

<b>Frederick National Laboratory for Cancer Research</b> <small>sponsored by the National Cancer Institute</small>	HPV Serology Laboratory Standard Operating Procedure	
Use and Maintenance of a Compact Digital MicroPlate Shaker		
<b>Document ID: HSL_ EQ_023</b>	Version 2.0	Page 1 of 6

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**1. PURPOSE**

- 1.1. The purpose of this procedure is to describe the proper use and maintenance of the compact digital microplate shaker.

**2. SCOPE**

- 2.1. This procedure applies to the HPV Serology Laboratory located at the Advanced Technology Research Facility(ATRF), Room C2007.

**3. REFERENCES**

- 3.1. Compact digital microplate shaker user manual
- 3.2. HSL\_EQ\_023.01: Compact Digital Microplate Shaker Use and Maintenance Form
- 3.3. HSL\_GL\_001: Waste Disposal at the Advanced Technology Research Facility
- 3.4. HSL\_GL\_002: Equipment Qualification and Calibration in the HPV Serology Laboratory
- 3.5. HSL\_GL\_003: Good Documentation Practices for the HPV Serology Laboratory
- 3.6. HSL\_GL\_004: Laboratory Notebook Control and Use for the HPV Serology Laboratory
- 3.7. HSL\_GL\_008: Laboratory Flow and Gowning Procedures for the HPV Serology Laboratory

**4. RESPONSIBILITIES**

- 4.1. The Research Associate, hereafter referred to as analyst, is responsible for reviewing and following this procedure.
- 4.2. The Scientific Manager or designee is responsible for training personnel in this procedure and reviewing associated documentation.
- 4.3. The Quality Assurance Specialist is responsible for quality oversight and approval of this procedure.

**5. REAGENTS, CHEMICALS AND EQUIPMENT**

- 5.1. Ster-ahol (VWR, Cat # 14003-358 or equivalent)
- 5.2. Wypalls paper towel (Warehouse, Cat # 79300335 or equivalent)

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## 6. HEALTH AND SAFETY CONSIDERATIONS

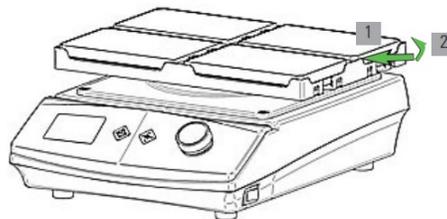
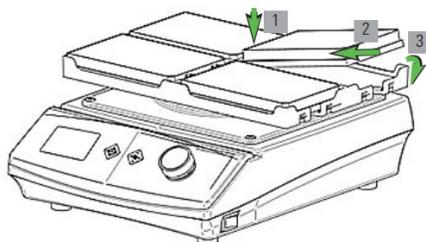
- 6.1. Proper safety precautions should be taken while working in a laboratory setting. This includes, but is not limited to, proper protective equipment such as lab coats, safety glasses, closed-toe shoes, and non-latex gloves.
- 6.2. Refer to the respective SDS when working with any chemicals.
- 6.3. Refer to “HSL\_GL\_001: Waste Disposal at the Advanced Technology Research Facility” regarding waste disposal processes at the ATRF.

## 7. DEFINITIONS

Term	Definition
ATRF	Advanced Technology Research Facility
FME	Facilities, Maintenance and Engineering
HPV	Human Papillomavirus
HSL	HPV Serology Laboratory
SDS	Safety Data Sheets
SOP	Standard Operating Procedure

## 8. OPERATION

- 8.1. Placing and removing a Microplate (see picture below)
  - 8.1.1. Slide and insert Microplate to the direction of the fixing rubber.
  - 8.1.2. If you insert two Microplates, install them diagonally.
  - 8.1.3. When removing the plate, push the outside home of the plate tray to the direction of the fixing rubber. Lift and remove it.



- 8.2. Shaking STOP and START
  - 8.2.1. Turn on the switch at the right bottom of the unit.
  - 8.2.2. Dial the knob and set the desired RPM.
  - 8.2.3. Display returns to previous display about after 10 seconds.

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8.2.4. You can stop the unit if you set SV to 0 or press the dial knob.

### 8.3. Setting the Shaker with a Timer

8.3.1. Press Timer button when the unit stops.

8.3.2. Time input display shows when you press the dial knob.

8.3.3. Input hour by rotating dial knob to right or left direction.

8.3.4. Press dial knob 1 time.

8.3.5. Input minute by rotating dial knob to right or left direction.

8.3.6. Press dial knob 1 time. Display moves to next mode (RPM setting).

8.3.7. Input RPM by dialing the knob. Press dial knob 1 time to save set value and unit starts shaking. Remaining time and set value (RPM) shows on display

8.3.8. During operation, you can check RPM by pressing RPM button.

8.3.9. Display returns to previous display in 10 sec.

8.3.10. Shaking stops and alarms when the time is terminated. If you press dial knob or touch button, display returns to stand-by status.

### 8.4. Stopping the Timer

8.4.1. Press the dial knob during operation.

8.4.2. Choose **STOP YES** by rotating the dial knob to the clockwise.

8.4.3. Press the dial knob. If you press dial knob or Timer button, the ending sound ends.

**Note:** Timer Mode can be cancelled in any step if the Timer button is pressed to get back to standby mode. If the Timer button is pressed again, time or rpm can be set.

## 9. MAINTENANCE

### 9.1. Quarterly Cleaning

9.1.1. Spray the unit with Ster-ahol then wipe using a clean, low-lint wipe.

9.1.2. Document use and maintenance on HSL\_EQ\_023.01: Compact Digital Microplate Shaker Use and Maintenance Form.

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9.2. Annual Maintenance

9.2.1. Facilities, Maintenance and Engineering (FME) or a contracted vendor shall perform an annual calibration and document maintenance on HSL\_EQ\_023.01: Compact Digital Microplate Shaker Use and Maintenance Form,

**10. ATTACHMENTS**

10.1. Not applicable

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**11. REVISION HISTORY**

Revision Start Date	Version #	Changes	Reasons
27Apr17	New	Create new SOP for the use and maintenance of a compact digital microplate shaker.	New SOP.
10Aug17	1.0	BOLD Document ID in header. Add yearly calibration.	Correct typographical and grammatical errors Ensure plate shaker accuracy.

