National University of Singapore
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Doc No			SWP-COE-07		
SAFE WORK PROCEDURE:	Last Rev/Date	00	14 Apr 2010		
Alpha-Step	Current Rev/Date	00	14 Apr 2010		

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# 1. Application to:

All personnel working on the Alpha-Step surface profiler.

# 2. Pre-requisite for Operation of the Alpha-Step:

- 2.1. Must have attended the operation and safety training.
- 2.2. Must be fully understand the system risk assessment
- 2.3. Must be fully qualified to operate the system by him/her self.

## 3. Hazards that may be present:

3.1. The system has no hazard.

#### 4. Personal Protection Required:

- 4.1. Gloves
- 4.2. Cleanroom apparel (garment and shoes)
- 4.3. Tweezers

#### 5. Procedures:

## 5.1. Operating of the Alpha-Step

- 5.1.1. Turn on the Alpha-Step
  - 5.1.1a Make sure the sample stage is at the lowest position. This is to avoid the stylus to scratch the surface of the sample
- 5.1.2. Load the sample
- 5.1.3. Position the sample at the centre of the stage.
- 5.1.4. SLOWLY bring down the stylus to touch the surface of the sample. Move the stylus (x-y adjustment) to the location where the measurement to be taken.
- 5.1.5. Press the start button to scan the surface profile.
- 5.1.6. Levelling a scan
- 5.1.7. Measurement can be taken
- 5.1.8. Once finish, unload the sample.

#### 5.2 Maintenance of the Centrifuge

5.2.1 As and when the system is not working

## 5.3 Specific Processes

5.3.1 To measure the thickness of both thin and thick film. It can identify surface roughness/step size in the tens of Angstroms in the range of 5Å to 3,200kÅ.

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# 6. Communication Frequency:

The Lab Supervisor shall arrange for this Safe Work Procedure to be communicated every once a year and as & when required.

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Approved by: <u>A/Prof Chor Eng Fong</u>