

# University of Minnesota Nano Fabrication Center

## Standard Operating Procedure (DRAFT)

**Equipment Name:** Jelight UVO-Cleaner

**Maintenance Process:** Shutdown/Startup

**Coral Name:** uv-ozone-cleaner

**Model:** 42

**Location:** Bay 4

**Revision Number:** 2

**Revisionist:** Lage Matzke

**Date:** 04-22-08

### 1 Description

The Jelight UVO-Cleaner is a device that relies on Ultraviolet light and ozone to clean organic material from the surfaces of the processed sample.

### 2 Safety

- a** Potentially fatal voltages exist within this machine. Never remove cover while the unit is plugged into an electrical outlet.
- b** Ozone is produced by this unit; thus, appropriate ventilation must be provided for the exhaust. Immediately deactivate the unit if ozone is detected.
- c** The lamp in this unit emits harmful UV radiation; under no circumstances is exposure permissible. Qualified personnel must do servicing.

### 3 Restrictions/Requirements

- a** Must be a qualified user of this system.

### 4 Required Facilities

- a** 120V AC, 3 amps
- b** House exhaust system.

### 5 Definitions

- a** Ozone – an allotrope of oxygen, denoted with the chemical formula O<sub>3</sub>

### 6 Setup

- a** Pre clean samples to save time.
- b** Load samples into removable sample tray.
- c** Adjust side thumbscrews to the appropriate height for the surface of the product to be cleaned
- d** For optimum results, the surface of the parts to be cleaned should be ~ 5mm from lamp.

### 7 Operating Instructions

- a** Close drawer. Safety interlock engages.

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- b** Set cleaning time by pressing the up or down arrow buttons on the timer to the desired process time. This value is to be determined through experimentation.
- c** Press start button to start process. Indicator in center of drawer should light.
- d** When cleaning cycle is complete the timer will sound an audible alarm and the UV lamp will go out.
- e** Open the drawer and remove parts that were cleaned.

### **8 Problems/Troubleshooting**

- a** Notify lab personnel if lamp fails to light.
- b** Stop system and notify maintenance if the presence of ozone is detected outside the cleaner.