

## Sample Results Summary Sheet

Please return this form to the Curator for each allocated Sample

Sample ID: RA-QD02-0044

PI: Hiroshi Naraoka

**Type and date of analysis performed:**

Solvent-extractable and non-volatile organic compounds analysis by ToF-SIMS (Time of Flight-Secondary Ion Mass Spectrometry) for organic solvent extract with RA-QD02-0017 & -0064.

**Elements or phases identified:** (Mg, Si, olivine, pyroxene, aromatic carbon, etc.)

Not determined

**Contaminant phases identified:** (Al, SUS, carbon particles, etc.)

Not determined

**Sample handling:** (e.g. exposed in atmosphere, embedded in resin, polished, sliced by FIB or UMT)

Extracted with dichloromethane/methanol (1/1, ~0.2ml x3) on a clean bench under atmosphere

**State of sample pre-analysis:** (e.g. N2 hold, atmosphere, resin embedded, polished section, UTS) (please describe treatments and/or modifications for the sample you have done before your analysis)

In a diamond holder after Raman and Infra-Red spectroscopy measurement.

**State of sample post-analysis:**

(N2 hold in sample holder, atmosphere, resin embedded, polished section, UTS)

(partially damaged by electron beam, spotted by Ga beam, neutron activation)

(consumed by laser ablation)

(unexpected breakup, into # pieces)

(Lost : reason)

Resin embedded and stored under N2 for Synchrotron-Radiation tomography

**Analysis data Notes:** (summary of the attached analysis data and/or images)

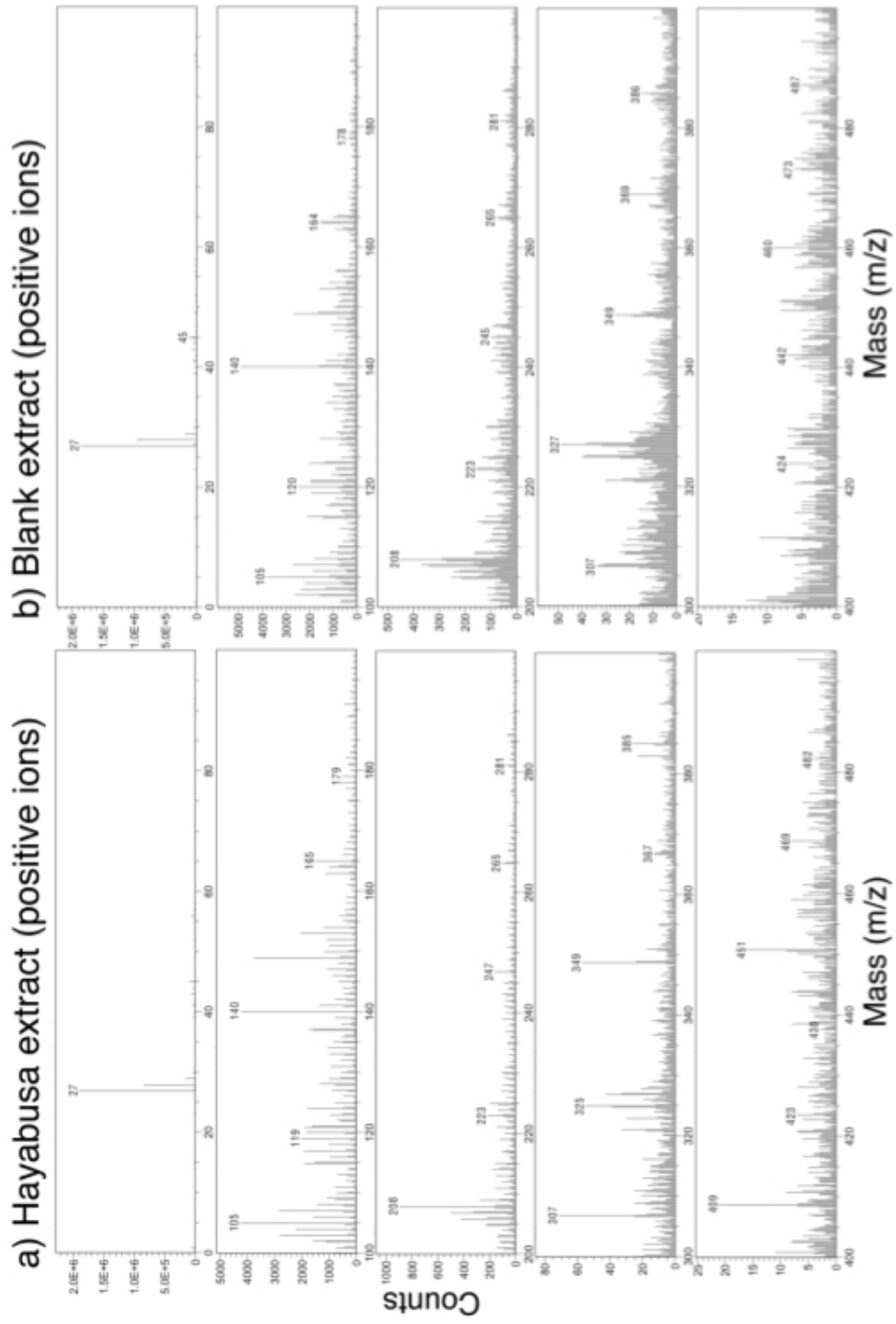


Fig. 5. Mass spectra of positive ions in ToF-SIMS analysis. a) Hayabusa particles extract, and b) blank extract.

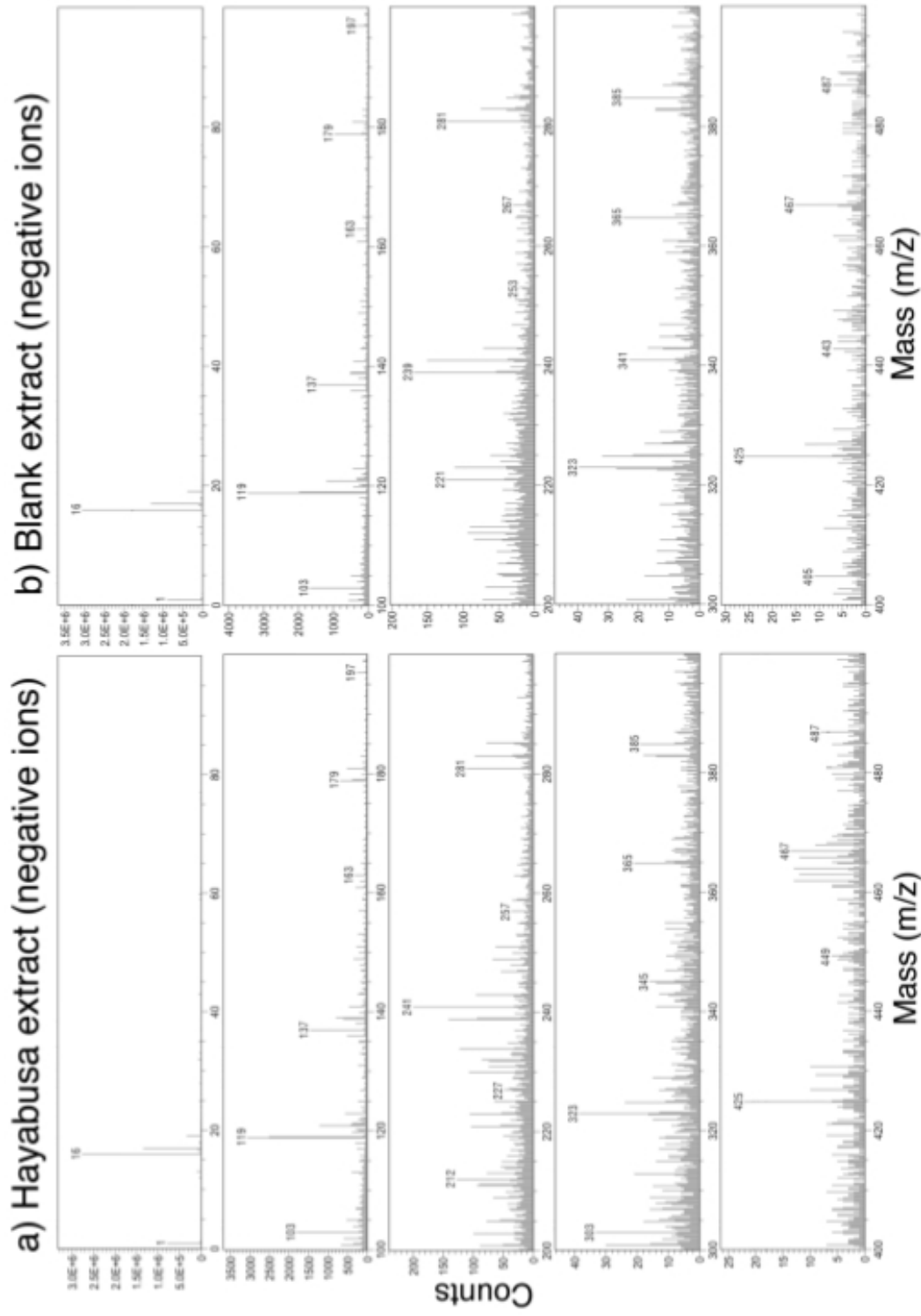


Fig. 6. Mass spectra of negative ions in ToF-SIMS analysis. a) Hayabusa particles extract, and b) blank extract.