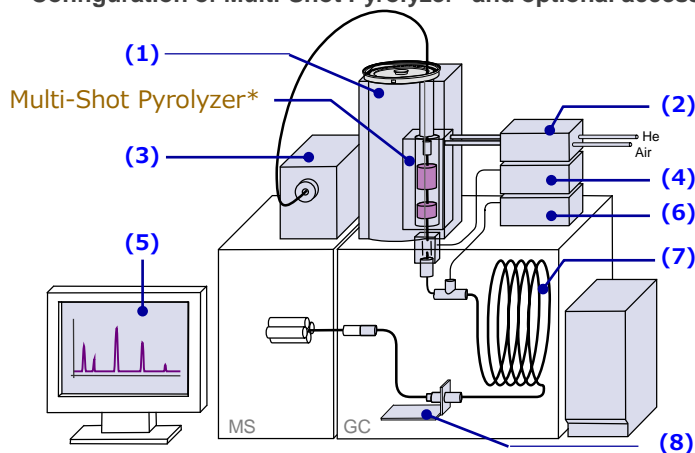


Py-GC/MS system

Configuration of Multi-Shot Pyrolyzer* and optional accessories



* All these accessories are compatible with Single-Shot Pyrolyzer.

(1) Auto-Shot Sampler (AS-1020E)

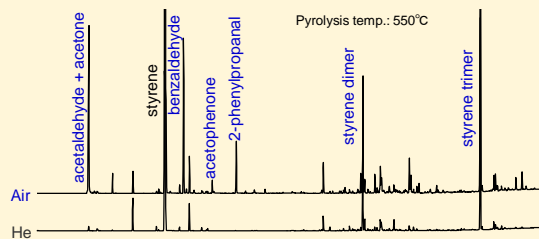
Up to 48 samples can be automatically run with enhanced reliability and reduced workload.



Pyrolyzer is located in the housing of Auto-Shot Sampler.

(2) Carrier Gas Selector (CGS-1050Ex)

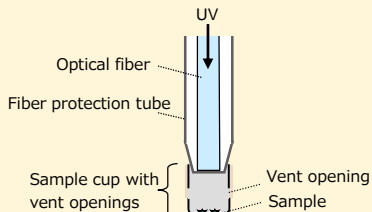
The device allows switching of atmospheric gases e.g., He and air.



Pyrograms of polystyrene obtained in air and He

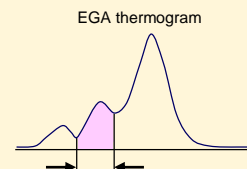
(3) Micro UV Irradiator (UV-1047Xe)

With a strong Xe UV light source, photo, thermal, and oxidative degradation of polymers can rapidly be evaluated.



(4) Selective Sampler (SS-1010E)

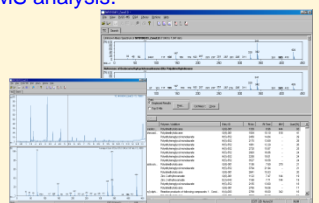
Any temperature zone in EGA thermogram, that is heart-cut either manually or automatically, can be introduced to a separation column.



Any temperature zone can be heart-cut for GC/MS analysis.

(5) F-Search System (Libraries and search engine)

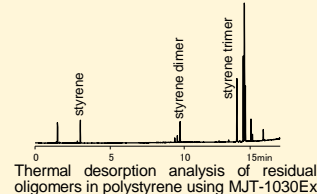
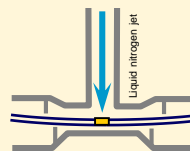
This software system supports identification of polymers and additives from data obtained by evolved gas analysis, thermal desorption, or pyrolysis GC/MS analysis.



Chromatogram and result of mass spectral search

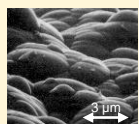
(6) MicroJet Cryo-Trap (MJT-1035E)

By blowing liquid nitrogen jet to the front of separation column, volatile compounds are cryo-trapped while maintaining the temperature at -196°C using only one third of the amount of liquid nitrogen required for competitors products. It supports automated analysis.

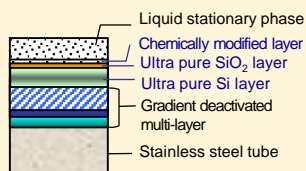


(7) Ultra ALLOY® Metal Capillary Column

By multi-layer gradient deactivation treatment, these separation columns have high flexibility and high temperature and contamination resistances.

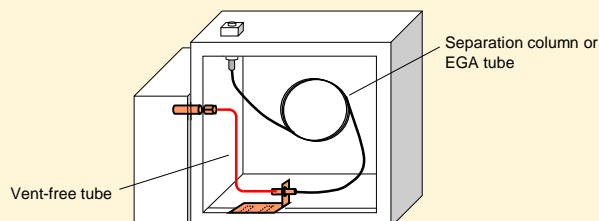


SEM image of inner surface of stainless steel tube after deactivation treatment.



(8) Vent-free GC/MS Adapter

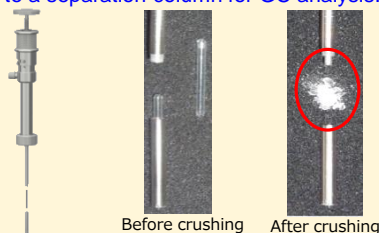
Without venting MS, separation column and/or EGA tube can be switched.



Other optional accessories

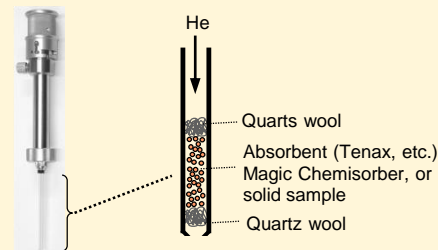
On-line Micro Reaction Sampler (PY1-1050)

Sample and reagent are sealed in a reaction capsule, then are reacted under high temperature and pressure. Products are introduced online to a separation column for GC analysis.



Micro Thermal Desorption Sampler (PY1-1060)

This is used for thermal desorption analysis of volatiles captured by absorbent.



Magic Chemisorber (MC)

Two types of solid-phase extraction devices for thermal desorption analysis.

- MC-PEG : PEG (polyethylene glycol) is used as a stationary phase, featuring a high selectivity toward polar compounds.
- MC-PDMS : Non-polar PDMS (polydimethylsiloxane) is used as a stationary phase.

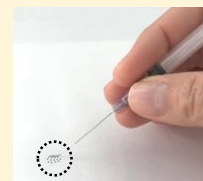


Micro Sample Collector (MSC)

This is a useful tool used to collect a small amount of powdered, liquids or paste-like materials that are difficult to pick up using tweezers.



- Sampling a solid



Micro-puncher

Small disc samples can be obtained by punching out from a thin sample piece. Seven varieties ranging from 0.5 to 5 mm inner diameters are available.



- Cutting into disc samples



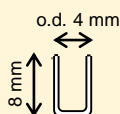
Sampling Tool Kit 01 & 02

The kits contain a set of useful tools for sampling polymers. By selecting the right tool for the form of sample, you can collect samples easily.



Eco-Cup G series

Sample cups made of transparent Pyrex glass. The amount of sample, color changes, and residues can easily be observed.



- Thickness: 0.5 mm
- Volume: 50 μ L
- With and without quartz treatment

Polymer Coated Cup G

Auto-Shot Sampler can be used in analysis of low boiling phthalates using thermal desorption GC/MS. Simply add phthalates standard solution and ready to use.



- Volume : 50 μ L
- PVC film thickness : approx. 2.4 μ m (approx. 120 μ g)
- Material : Pyrex glass (sample cup)
PVC (coated film)
- Max use temp. : 450 $^{\circ}$ C

Phthalate-free Quartz Wool

Ultra clean quartz wool and ready to use without any further treatment. Contains extremely low level of seven phthalates guaranteed by test certificate.



- Material : Quartz
- Max use temp. : 1050 $^{\circ}$ C
- Test certificate of the level of seven phthalates included.

RoHS-Cup LN

These are single use disposable sample cups specially made for phthalates analysis.



- Volume: 80 μ L
- Material : Stainless steel
- Max use temp. : 700 $^{\circ}$ C

Detailed product catalogs are available from Frontier-Lab website.

Use the QR code or the URL on the right. <http://www.frontier-lab.com/english/catalogue/>

