# Cleaning Mass Spectrometer (MS) Source Parts Using the MS Cleaning Kit

## cat.#s 27194 – 27196

**Restek's Mass Spectrometer (MS) Cleaning Kit** includes the following supplies, which are commonly recommended for cleaning the MS source on most instruments.

- Lint-free nylon gloves, 4 pairs (2 small and 2 large), cat.# 27196
- Lint-free cotton cloth, 10 sheets (9" x 9" each), cat.# 27196
- Micro Mesh 3600, 4 sheets (4" x 6" each), cat.# 27196
- Low speed Dremel® tool (included in cat.# 27194)
- Aluminum oxide cleaning powder, cat.# 22685
- Cotton-tipped applicators
- Large and small tweezers
- Septum puller, cat.# 20117

**Figure 1**


**Figure 2**

The following are recommended procedures for cleaning the MS source. These procedures are only guidelines for cleaning the source—the manufacturer's recommendations should be followed at all times.

### Disassembling the MS Source

1. Vent and turn off the mass spectrometer following the instrument manufacturer's guidelines.
2. Allow the source to cool before disassembling.
3. Always wear nylon gloves when disassembling the MS source. This will prevent contamination of the source parts. Use one pair of nylon gloves for disassembly and cleaning of the source; then use another pair for re-assembly.
4. Place the source on the lint-free cloth and disassemble according to the manufacturer's instructions.

### Cleaning the MS Source

1. Stainless steel parts on the MS source can be cleaned using the Dremel® tool, the Micro Mesh 3600 abrasive cloth, or a combination of both.
2. Mix a liquid slurry of the aluminum oxide cleaning powder using methanol or water in a clean beaker.
3. Break off a cotton-tipped applicator approximately 2 inches from the cotton tip and insert it into the Dremel® tool as shown in Figure 2.
4. Apply a small portion of the aluminum oxide powder slurry onto the cotton tip of the applicator.
5. Using low speed, clean the stainless steel parts by gently moving the tip of the tool in a circular motion across the parts. When cleaning with the Dremel® tool, be careful not to press too hard on the stainless steel parts.
6. Alternately, the Micro Mesh 3600 abrasive cloth can be used to clean the MS parts, instead of the Dremel® tool.
7. After cleaning, rinse the parts with methanol or water and dry immediately.
8. Use a clean cotton swab and solvent to remove any remaining residue, then sonicate the parts in an appropriate solvent for approximately 5 minutes.
9. Using both a polar solvent (e.g. methanol) and a nonpolar solvent (e.g. methylene chloride) is recommended. **Do not use a solvent which is a target compound for analysis.**
10. After sonication, place the parts in a clean beaker, cover with aluminum foil, and place in a GC oven. Heat at 110°C for 15 minutes.
11. Cool the parts and place them on a clean lint-free cloth for reassembly.
12. Using a clean pair of nylon gloves, re-assemble the source according to the manufacturer's instructions.

**Call Technical Service at 800-356-1688 or 814-353-1300, ext. 4 (or your Restek representative) if you have any questions about this product or any other Restek product.**

RESTEK
*Turning Visions Into Reality*

ISO 9001:2000 cert.# FM80397

**#200-00 [007]**
Rev. date: 10/09

**Restek U.S.** • 110 Benner Circle • Bellefonte, PA 16823
phone: 814-353-1300 or 800-356-1688 • fax: 814-353-1309 • **www.restek.com**
**Restek France** • phone: 33 (0)1 60 78 32 10 • fax: 33 (0)1 60 78 70 90 • e-mail: restek@restekfrance.fr
**Restek Ireland** • phone: 44 2890 814576 • fax: 44 2890 814576 • e-mail: restekeurope@aol.com
**Thames Restek U.K. LTD** • phone: 44 1494 563377 • fax: 44 1494 564990 • e-mail: sales@thamesrestek.co.uk
**Restek GmbH** • phone: +49 (0) 6172 2797 0 • fax: +49 (0) 6172 2797 77 • e-mail: info@restekgmbh.de