

## Operational Principle of Selective Sampler (SS-1010E)

Selective Sampler (SS-1010E) we have developed allows any temperature zone of EGA profile obtained in Evolved Gas Analysis (EGA) with Double-Shot Pyrolyzer® to be introduced into GC.

The operational principle of Selective Sampler is shown in Fig. 1. The selective sample introduction adaptor (SS adaptor) installed at the bottom of the GC injection port is connected to Gas flow controller with a built-in EM valve. If sample gas containing targeted components is to be introduced into the GC column, the EM valve is closed so that the system operates as a normal GC (see left figure of Fig. 1). When sample gas is not to be introduced into the column, the EM valve is opened to drive pressurized carrier gas into the GC injection port (right figure of Fig. 1) Thus, the gas pressure difference between the atmosphere gas from the pyrolyzer and He gas from the gas flow controller will drive the sample gas out through the split vent. This Flow Switching system is simple in structure with least dead space. Also, because there is no rotational valve with exposed metal surface in the flow pass of sample gas, adsorption of sample components can be held minimal.

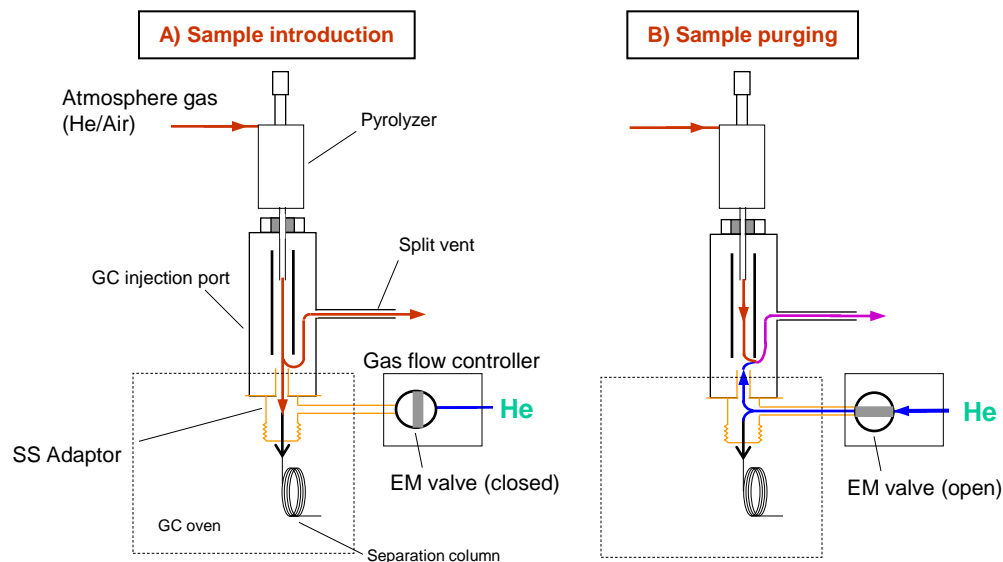


Fig. 1 Operational Principle of Selective Sampler

1) Hosaka, et al., 1st Polymer Analysis Symposium, I I-14, p109-110 (1996)

**Keyword : Selective Sampler, Evolved Gas Analysis**

**Applications : General Polymer Analysis**

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Double-Shot Pyrolyzer® is a registered trademark of Frontier Laboratories Ltd.



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