

Rev	ECO	Description	Author	Approved by	Date
A	37-350	Initial Release	M. Gabutti	RFGoetze	01/25/16

Massachusetts Institute of Technology
Kavli Institute for Astrophysics and Space Research (MKI)

CLEANROOM MAINTENANCE

Dwg. No. 99-03005

Revision A

December 15, 2015

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1.0 Preface

Revision A is the Initial Release of 99-03005.

2.0 Scope

This document describes the procedure to maintain the flight program cleanroom areas at MKI.

3.0 Precautions

- Refer to Material Safety Data Sheet (MSDS) for Isopropyl Alcohol (IPA) guidance regarding exposure, handling, and storage.
- Handle IPA with gloves in a well-ventilated area. Keep away from heat, sparks, and open flame. IPA evaporates rapidly, keep bottles closed whenever possible.
- Dispose chemically soiled materials per MIT EHS guidelines.
- Utilize O₂ meter when nitrogen purge is active in the cleanroom.

4.0 Materials Required

- Isopropyl Alcohol, 99.5% (IPA) soaked wipes
- Cleanroom suitable polyester wipes
- Tacky roller floor tool
- HEPA vacuum
- UV Black Light, UVP model B100Y, or equivalent

5.0 Personnel Requirements

- ESD Awareness training
- Cleanroom Awareness training

6.0 Procedure

1. Perform cleanroom maintenance (cleaning) every two weeks and on an as-needed basis, as indicated by particle count monitoring.
2. Survey the cleanroom using a UV light prior to performing cleaning.
3. Clean the floor using the tacky roller.
4. Clean the walls and other surfaces with IPA-soaked wipes.
5. If the airborne particle count is above 250 in the Class 1000 cleanroom, use the HEPA vacuum to clean the floor and walls.
6. If the airborne particle count is above 50 in the Class 100 Laminar Flow Bench, use polyester wipes with antistatic surface cleaner to clean ESD mats; don't use IPA on the mats. Use IPA-soaked wipes to clean all other surfaces of the bench.
7. Survey the cleanroom using a UV light after performing cleaning. Perform additional cleaning as needed to ensure all areas and surfaces are suitable for lab operations.
8. Dispose all soiled materials as directed by MIT EHS guidelines.
9. Record the cleaning event in a logbook and note any special observations.
10. Notify the Mission Assurance and I&T Managers if a contamination issue exists in the cleanroom.