

# Features of Double-Shot Pyrolyzer® PY-2020D & iD

## Part 1 : Two Guaranteed Performance Specs

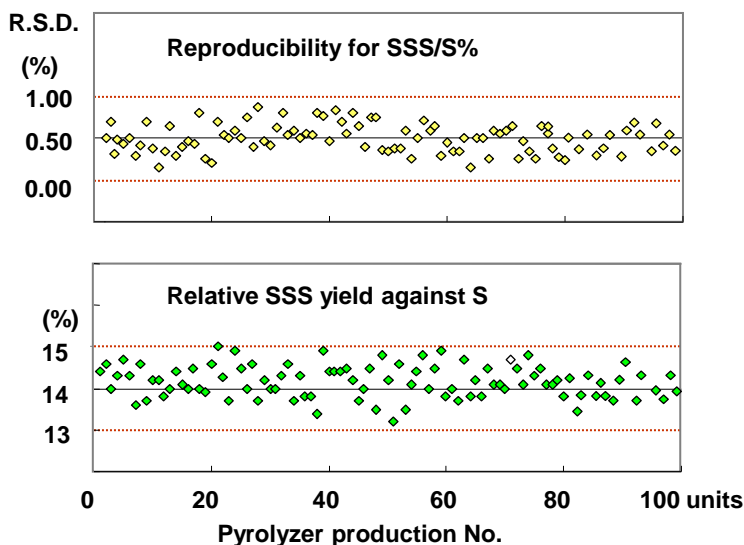
### High Performance and High Reliability of Pyrograms

A newly developed pyrolysis furnace and controller by Frontier Laboratories make it possible to guarantee the reproducibility of pyrograms. Frontier guarantees that in styrene pyrolysis at 550°C, the response ratio of styrene trimer to monomer is 14 % +/- 1.5%, and the relative standard deviation (RSD) is less than 3% using Flame Ionization Detector.

Another guarantee Frontier offers is an evidence for complete deactivation of the flow path from the sampler to the detector, and minimum dead volume in the sample's flow path (see Technical Note PYT-002E)

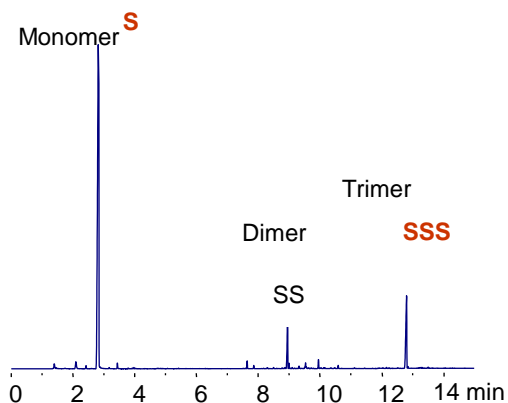
### Polystyrene Response Ratio Precision and Reproducibility Among 100 Different Pyrolyzers

#### Precision of Trimer/Monomer peak area ratios



#### Pyrogram of polystyrene at 550°C

Ultra ALLOY-5, 30m, 0.25mm id, 0.25um at 70-300 °C, 20°C/min,



**Keywords :** Basic Performance, Reproducibility Among Pyrolyzers, Polystyrene

**Products used :** Multi-functional pyrolyzer

**Applications :** Polymer Chemistry, Forensic Science, Environmental Science

**Related technical notes :**

Please forward your inquiries via our web page or send us a fax message.

**R&D and manufactured by :**  
Frontier Laboratories Ltd.

Phone: (81)24-935-5100 Fax: (81)24-935-5102  
<http://www.frontier-lab.com/>