Apr 2026	20 Apr 2028	C. Reyes
20	Acetic acid, glacial	64-19-7	$C_2H_4O_2$	2 × 1 L	Amber glass		**F, C**	AC-2, shelf 3	24 Apr 2026	24 Apr 2028	P. Natarajan
21	Nitrogen, compressed	7727-37-9	N_2	1 × 50 L cyl.	Steel cylinder, chained		—	GC-1, bay 1	04 May 2026	04 May 2028	C. Reyes
22	Hydrogen, compressed	1333-74-0	H_2	1 × 20 L cyl.	Steel cylinder, chained		**F+**	GC-1, bay 2¶	04 May 2026	04 May 2028	C. Reyes
23	Picric acid, wetted ≥30%	88-89-1	$C_6H_3N_3O_7$	1 × 100 g	Amber glass, water-wetted		**E, T**	EX-6‡§	15 May 2026	15 Nov 2026	F. Iqbal

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Chemical Inventory Register (continued)

No.	Chemical Name	CAS No.	Formula	Quantity	Container	GHS	Class	Storage	Received	Expiry	Custodian
24	Sodium, metal, in mineral oil	7440-23-5	Na	1 × 100 g	Sealed jar under oil		F	FL-1, shelf 4‖	18 May 2026	18 May 2029	M. Webb

* Nitric acid held apart from other AC-2 stock, no organic contact. † Peroxide test logged in LIMS; see storage note above. ‡ Two-person checkout required. § Fume-hood dispensing only. ¶ Flammable-gas bay, isolated from oxidizer cylinders. ‖ Stored in a secondary dry tray, segregated from all aqueous stock.

Reconciliation & Audit Log

Each entry reconciles the physical count against this register and the LIMS purchase/disposal ledger. Any discrepancy opens a CAPA record in the Deviation Log (CHM-DEV-*nnnn*) and is cleared only after the corrective action is verified.

Date	Audit Type	Auditor	Lines Checked	Discrepancies	Corrective Action	Sign-off
06 Jan 2026	Quarterly full	F. Iqbal	18 / 18	None	—	FI
03 Feb 2026	Routine monthly	C. Reyes	21 / 21	None	—	CR
03 Mar 2026	Routine monthly	C. Reyes	23 / 23	Item 8 (H_2O_2) volume 150 mL below ledger	Traced to unlogged bench draw; CHM-DEV-0142 opened, dispensing SOP re-briefed	CR / FI
07 Apr 2026	Quarterly full	F. Iqbal	23 / 23	CAPA 0142 verified closed	Re-audit confirmed count restored	FI
05 May 2026	Routine monthly	A. Tanaka	24 / 24	None	—	AT
02 Jun 2026	Routine monthly	A. Tanaka	24 / 24	Item 21 (N_2 cylinder) chain anchor loose	Anchor re-secured same day; facilities ticket closed	AT
06 Jul 2026	Quarterly full + gas cage	M. Webb	24 / 24	None	—	MW
03 Aug 2026	Routine monthly	C. Reyes	24 / 24	None	—	CR

Prepared by

Dr. Elena Marsh, Lab Manager
Date: August 4, 2026

Approved by

Dr. Farhan Iqbal, EHS Officer
Date: _____

References

[1] United Nations Economic Commission for Europe. Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Technical report, United Nations Economic Commission for Europe, New York and Geneva, 2023. The “Purple Book”.

[2] Occupational Safety and Health Administration. 29 CFR 1910.1200 – Hazard Communication. Code of Federal Regulations, 2012. Aligned with the GHS.

[3] National Fire Protection Association. NFPA 704: Standard System for the Identification of the Hazards of Materials for Emergency Response. Technical report, National Fire Protection Association, 2022.

[4] American Chemical Society, Committee on Chemical Safety. Guidelines for Chemical Laboratory Safety in Academic Institutions. Technical report, American Chemical Society, Committee on Chemical Safety, 2017.