
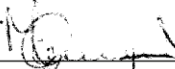


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	<b>STANDARD OPERATING PROCEDURE</b>	
	VORTEX-GENIE® 2	

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## 1. Scope

This Standard Operating Procedure (SOP) applies to the staff and students making use of the Vortex-Genie® 2 in the laboratories of the Pharmacy Department, University of Malta.

## 2. Objective


To describe the procedure for the installation, operation and maintenance of the Vortex-Genie® 2.

## 3. Definitions

- 3.1. 3-Inch Platform Attachment:** The standard rubber attachment that comes with the Vortex-Genie® 2 and is able to accept single or multiple test tubes, beakers as well as various flasks. Mixing must always be carried out with the respective covers / lids in place.
- 3.2. Pop-Off Cup Attachment:** An additional attachment that accepts tubes of almost any size or shape i.e. from microcentrifuge tubes to up to 40mm in diameter and 200mm in length. Mixing may be carried out without the respective covers / lids.
- 3.3. Shaft:** The central rotating part of the mixer on which the rubber attachments are attached to.
- 3.4. Speed Control Knob:** Used to set the desired speed of rotation from a range of 0 to 10. The bigger the number, the higher the speed of rotation.

## 4. Responsibility

- 4.1.** The members of the Department of Pharmacy (staff and students) are responsible for following this SOP.
- 4.2.** The designated Laboratory Officer or Laboratory Assistant is responsible for ensuring that this SOP is followed.

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## 5. Procedure

### 5.1. Installation

- 5.1.1. Place on a level surface and plug cord into mains supply.
- 5.1.2. Place desired attachment onto the shaft and rotate until the 'flats' align.
- 5.1.3. Press the attachment down firmly until it snaps into place.
- 5.1.4. Grasp and pull straight up the installed attachment until it is released from the shaft if another type of attachment needs to be used.


### 5.2. Operation

#### 5.2.1. Continuous Operation

- 5.2.1.1. Push switch to the 'ON' position.
- 5.2.1.2. Turn speed control knob to setting No.3 on the dial.
- 5.2.1.3. Observe that the attachment is immediately set in motion.
- 5.2.1.4. Place the sample tube on top of the attachment and keep steady.
- 5.2.1.5. Vary the speed on the dial and/or the angle of contact and pressure against the mixing attachment to achieve the desired mix.
- 5.2.1.6. Return switch to the 'OFF' position once finished.

#### 5.2.2. Intermittent Operation


- 5.2.2.1. Push switch to the 'TOUCH' position.
- 5.2.2.2. Turn speed control knob to setting No.3 on the dial.
- 5.2.2.3. Touch the sample tube with the attachment to observe motion and keep steady.
- 5.2.2.4. Vary the speed on the dial and/or the angle of contact and pressure against the mixing attachment to achieve the desired mix.
- 5.2.2.5. Return switch to the 'OFF' position once finished.

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### 5.3. Maintenance

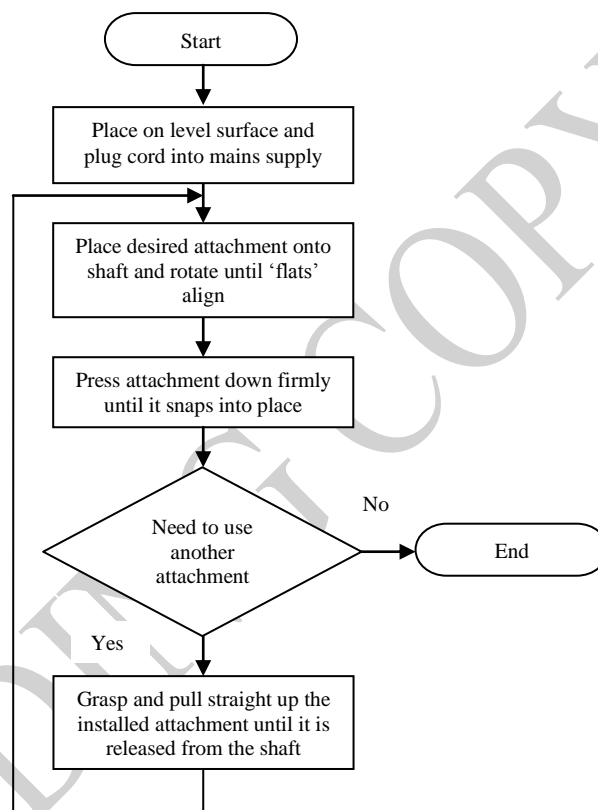
- 5.3.1. Unplug the mixer from its power supply before attempting any cleaning measures.
- 5.3.2. Keep the unit clean by immediately blotting any spills.
- 5.3.3. Use a moistened cloth or sponge with a mild detergent to clean the outside surface.
- 5.3.4. Replace rubber attachments with new ones when these show progressive signs of wear.


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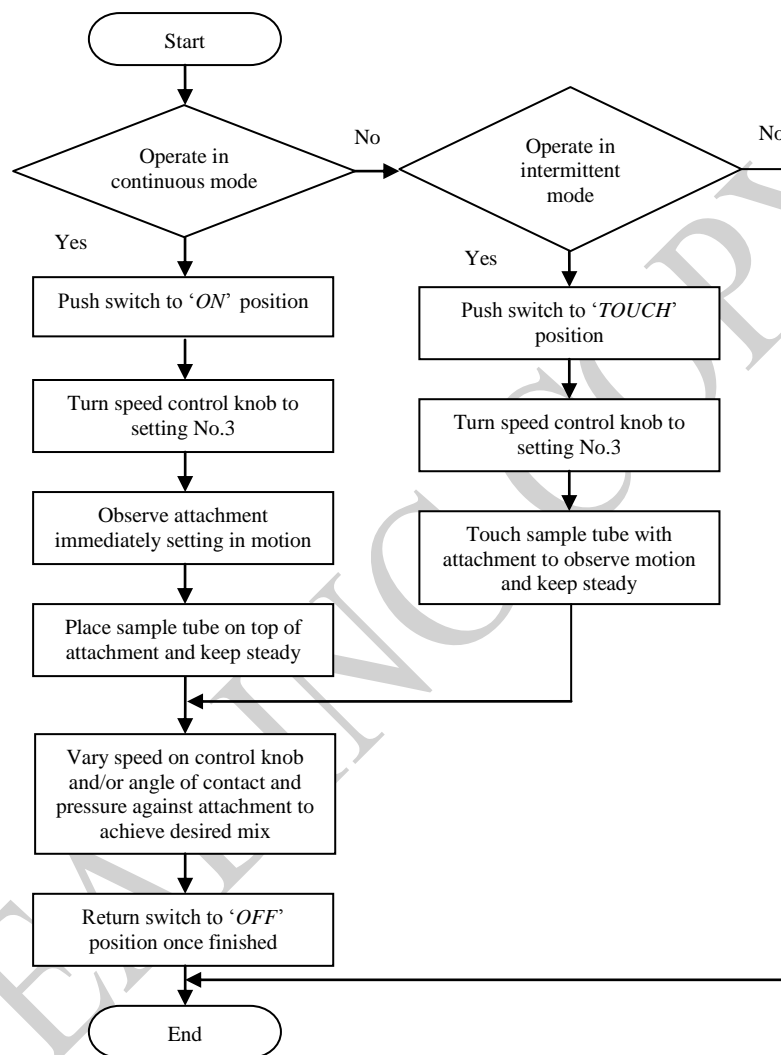
## 5.4. Flow Charts


### 5.4.1. Installation



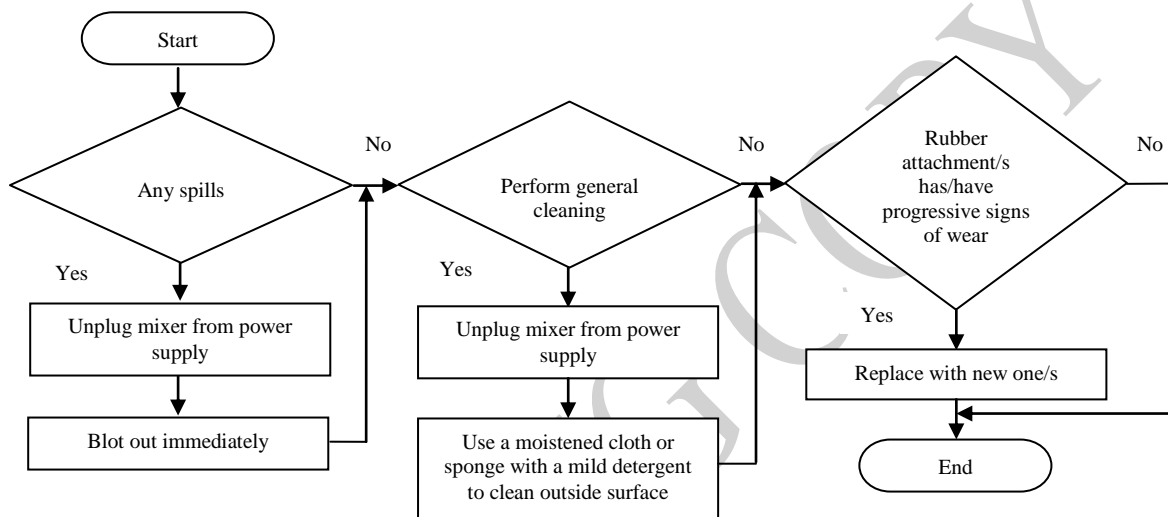
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#### 5.4.2. Operation



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### 5.4.3. Maintenance



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## 6. Precautions

- 6.1. The mixer may become warm to touch when in constant use, however performance will not be affected.
- 6.2. Do not lift the mixer from its removable rubber attachments.
- 6.3. Avoid wetting and unnecessary exposure to fumes.

## 7. References

Scientific Industries, Inc. Vortex-Genie® 2 Operating Instructions. New York: Scientific Industries, Inc.

## 8. Appendices

N/A

## 9. Revision History

Version Number	Amendments/ Reasons for change
01	Initial Release