IMP Reconstitution Procedure under the VPD-HLRI CRF Microbiology Safety Cabinet (MSC)

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Summary of Amendments

Version Number	Modification:
1.0	New SOP

Key related documents:	DN180 Needlestick Sharp and Splash Incidents involving blood or body fluids Procedure DN298 Medical Devices Maintenance and Repair Procedure RAC/RD/TBR/025 Biological Safety Cabinet SOP095 Biological hood Laboratory SOP138 Set-up and Management of ATIMP Clinical Trials FRM125 IMP Safety Cabinet Workshop Booklet CT12 Development and Approval of Local Documentation v3.0 CT004a Feasibility and Risk Assessment for CTIMPS V3

Key Points of this Document

- This document sets out the procedures to be followed by staff who are trained and compliant with the use of the VPD-HLRI CRF Microbiological Safety Cabinet (MSC) for handling and reconstituting Investigational Medicinal Products IMPs.
- It provides guidance on safe operation and maintenance of the VPD-HLRI CRF MSC to those who received approval to reconstitute IMPs within the VPD-HLRI CRF.
- It provides detailed procedures before, during, and after use, covering cleaning, waste disposal, and communication flow.

1 Purpose and Contents

a. This SOP outlines the procedures for the safe, and effective use of the VPD-HLRI CRF Microbiological Safety Cabinet (Class II Microbiological Safety Cabinet) for preparation of Investigational Medicinal Products (IMPs) within the VPD-HLRI Clinical Research Facility (VPD-HLRI CRF). It ensures compliance with Good Clinical Practice (GCP), Good Manufacturing Practice (GMP), biosafety requirements, and study-specific protocols, with additional considerations for genetically modified organisms (GMOs).

b. It ensures consistent aseptic practices that protect study participants, staff, and the environment.

c. It clarifies the roles and responsibilities of the Clinical Trials Pharmacy (CTP), Clinical Research Facility staff, and investigators regarding which IMPs depending on their category and classification may be prepared within the VPD-HLRI CRF Microbiology Safety Cabinet.

d. It establishes a clear approval pathway with Pharmacy for authorising or prohibiting preparation of IMPs within the VPD-HLRI CRF, based on IMP formulation, sterility requirements, and risk profile, handling restrictions and applicable GMO legislation, including requirement for risk assessment and approval from institutional Biosafety Committees.

e. It facilitates traceability and accountability through documentation, logs, and communication records.

2 Roles & Responsibilities

a. This Policy applies to staff who are conducting research studies approved to be undertaken in the VPD-HLRI CRF.

b. VPD-HLRI CRF staff are responsible for daily/ weekly/ monthly maintenance. The approved external users will need to follow requirements for the use prior to, during and after use of the VDP-HLRI MSC.

c. Training in this procedure will be carried out by a competent member of staff, followed by an assessment of competency (see FRM125 IMP Safety Cabinet Workshop Booklet) and then followed by a train the trainer process. All new users must be signed off as competent by a trained member of staff before using the VPD-HLRI CRF MSC for IMP reconstitution independently.

d. Clinical Trials Pharmacy (CTP) will provide IMP preparation worksheet and approval prior to delivery and authorise preparation/dispensing of IMPs under the VPD-HLRI CRF MSC on a study-specific basis.

3 Policy

a. This SOP is mandatory and, as per the Trust's Information Governance and Records Management framework, non-compliance with it may result in disciplinary procedures.

4 Procedure

4.1 Governance & Approvals

a. All IMPs intended for preparation under the VPD-HLRI CRF MSC must be reviewed, assessed and documented by the Clinical Trial Pharmacist (CTP) during the study setup. Each study will have a CT004a Feasibility and Risk Assessment for CTIMPS form completed accordingly and filed amongst relevant documents IB /Pharmacy Manual/ Protocol/ Material Safety Data Sheet. They are all stored in the site file under pharmacy section.

- IMP formulation (oral, Intravenous, Sub-cutaneous, lyophilised, GMO, cytotoxic, biological, etc.).
- Requirement for aseptic conditions and whether these can be achieved in the VPD-HLRI CRF MSC.
- Necessity for higher-level containment (e.g. Pharmacy cleanroom, aseptic unit).

b. IMPs **not eligible** for VPD-HLRI CRF MSC preparation include (but are not limited to):

- Cytotoxic or high-risk antineoplastic IMPs.
- Radiopharmaceuticals products.
- Advanced Therapy Medicinal Products (ATMPs) requiring specialist facilities.
- GMO IMPs not covered by the approved institutional risk assessment.

4.2 Using the VPD-HLRI CRF MSC

a. Verify room access restrictions are in place.

b. Ensure temperature and environmental monitoring systems are operational.

c. Switch on cabinet at least **15 minutes before use** to purge airflow.

d. Check airflow indicators are within acceptable range for a minimum of 5 min. Turn on the light.

e. Gloves, Googles, laboratory coats and relevant PPE must be worn when using the VPD-HLRI CRF MSC, follow additional PPE requirements from CTP assessment (disposable coats, etc…).

f. Wipe the work surface under the VPD-HLRI CRF-MSC with 70% IPA wipes before placing down any essential items for the IMP reconstitution. Wipe with Clinell wipes any essential items for the IMP reconstitution (i.e. IV bags, vials) before placing them under the VPD-HLRI CRF MSC.

g. Position the items at least 10 cm from the front and rear borders of the VPD-HLRI CRF MSC to preserve the air barrier.

h. Perform manipulations in a slow manner to minimise airflow disruption.

i. Follow pharmacy-provided reconstitution/dispensing instructions for handling IMPs inside the MSC.

j. After finishing IMP preparation wipe down all interior surfaces with 70% IPA wipes (top → bottom, back → front).

k. Allow cabinet to run for **15 minutes** after cleaning.

l. All materials and consumables used during the entire preparation will be disposed of according to the VPD-HLRI CRF waste disposal process.

m. Switch off lights and VPD-HLRI CRF MSC.

4.3 Spillage

a. Spills must be cleaned up immediately, especially if it is a biohazard, please also refer to RPH DN180.

b. Small spills: Wipe immediately with 70% IPA.

c. For larger spills: Stop work. Cover with Clinell Spill wipes. If necessary, clean underneath the metal panels (make sure the airflow is switched off before removing the panels). After cleaning switch on the U.V. light and allow it to run for at least twenty minutes.

d. Biohazard material should be disposed of in clinical waste.

4.4 Cleaning Schedule

a. Daily: Pre- and post-use wipe down with 70% IPA / approved disinfectant.

b. Weekly: Remove work tray, deep clean panels and under surfaces. Use bleach/Tristel if residues visible. Run UV light cycle (cabinet closed, remove plastics). The window of the VPD-HLRI CRF MSC must be fully closed before turning on the UV light.

c. Do not use Clinell wipe on the window as this leaves a residue.

d. Bi-annually: External service and airflow certification.

4.5 Environmental Monitoring

The VPD-HLRI MSC is checked every two months to detect and prevent any contamination risks. To conduct this environmental monitoring, Agar plates will be supplied by an external certified company, VPD-HLRI CRF team will then receive and place these plates in the VPD-HLRI MSC for exposure. Following the exposure period, the plates will be sent back to the company, which will perform the necessary tests and provide the corresponding reports.

The steps should be followed as described below:

a. Switch on the cabinet and clean as detailed in section 4.2.

b. Place the Agar plates inside the cabinet following the external company specified instructions. Remove the covers from the Agar dishes and leave the plates exposed for exactly one hour. After one hour, replace the covers on the plates and send them to the external company in accordance with their guidelines.

c. If any colonies are detected in the report, repeat the cleaning process and re-test as necessary / repeat cleaning as in section 4.2 including underneath the work surface, before repeating the test.

d. If growth is reported, consult with the company to determine whether it qualifies as low risk. The VPD-HLRI CRF MSC may continue to be used. Repeat cleaning procedures as stated in section 4.2.

e. If the growth reported qualifies as high risk, discontinue the use of the VPD-HLRI CRF MSC and attach a dated sign notifying 'CONTAMINATION – do not use'. This sign must be removed before the cabinet is brought back into use.

f. If colonies are still present in the results of the repeat tests, an investigation into the cause of the growth must be conducted, and the root cause addressed until the VPD-HLRI CRF MSC can be used again.

4.6 Preventive Maintenance

a. VPD-HLRI CRF MSC: Cambridge University is responsible for regular service and air flow checks. Undertaken bi-annually.

b. Additional fumigation is carried out if a hazardous substance has been spilt which may require additional decontamination.

5 Health and Safety

5.1 COSHH

Staff members must read all COSHH forms related to chemicals used to clean these MSC including:

COSHH_HLRI CRF 003 Clinell Wipes
COSHH_HLRI CRF 018 Clinell Spill Wipes
COSHH_HLRI CRF 012 Tristel duo
COSHH_HLRI CRF 013 Tristel fuse
COSHH_HLRI CRF 021 70%API (Micronclean IPA 7030 WFI WipesMops)

6 Risk Management / Liability / Monitoring & Audit

a. The R&D SOP Committee will ensure that this SOP and any future changes to this document are adequately disseminated.

b. The R&D Department will monitor adherence to this SOP via the routine audit and monitoring of individual clinical trials and the Trust's auditors will monitor this SOP as part of their audit of Research Governance. From time to time, the SOP may also be inspected by external regulatory agencies (e.g., Care Quality Commission, Medicines and Healthcare Regulatory Agency).

c. In exceptional circumstances it might be necessary to deviate from this SOP for which written approval of the Senior R&D Manager should be gained before any action is taken. SOP deviations should be recorded including details of alternative procedures followed and filed in the Investigator and Sponsor Master File.

d. The Research and Development Directorate is responsible for the ratification of this procedure.

e. Sponsors will be consulted to provide a contingency plan in the event that the Safety Cabinet becomes inoperable due to fault or contamination (where use of the cabinet is mandatory for IMP preparation).

f.

Further Document Information

Approved by: *Management/Clinical Directorate Group*	Research and Development Directorate
Approval date: *(this version)*	Current approved version date
Ratified by Board of Directors/ Committee of the Board of Directors:	STET
Date:	N/A
This document supports: *Standards and legislation*	Medicines for Human Use (Clinical Trials) (Amendment) Regulations 2025 (and any subsequent amendments). UK Policy Framework for Health and Social Care Research version 3.3 (07/11/17) and authorised amendments thereafter.

Equality Impact Assessment: Does this document impact on any of the following groups? If YES, state positive or negative, complete Equality Impact Assessment Form available in Disability Equality Scheme document DN192 and attach.

Groups	Disability	Race	Gender	Age	Sexual orientation	Religious & belief	Other
Yes/No	NO	NO	NO	NO	NO	NO	NO
Positive/Negative							

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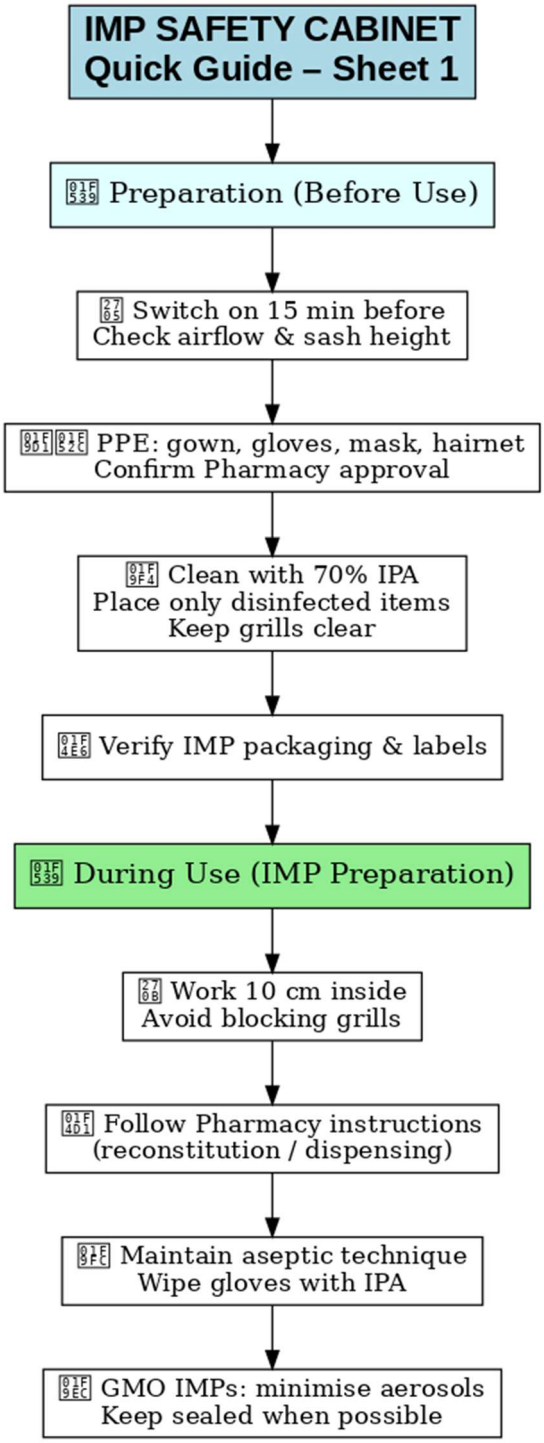
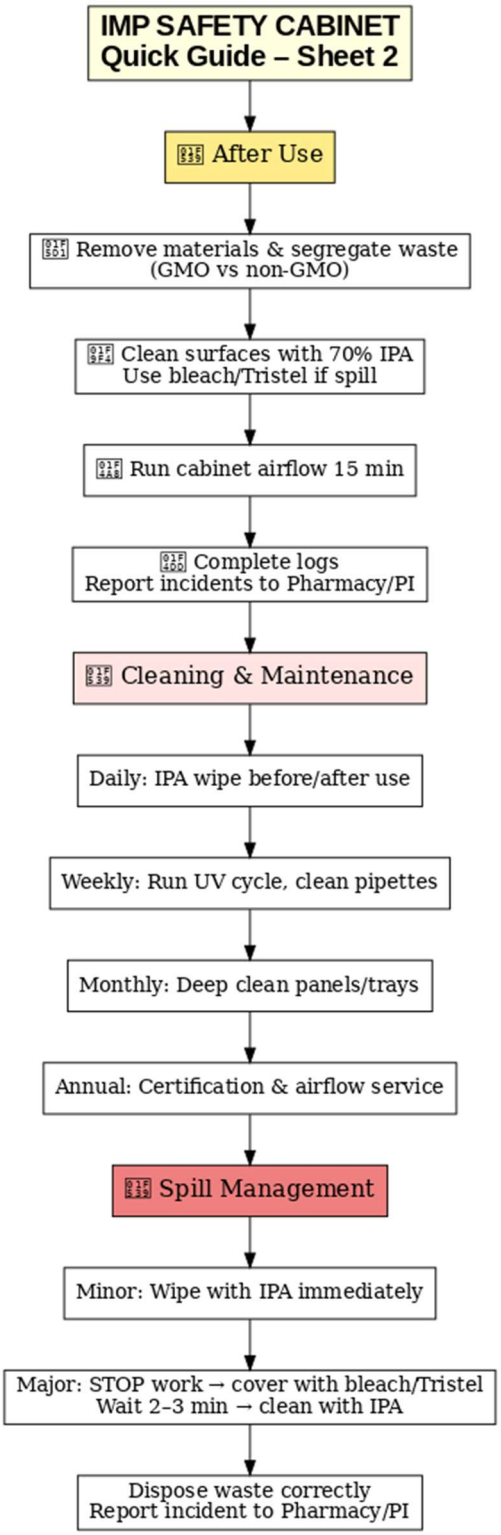
Appendix A:

IMP Safety Cabinet Quick Guide




IMP SAFETY CABINET
Quick Guide – Sheet 2
After Use
Remove materials & segregate waste
(GMO vs non-GMO)
Clean surfaces with 70% IPA
Use bleach/Tristel if spill
Run cabinet airflow 15 min
Complete logs
Report incidents to Pharmacy/PI
Cleaning & Maintenance
Daily: IPA wipe before/after use
Weekly: Run UV cycle, clean pipettes
Monthly: Deep clean panels/trays
Annual: Certification & airflow service
Spill Management
Minor: Wipe with IPA immediately
Major: STOP work → cover with bleach/Tristel
Wait 2–3 min → clean with IPA
Dispose waste correctly
Report incident to Pharmacy/PI