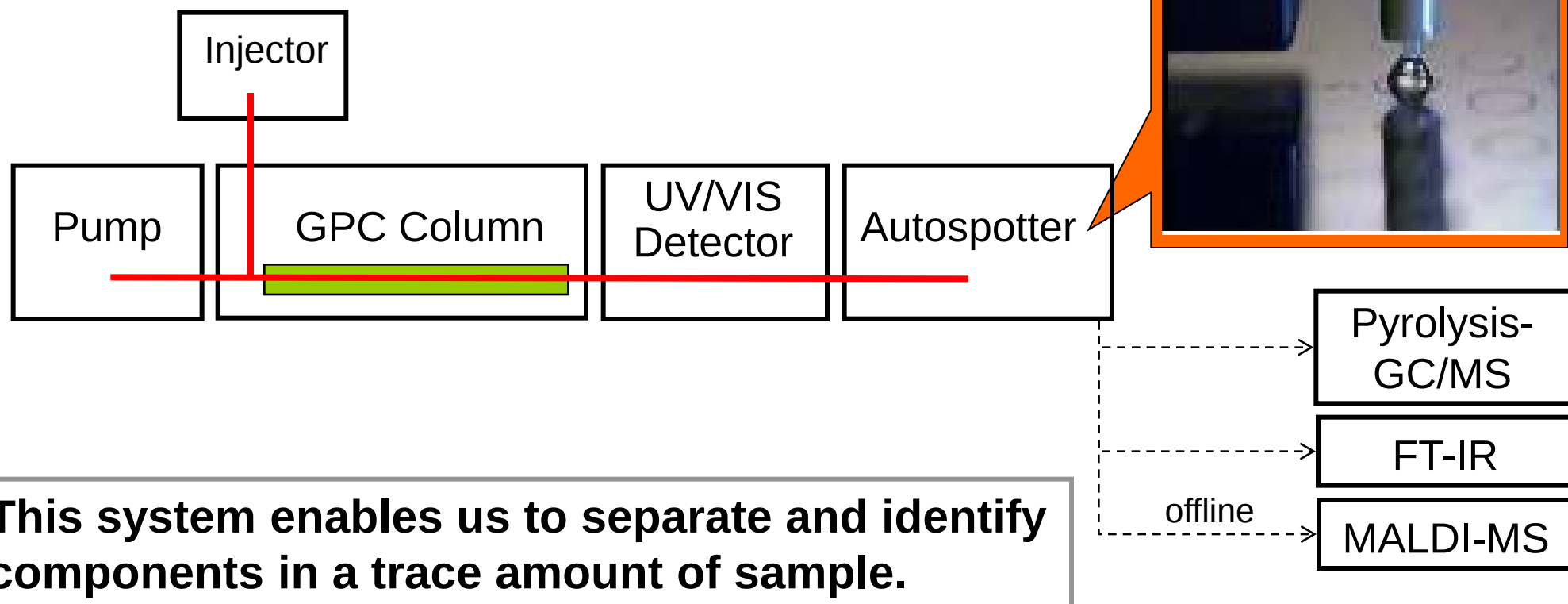


microGPC fractionation System

Schematic diagram

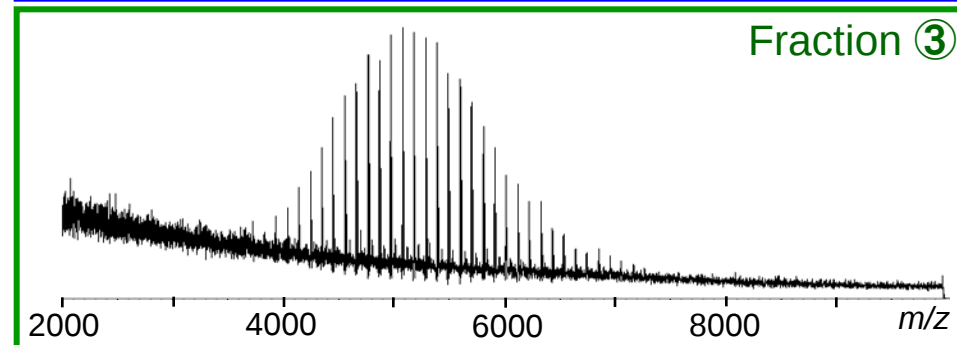
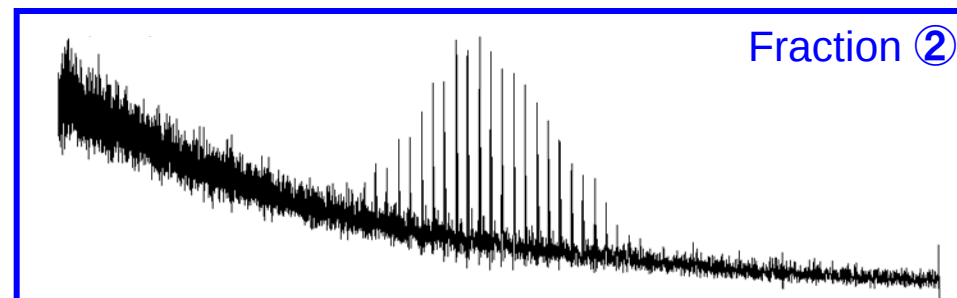
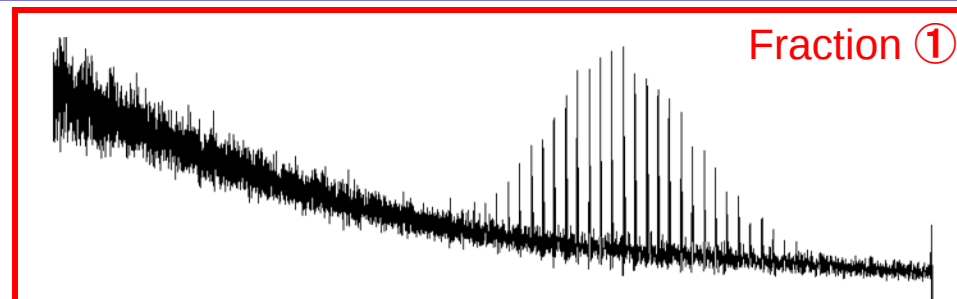
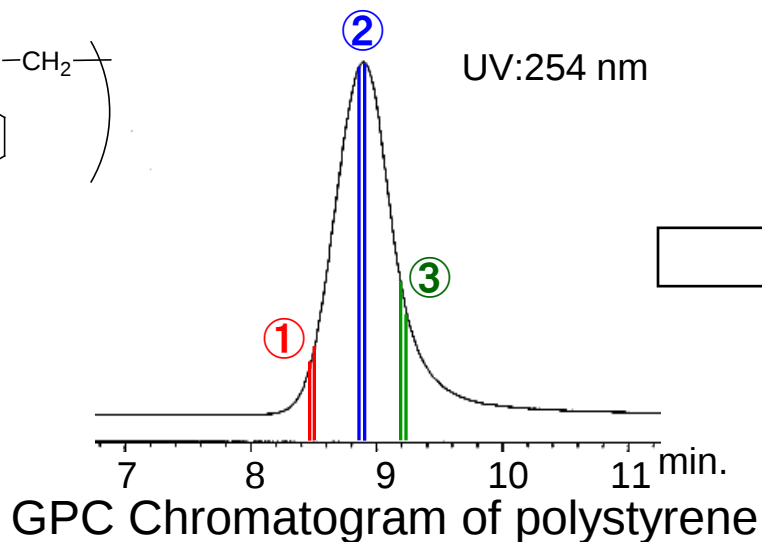
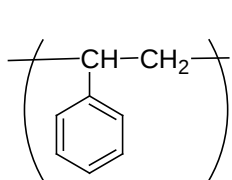
The eluents are spotted on the sample plate or sample cup with a constant interval.

Sample Volume: tens micrograms



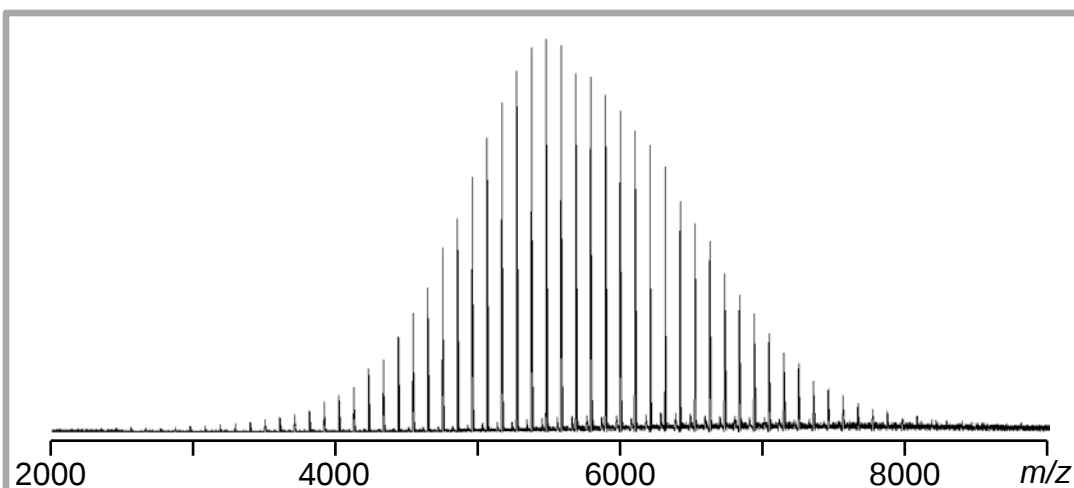
Analysis of Polystyrene standard (MALDI-MS)

Polystyrene standard ($M_w : 5.97 \times 10^3$)



Mass spectra of fractions

Fractions have narrower distributions.



Mass spectrum of polystyrene before fractionation

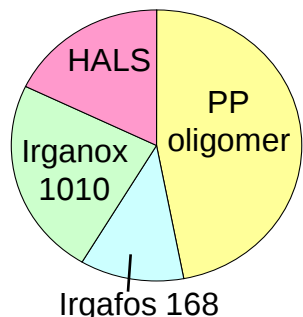


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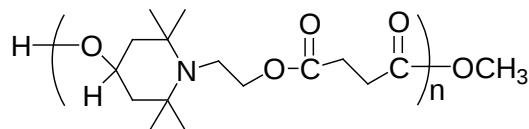
Analysis of additives in PP material (MALDI-MS)

Model sample

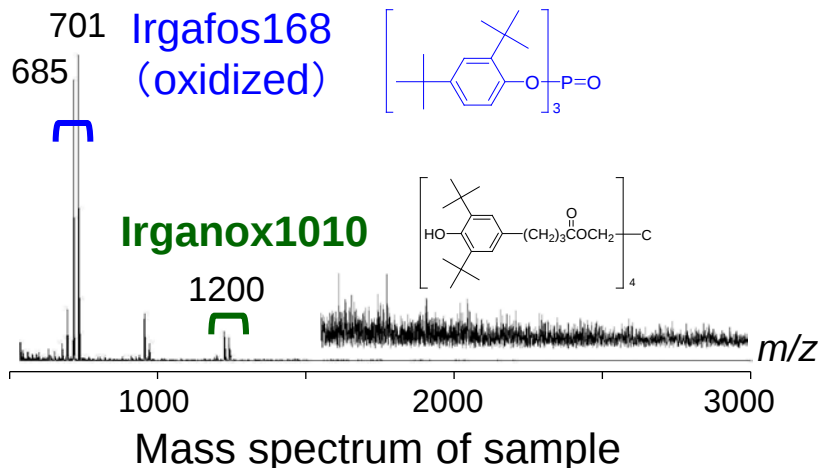
(Chloroform extracts of PP material)



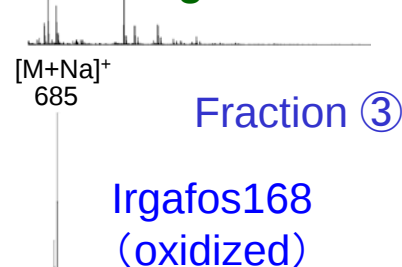
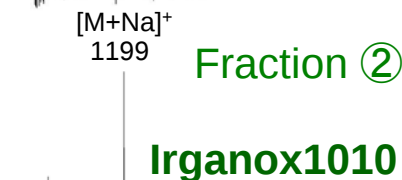
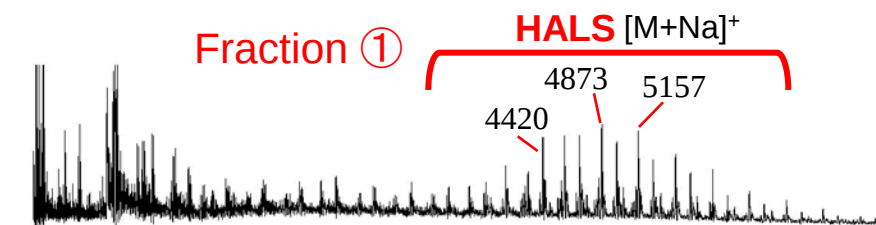
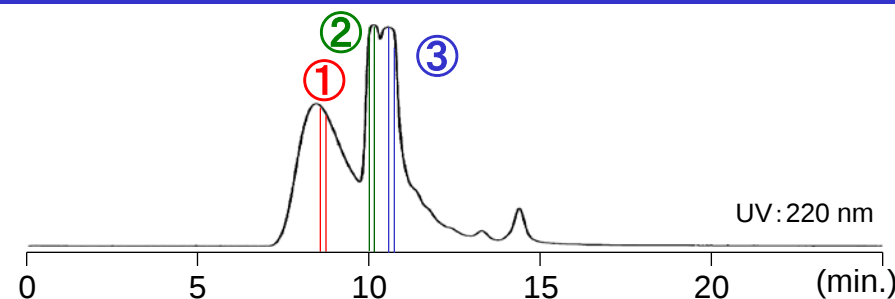
HALS (Oligomeric type)



- No characteristic UV absorption
- Molecular weight: ca. 4000



The peaks derived from the HALS were not observed because of the interference of the antioxidants.

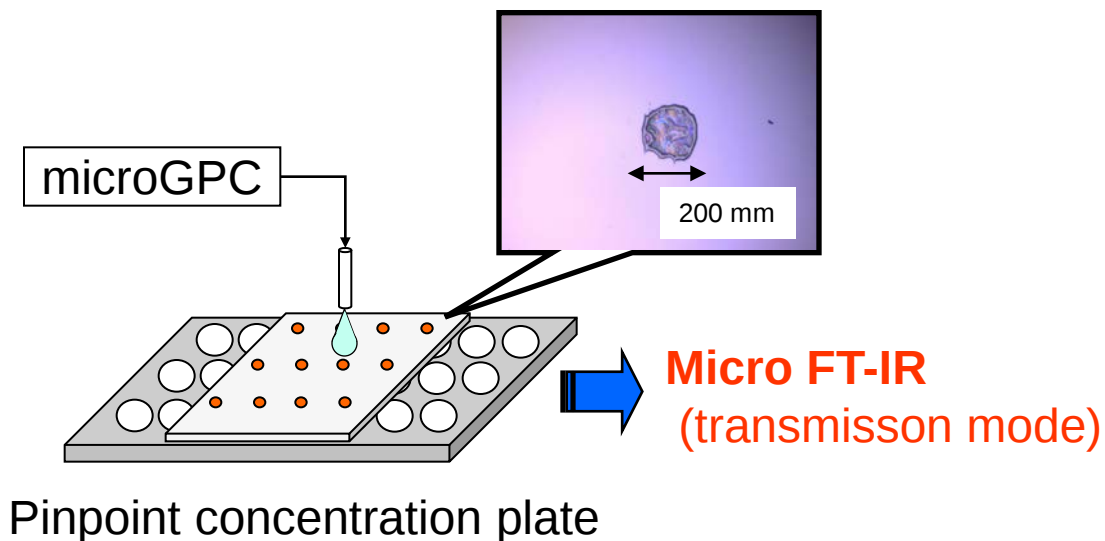


HALS was detected by using **microGPC fractionation**.

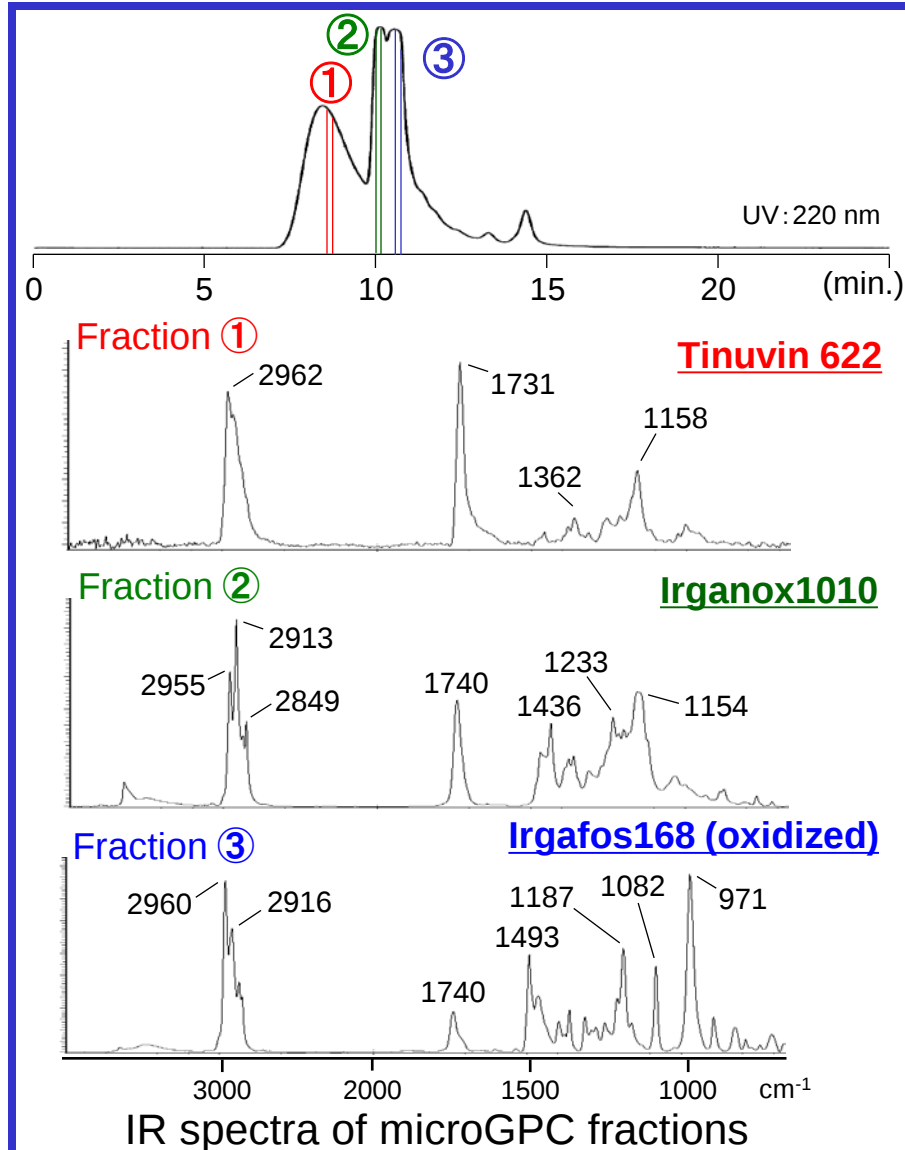
Mass spectra of microGPC fractions

Analysis of additives in PP material (IR)

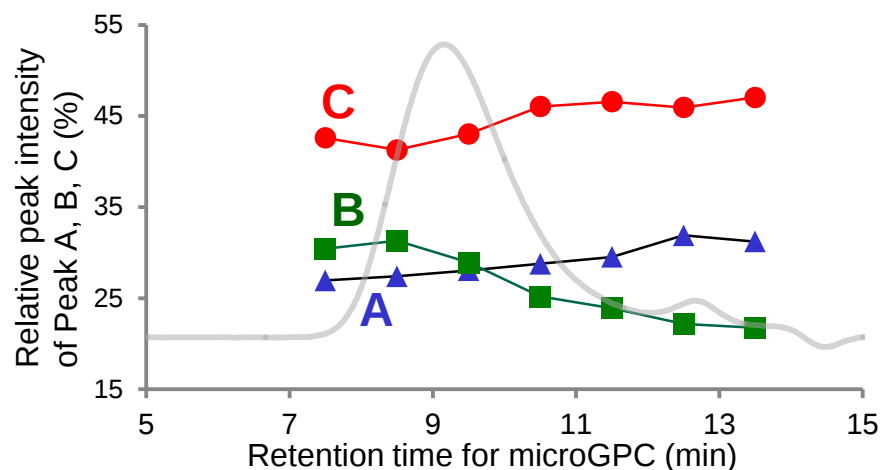
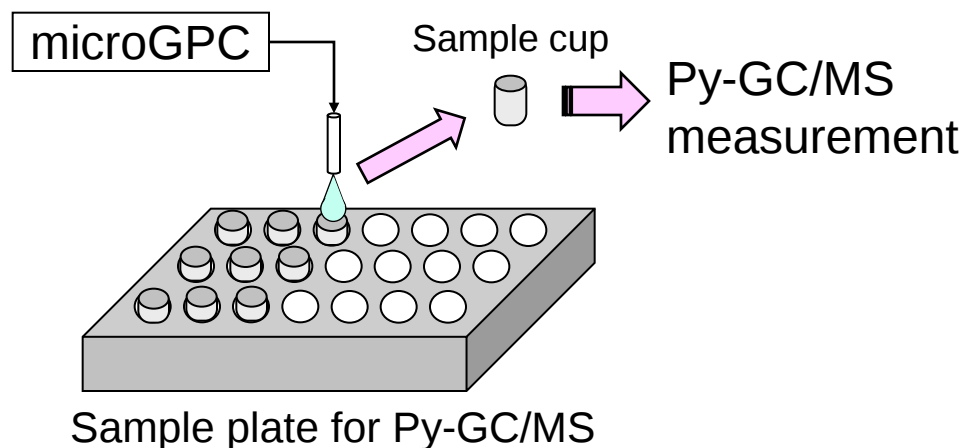
Pinpoint Concentration Technique



Pinpoint concentration technique allows to obtain IR spectrum by once fractionation on pinpoint concentration plate.



Composition Analysis of Copolymer (Py-GC/MS)



Monomer compositions of copolymer change against its molecular size.

