Headspace Steam Cleaning Procedure

Steam cleaning removes components of the sample that could stick to the surfaces of the Sample loop, flow paths and valves. For example, polar compounds tend to stick to these surfaces and may appear as carryover when running solvent or air blanks after samples. For safety reasons, Agilent only recommends water as the cleaning agent. The success of the cleaning procedure will vary depending on your application. Check the results to assess the value of steam cleaning.

**Caution** Disconnect the transfer line from the gas chromatograph or 5973 MSD. Injecting water vapor into the GC will damage the column. Injecting water vapor directly into the MSD may shorten the life of analyzer components. You may have to cool down the GC or vent the MSD before disconnecting the transfer line.

**WARNING** Use vial septa that can handle the temperature and pressure associated with this procedure. Agilent recommends septa part number 9301-0719, tan PTFE/ white silicone septa, –60°C to 125°C. These are the septa provided in the part number 5182-0840 preassembled 20-ml vial kits.

1. Prepare the GC: Reduce the temp of Oven, Injector, Detector, and Valve Boxes. You can switch off the GC after cooling.
2. Prepare MSD: Vent the MSD. You can switch off the MSD after vent completion.
3. Prepare 23 vials: 20 vials with 1 ml of distilled water and 3 air blanks.
4. Disconnect the transfer line. Set the carrier flow through HSS so that it is less than 100 mL/min. In G1290 and G1883 models HSS you can set the carrier gas through manual flow Controller and pressure regulator. In G1289 and G1888 model HSS you may have to connect an External controlled source for the flow or you can use Auxiliary EPC if available with your GC.
5. Enter the following parameters on the headspace sampler keypad:
6. Start. It takes about 70 minutes to complete.

**Function Parameter Settings**
- **Zone Temps:** Oven Temp 125°C, Loop Temp 140°C, Transfer line temp 150°C
- **Event Times (minutes):** GC Cycle time 2.5, Oven Equilibration Time 15.0, pressurization time 0.0, Loop Fill Time 0.2, loop Equilibration time 0.2, Inject Time 1.
- **First Vial 1, Last Vial 23, Shake 0 (off).**