

Standard Operating Procedure

SOP126

Title: Use and Maintenance of Vortex Mixer(s)

Location: CBE Laboratories

1. PURPOSE

The intent of this SOP is to describe procedures for the safe operation and maintenance of the vortex mixer for mixing liquids in containers.

2. SCOPE

This SOP applies to the use and maintenance of all vortex mixers in CBE and T208b laboratories. This SOP applies to the Containment Level 2 Laboratory Unit of the CBE and T208b and its personnel.

3. RESPONSIBILITIES

CBE Laboratory Users

- Shall ensure that they are familiar with the equipment, its controls, and emergency procedures by reference to this SOP and the Manufacturer's Operating Instructions.
- Shall ensure that the equipment is suitable for the work they intend to carry out before commencing. For example; do not vortex hazardous substances in open vessels. Risk assessment may need to be carried out.
- Shall carry out routine inspection and/or maintenance of the equipment, as required.
- Shall stop using the vortex as soon as any safety deficiency is detected. Operators **MUST** inform the Laboratory Manager or designated person.

Responsible Person (RP)/Laboratory Manager (LM)

- Shall ensure laboratory personnel are given suitable information, instruction, training and supervision in the correct use and maintenance of the equipment.
- Shall coordinate routine inspection and maintenance duties to be performed by laboratory personnel (according to SOP004).
- Shall investigate any reported problems, adverse event, alarms or non-conformities associated with the equipment usage.
- Shall organise the maintenance, repair or servicing of the equipment by trained and authorised contract / service personnel.
- Shall ensure that prior to authorising the commencement of maintenance, repairs or servicing that the equipment is suitably disinfected and that a "Decontamination Certificate" is issued.

Version 002

Effective Date: 13/07/2020

Review 13/07/2022

Written by: Victoria Workman	Reviewed by: P. Mitchell	Approved by: F. Ahmed
------------------------------	--------------------------	-----------------------

Title: Use and Maintenance of Vortex Mixer(s)

Location: CBE Laboratories

4. EQUIPMENT AND MATERIALS

- Vortex mixers in all labs in CBE and T208b
- Grant Vortex (H23)
- Sciquip/Fisher Vortex (H27)
- Fisherbrand Vortex in (H22)
- Biocote Vortex (H34)
- SciQuip Vortex x 2(H34)
- Fisherbrand Vortex (H34)
- Fisherbrand Vortex x 3 (CTMF)
- Fisherbrand Vortex (H25)
- Fisherbrand Vortex (T208b)
- Stuart Vortex (H30)
- 70% IMS for cleaning

5. PROCEDURE

Users MUST read all Precautionary Statements in Section 1 of the Operators Manual.

- Keep vessels containing liquid vertical as much as possible
- Mix liquid using the minimum pressure required
- Start with the speed at the lowest setting and gradually increase to the required speed
- Reduce speed if mixer isn't running smoothly or moves on the bench
- Check instrument and vessels for damage before use. Do not use damaged components
- Place vessel at the centre of the mixing head
- The instrument may heat up when in use

5.1 Continuous operating

- (i) Start with speed control knob at lowest setting
- (ii) Push the two-direction switch towards the left to switch mixer to continuously on. Mixer will start
- (iii) Turn the speed control knob to set the speed required

Version 002

Effective Date: 13/07/2020

Review 13/07/2022

Written by: Victoria Workman	Reviewed by: P. Mitchell	Approved by: F. Ahmed
------------------------------	--------------------------	-----------------------

Standard Operating Procedure

SOP126

Title: Use and Maintenance of Vortex Mixer(s)

Location: CBE Laboratories

- (iv) Push the two-direction switch to the middle to turn the mixer off

5.2 Touch operating

- (i) Start with speed control knob at lowest setting
- (ii) Push the two-direction switch towards the right to switch mixer to touch mode
- (iii) Turn the speed control knob to set the speed required
- (iv) When a vessel is pressed into the mixing head vertically, the instrument will start. When the vessel is removed the mixer will stop
- (v) After mixing is completed push the two- direction switch to the middle to turn the mixer off

5.3 Cleaning

- (i) The mixer can be cleaned with 70% IMS
- (ii) Do not spray directly onto the mixer, instead spray tissue and use to wipe the machine

5.4 Preventative Maintenance

The vortex's should be inspected before each use and cleaned regularly according to the manufacturer's instructions or after contamination with hazardous material.

5.5 Equipment Malfunction

- (i) The Responsible Person and Laboratory Manager should be informed if any part of the equipment ails or malfunctions. With permission of the Responsible Person or Lab Manager the user should consult the Operator Instruction Manuals for fault finding and troubleshooting procedures.
- (ii) All problems and corrective actions should be recorded in the maintenance record which can be found outside each respective laboratory.
- (iii) If the equipment fails to work or malfunctions and cannot be rectified according to troubleshooting procedures detailed in the Operator and Users Manuals the following should be done.
 - a) Inform the Responsible Person and the Lab Manager.
 - b) Attach a 'Do Not Use' notice.
 - c) Contact the manufacturer for advice. External maintenance and servicing of the vortex can only be performed after it has been suitably disinfected (see SOP003) and a 'Decontamination Certificate' has been issued (a proforma is available on the CBE LEARN page).

Version 002

Effective Date: 13/07/2020

Review 13/07/2022

Written by: Victoria Workman	Reviewed by: P. Mitchell	Approved by: F. Ahmed
------------------------------	--------------------------	-----------------------

Standard Operating Procedure

SOP126

Title: Use and Maintenance of Vortex Mixer(s)

Location: CBE Laboratories

6. DOCUMENTATION

The following records are outputs of this SOP & can be found on the CBE website:

- QS-FORM- 009 : Decontamination certificate

- Equipment Maintenance Record

These records will be filed in the Equipment File and stored in the CBE Office or otherwise archived for future review or retrieval.

Version 002

Effective Date: 13/07/2020

Review 13/07/2022

Written by: Victoria Workman	Reviewed by: P. Mitchell	Approved by: F. Ahmed
------------------------------	--------------------------	-----------------------

Standard Operating Procedure

SOP126

Title: Use and Maintenance of Vortex Mixer(s)

Location: CBE Laboratories

SOP Version History

Version Reviewed	Date Revised/ Reviewed	Revision Summary	New Version Number
001	13/07/2020 C.Kavanagh	Annual review . Minor editorials . Listing of all Vortex	002

Version 002

Effective Date: 13/07/2020

Review 13/07/2022

Written by: Victoria Workman	Reviewed by: P. Mitchell	Approved by: F. Ahmed
------------------------------	--------------------------	-----------------------