

Title of SOP	Freezer breakdown procedure - use of emergency freezers
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## 1. Introduction, Background, and Purpose

There are a large number of freezers around the Blizzard Institute storing samples and reagents at -20°C or -80°C. **The contents of each freezer is the responsibility of the research staff and not Laboratory Management.** Freezers contain temperature sensitive probes that will alert staff via telephone, text or email if the temperature of the freezer breaches the set parameters. Laboratory Management organise annual freezer servicing and Institute Technicians carry out daily checks to identify any problems with the freezers to ensure they do not fail. On occasion due to freezer age, mechanical failure or electrical failures, the freezer may fail and start to rise to room temperature which jeopardises the integrity of the contents. In the event of a freezer failure, all Blizzard Institute research staff should know the procedures involved to prevent the loss of precious or expensive items stored within their freezers by moving them into an emergency back-up if required.

This document outlines the procedures that all Blizzard Institute research staff who are storing items in freezers within the laboratories should follow in the event of a -20 or -80 freezer failure.

## 2. Procedure(s)

**Each freezer should have a minimum of two responders.** Responder details for freezers can be changed by contacting [blizard-lab-man@qmul.ac.uk](mailto:blizard-lab-man@qmul.ac.uk) so the details can be altered on the Connected Automated Monitoring CAM+ (formerly known as Tutela) website. Up-to-date responder information for the temperature probe is displayed on the front of the freezer.

### Freezer responder initial contact

If your freezer breaches its temperature parameters, you should receive a call about your freezer from Checkit Premium Automated Alarm Service (PAAS). **Alarms will be received from phone number +44 (0)7401 228178, with the following options – N.B. PLEASE STORE THIS NUMBER IN YOUR PHONE TO RECOGNISE IT IN THE EVENT YOU ARE CALLED ABOUT YOUR FREEZER**

**Option 1: Accept the alarm and leave your name and position after the tone**

**Option 2: Request to be transferred to a member of Checkit Support (allows support to handle the alarm and answer any questions you may have)**

**Option 3: Reject the alarm call and the service will attempt to call the next contact**

**Option 9: Request to listen to the message again**

***If you do speak with Checkit/CAM+ Support:***

- Ask CAM+ to repeat carefully the Site Reference - This should be **QMARY**
- Ask CAM+ to repeat carefully the probe number and freezer reference of the system they have called about.

**Freezer references correspond to the following locations:**

ABH	Abernethy building - freezer room (G19A); Abernethy CL3 (2.15C)
BC	Blizard building Central
BN	Blizard building North
BS	Blizard building South
NBRC	Abernethy first floor (R1.18)
QU	QMBio basement freezer room (LG12)
TLN	Liquid nitrogen tank - Abernethy CL3 (2.15C); Blizard CL3 (LG96C); Cryostore (0/26)
WIN	Wingate building first floor (104)

**Ask Checkit/CAM+ Support what type of alarm has been generated:**

- **Comms Fault or Lost Power:** This means that the monitoring probe has lost contact with the control panel. This does not mean that your freezer has broken down. There is no need to come in to check your freezer.
- **High Temperature Alarm:** Staff should respond promptly as the freezer is warming to room temperature. The contents are at risk if not moved into an emergency freezer.
- **Low Temperature Alarm:** This likely means your freezer needs to be defrosted. This does not mean that your freezer has broken down. There is no need to come in to check your freezer.
- **Probe Failure:** The probe is unable to communicate with the panel usually due to a defect with the probe. This does not mean that your freezer has broken down. There is no need to come in to check your freezer.

In the first instance, you should login to the Checkit/CAM+ website to check and monitor the temperature log of your freezer, regardless of the type of alarm that has been generated.

Website: <https://camplus.checkit.net/main/login>

Username: Blizard

Password: blizard123 (case sensitive)

**It would be worthwhile logging into the website before an emergency arises so that you are aware of how the site works and what a normal temperature log looks like.**

### Contacting Security if you are concerned out-of-hours

If you are concerned out-of-hours, you can contact QMUL Whitechapel Security who can be called on ext. 2599 (020 7882 2599). Tell them the location of your freezer, the freezer prefix and number

i.e. Blizzard central corridor, BC11. Ask Security to have a look at your freezer and report back to you; make sure you give them a telephone number. They can tell you what the temperature is reported to be on the front panel. Ask Security what they can see and hear about the freezer i.e. puddles of water on the floor, front panel not displaying a temperature, very noisy motor, door not shut. If all looks okay, call Security again after an hour so you can make an informed decision on what action you may need to take.

**Security will help you by reporting on-site freezer condition but cannot transfer material to emergency freezer. It is your responsibility with your research group to organise this.**

Laboratory Management can be emailed via [blizard-lab-man@qmul.ac.uk](mailto:blizard-lab-man@qmul.ac.uk) if you have concerns. **Be aware that Laboratory Management will not respond out-of-hours**

### If you need to move your freezer contents into an emergency/back-up freezer

*Emergency freezer locations:*

Freezer name	Location	Type	Probe No.
ABH15	Abernethy freezer room (G19A)	-20	48
ABH17	Blizard building Mushroom area	-20	Unmonitored
BC11	Blizard building Central corridor	-80	01
BC19	Blizard building Central corridor	-80	09
BC37	Blizard building Mushroom area	-80	50
BS31	Blizard building South corridor	-80	32
QU15	QMBio basement freezer room (LG12)	-80	68
QU37	QMBio basement freezer room (LG12)	-80	90
QU53	QMBio basement freezer room (LG12)	-80	41
Unnamed emergency freezers x2	Blizard building mushroom area	-20	Unmonitored






- Locate the nearest emergency freezer from the list above and check there is sufficient capacity before you start emptying your freezer.
- Wear the appropriate PPE, at minimum of a laboratory coat, cryogenic gloves and safety glasses.

- Transfer the contents of the failing freezer to an emergency freezer using a trolley to transport the contents. Contents should be stored within freezer racking to ensure easy and safe transport. **The contents can only be moved by group members themselves; Laboratory Management or Security will not assist with this process.**
- Fill in the front sheet of emergency contacts on the front of the emergency freezer to specify names, group, date, contact numbers and details of the contents.
- Make a note of the temperature of the defective freezer, time of transfer, and any other relevant information i.e. sounds, error messages. This can be checked later on the CAM+ website.
- Leave the broken freezer running as this is better for fault diagnostics. However, if the power is lost then allow the freezer to defrost making sure that the water is collected in a tray or other suitable vessel. Place an A-frame plastic hazard ‘wet floor’ sign in front of the freezer in case of flooding.
- If possible, please place a “Responder aware” notice on the freezer in a prominent position.
- The audible alarm will sound every 30 minutes. This can be silenced by pressing the ‘mute’ button. Laboratory Management can turn off the audible alarm. Do not attempt to turn off the audible alarm by yourself as you risk turning off your freezer accidentally; contact Laboratory Management to ask them to do this for you (see Appendix 1).
- Email [blizard-lab-man@qmul.ac.uk](mailto:blizard-lab-man@qmul.ac.uk) to inform Laboratory Management of the name, location and any other relevant information relating to the failure of the freezer, and to inform them when the transfer is complete.
- Notify Laboratory Management which emergency freezer you are using; whilst your items are in the emergency freezer, your group will become the CAM+ responders responsible for that specific system - Laboratory Management will transfer the contact details on the CAM+ website.
- Laboratory Management will contact Haier to obtain a quote for repair and discuss it with the end users before asking them to proceed with the repair. This may incur charges that groups/Centres will be required to cover. If your freezer cannot be repaired, Laboratory Management can advise or assist in getting a replacement.
- Once your freezer has been repaired or replaced, the contents must be moved as soon as possible. **Emergency freezer storage is only permitted for a short period of time, and these back-up freezers must be kept empty for genuine emergencies.** Details from the front sheets can be removed.

### 3. Related SOPs and Documents

- SOP LM03d Maintenance of -80 freezers
- SOP LM03f CAM+ website guidance
- RA LM12 Freezers
- Blizard Institute freezer location map

## Document Version Control

Version	Effective Date	Superseded Version	Summary of changes	Sign
V4	13.06.2017	V3	Alteration to text and approval of Inst Director	
V5	13.07.2017	V4	Added page number. Removed names, added job titles.	
V6	11.07.2018	V5	Added information regarding type of alarms generated	M. Schifano.
V7	08.08.2019	V6	Changed title; edited reference number; edited footer; changed	
V8	16.08.2019	V7	Changed SOP number	
V9	24.02.2022	V8	Edited and reformatted throughout	
V10	24/03/2023	V9	Edited and reformatted throughout	CM Chromell
V11	21/04/2023	V10	Edited procedures pg2 and emergency freezer locations pg4	CM Chromell

IT IS THE RESPONSIBILITY OF ALL USERS OF THIS SOP TO ENSURE THAT THE CORRECT VERSION IS BEING USED.

### Contact details:

Blizard Institute Laboratory Management

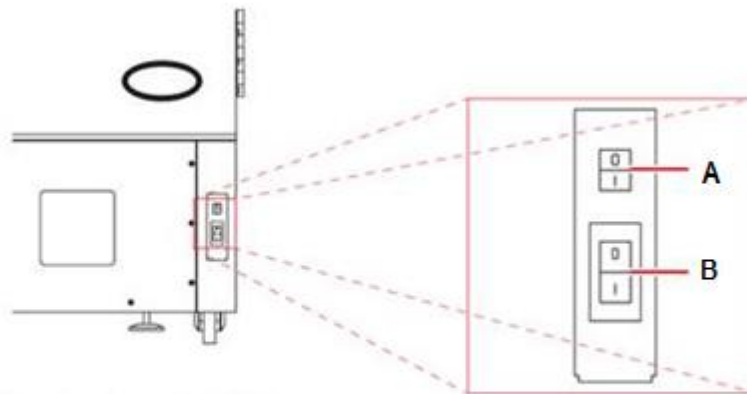
Laboratory Managers' Office, Blizard building east side (OE-15 G-92)

020 7882 2282/2324/2363

## Appendix 1 - Turning off internal freezer alarms

For the Eppendorf/New Brunswick freezers, the Power Fail alarm is activated by the battery rocker switch behind the lockable panel which is located at the bottom right-hand corner.

- Insert and turn the key to unlock and remove the panel.
- The battery switch (A) is the top switch; the bottom switch (B) will turn the freezer on/off.
- The battery switch is labelled I and O. To deactivate the alarm, place the battery switch into the **O** position. **N.B. Take care not to turn the freezer off!**



Upright freezers switch location (except U101)

<b>A Battery switch</b>	<b>B On/Off circuit breaker switch</b>
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