

Gas Chromatography/  
Mass Spectrometry

## Custodion Specifications



Our Custodion portfolio includes novel sample collection and injection devices used for in-field sampling and gas chromatographic (GC) injections. When used with the Torion® T-9 portable GC/MS system, the Custodion sampling devices are a quick, easy, and reliable way to collect and analyze complex samples in the field.

The Custodion handles were designed with the field user in mind. They're made of hardened plastic for robust, durable operation, even while wearing heavy protective gear. The push-button trigger on top operates like a ballpoint pen. Each sampler comes with a screw-on/off cap to protect your samples during transport and storage.

The entire Custodion portfolio includes three different sampling devices that provide you with an all-encompassing, flexible solution that meet the diverse, changing needs of sample analysis in the field.

Custodion SPME (solid-phase microextraction) contains a 1 cm fiber coated with a material that traps, concentrates and removes chemical compounds from the sample matrix by adsorption. SPME is ideal for qualitative screening of liquid, solid, gas and soil samples by sampling the headspace over the sample matrix. SPME can be directly exposed to water samples to extract chemical contaminants, as well as collect VOC profiles of fuels, fragrances and food/beverages.

Custodion CME (coiled microextraction) contains a 1 cm coiled wire that traps a liquid matrix sample via capillary action. The liquid/solvent in the coil is evaporated, and the chemical contaminants remain trapped on the coiled wire before injecting the sample into a GC. CME is ideal for solids dissolved in a solvent, or for liquids that do not have an affinity for SPME such as liquid explosives or samples containing semi-volatiles, such as pesticides and essential oils. The CME technique is especially useful for sampling drugs, narcotics, powders, pills etc. in the field.

Custodion NT (needle trap) is essentially a miniaturized thermal desorption tube, a small 19 gauge tube that is packed with sorbent materials. The NT interfaces with a small hand-held pump that pulls air and gas samples through the NT where contaminants are absorbed into the NT packing material. NT is small enough to directly inject the sample into a GC port and is ideal for quantitative analysis of air and gas contaminants when an internal standard is added.

All of our Custodion devices are designed to be used with the T-9 injection port interchangeably. The user can easily transition from using one Custodion sampling device to the next with continual sample analysis and without changing anything on the T-9.

Device	Solid Phase or Packing Material	Analysis Type	Sampling Method	Applications	Sampling Time <sup>1</sup>	Estimated LOD <sup>2</sup>
Custodion SPME	PDMS/DVB	Qualitative & Quantitative e	Headspace, Direct Immersion in Water and Gas	Arson Investigations, CWAs, First Response, VOC Profiling	~30 sec – 15 min	High ppb Range
Custodion CME	None	Qualitative & Quantitative	Liquid Immersion	Narcotics, Explosives, Essential Oils	~3 min	Mid ppb Range
Custodion NT	Tri-bed Includes: Tenax TA, Carboxen 1016 and Carboxen 1003	Quantitative	Air, Gas	Environmental Air, Air Quality	~1 min – 15 min	ppb Range (Used Alone)

1. Sampling times are typically in a range of seconds. However, Custodion sampling times can take up to 15 minutes to absorb even the most extreme samples.
2. LOD is estimated based on most compounds suitable for that sampler but will vary from compound to compound.