SOP number	**17.007**	Version	**6.0**
Title	**Use of laboratory centrifuge**		

Prepared by	Dominic Rimmer
Approved by	Lynn Prentice
Released by	Jesse Dawson

SOP category	17 NHSGGC Clinical Research Facility – Clinical

Staff category

Staff Category	R	A	C	I
Nursing	X			
GCRF Manager		X		
GCRF Associate Director				X
Senior R&I Manager				X

1. Scope

This procedure applies to all staff working within Glasgow Clinical Research Facility (GCRF).

2. Purpose

To describe the standard operating procedure (SOP) to be followed when using the laboratory centrifuges which are used within GCRF. This SOP is not a full reference guide and detailed instructions can be found in the manufacturer's manual located in the laboratory.

3. Procedures

3.1. Preparation

- Only trained and competent staff may operate centrifuges. GCRF staff must undergo lab training and be signed off as competent before operating a centrifuge unsupervised. Visiting staff must also undergo the training or provide evidence of previous lab training.
- Wear appropriate PPE, at minimum gloves and an apron. A lab coat and eye protection should be worn if indicated by protocol or risk assessment.
- Before use of the centrifuge, its buckets and lids must be checked for cleanliness and damage. If they are damaged report to line manager and do not use.
- Refer to the relevant study protocol or lab manual which will define the sample processing instructions.
- The centrifuge has a display on the front to set the temperature, speed and duration of centrifugation.
- Ensure centrifuge is set to the correct temperature in advance as reaching target temperature can take 20-30minutes.

3.2. Procedure

- The buckets, inserts and samples must be weighed together, using the laboratory scales to ensure that they are balanced properly. The scales should be set to zero before weighing.

- Position samples in opposite pairs, ensuring blood bottles are evenly balanced across the rotor at 180° intervals. Reset the scales to zero and remove the sample bucket before placing the other loaded bucket on the scales. If necessary, balance the buckets using unused expired sample tubes which can have water added to achieve the correct weight.
- Replace bucket lids. If they are screw-on, secure in a clockwise direction but do not over tighten. If they are clip-on, ensure that clips are fastened securely.
- Place buckets in the centrifuge. Ensure equally balanced buckets are positioned in opposing rotor arms.
- Close the lid of the centrifuge until it clicks.
- Set to the desired speed and time. Ensure when setting speed that the correct units are used as the lab manual may refer to RPM (speed) or G (relative centrifugal force).
- Start the centrifuge.
- After starting the centrifuge, it is important to ensure it is operating smoothly before leaving the laboratory. If the centrifuge is improperly balanced it may shake, move violently or alarm and should be stopped immediately and the balancing process should be repeated. If the problem persists report fault to line manager.
- Remove samples when cycle complete, keeping them upright and process as per study protocol.
- Close lid on centrifuge until it clicks.

3.3. Safety

- If centrifuge alarms, shakes or moves violently press **STOP** immediately.
- Report all faults promptly to line manager. **DO NOT** use centrifuge until reported faults are repaired.
- Any spillages must be cleaned up immediately following the NHS Services Scotland National Infection Prevention and Control Manual

4. Referenced documents

- NHS Services Scotland National Infection Prevention and Control Manual

5. Related documents

- Competency Record: Safe Sample Processing within Research Laboratories. V 3 (2023)

6. Document history

Version	Date	Description	Retrospective Implementation
Draft	10/10/07	Creation of SOP	No
1.0	22/11/07	Release of Version 1	No
1.1	19/05/08	Released to staff	No
1.2	30/09/09	General update	No
1.3	21/06/11	General update	No
2.0	30/06/14	Significant changes to clarify the preparation of equipment and staff protection and the safety issues to be considered. New template	No
3.0	15/07/16	SOP restructure	No

		Minor admin changes Change released by	
4.0	26/08/2019	Minor admin changes Change approved by	No
5.0	23/06/2023	Update to SOP template v2.0 Addition of RACI matrix Change of author Minor admin changes	No
6.0	03/11/2026	Change of released by Transfer to new R&I SOP template v1.0 Addition of training requirements Minor admin changes NHSGGC policies reviewed and references updated to NHS Services Scotland National Infection Prevention and Control Manual	No

This SOP is a controlled document. The current version can be viewed on the R&I website, GCTU website and R&I's Q-Pulse account.

Any copy reproduced from the website may not, at time of reading, be the current version.