

## Merlin Microseal™ Adapter Kit #61-12 for Shimadzu Inlets

This kit adapts Shimadzu GC inlet systems for use with a Merlin Microseal™ using 23 ga needles for syringe injection, headspace, and Solid Phase Microextraction (SPME).

**Contents:** Microseal nut, adapter, O-ring support, 2 ea size 004 Viton O-rings, 2 ea 21-01 Microseals.

**Advantages:** The Microseal is a high performance microvalve replacement for conventional septa. The design allows the needle to slide through the sealing elements of the Microseal without piercing or puncturing any material or shedding particles into the liner. This eliminates contamination of the inlet liner with septum particles which produce septum bleed "ghost peaks" and which may adsorb or react with sensitive sample components. Microseals last much longer than conventional silicone septa.

**Operating Requirements:** Use only 23 ga (0.63 mm, .025" dia.) cone tip syringe needles or SPME probes. Note that SPME probes are available in both 23 and 24 ga. The 24 ga. probes will not seal reliably with the Microseal.

Recommended Operating Conditions:

Injection port temperatures: 50 - 450 C.  
Pressure: 3 - 100 psi (20 - 700 kPa)

### Replacement Part Numbers:

Microseal	21-01
O-ring	61-10-0

**Safety Precautions:** Follow the directions and safety precautions in your instrument manual for replacing the septum. The injection port may be hot and under pressure. Wear safety glasses. Use caution with flammable carrier gases such as hydrogen.

### Installation:

1. Prepare instrument for septum replacement.
2. Remove the Shimadzu nut and septum.
3. Clean up septum particles from the septum cup.
4. Install a clean injection port liner. For best performance place some glass wool in the liner to wick sample from the needle tip.
5. Install the O-ring on the O-ring support. (Use a fresh O-ring when re-installing the adapter.)
6. Insert the O-ring support into the septum cup with O-ring on top.
7. Screw the adapter tightly onto the port.
8. Press the Microseal into the adapter.
9. Screw the Microseal nut onto the adapter finger tight.

**Checking for Leaks:** Measure leaks at the nut using a soap-film flow meter. Thermal conductivity or helium leak detectors are much too sensitive and do not measure actual leak rate. Small leaks add to the septum purge and will not affect chromatographic results as long as system pressure is maintained. Replace the Microseal when the leak rate reaches 5 to 10 mL/min.

Merlin Microseal™ is a trademark of Merlin Instrument Company  
Half Moon Bay, CA 94019. For more information see [www.MerlinIC.com](http://www.MerlinIC.com)

