

Sample Results Summary Sheet

Please return this form to the Curator for each allocated Sample

Sample ID: RA-QD02-0017

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-QD02-0044 & -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)

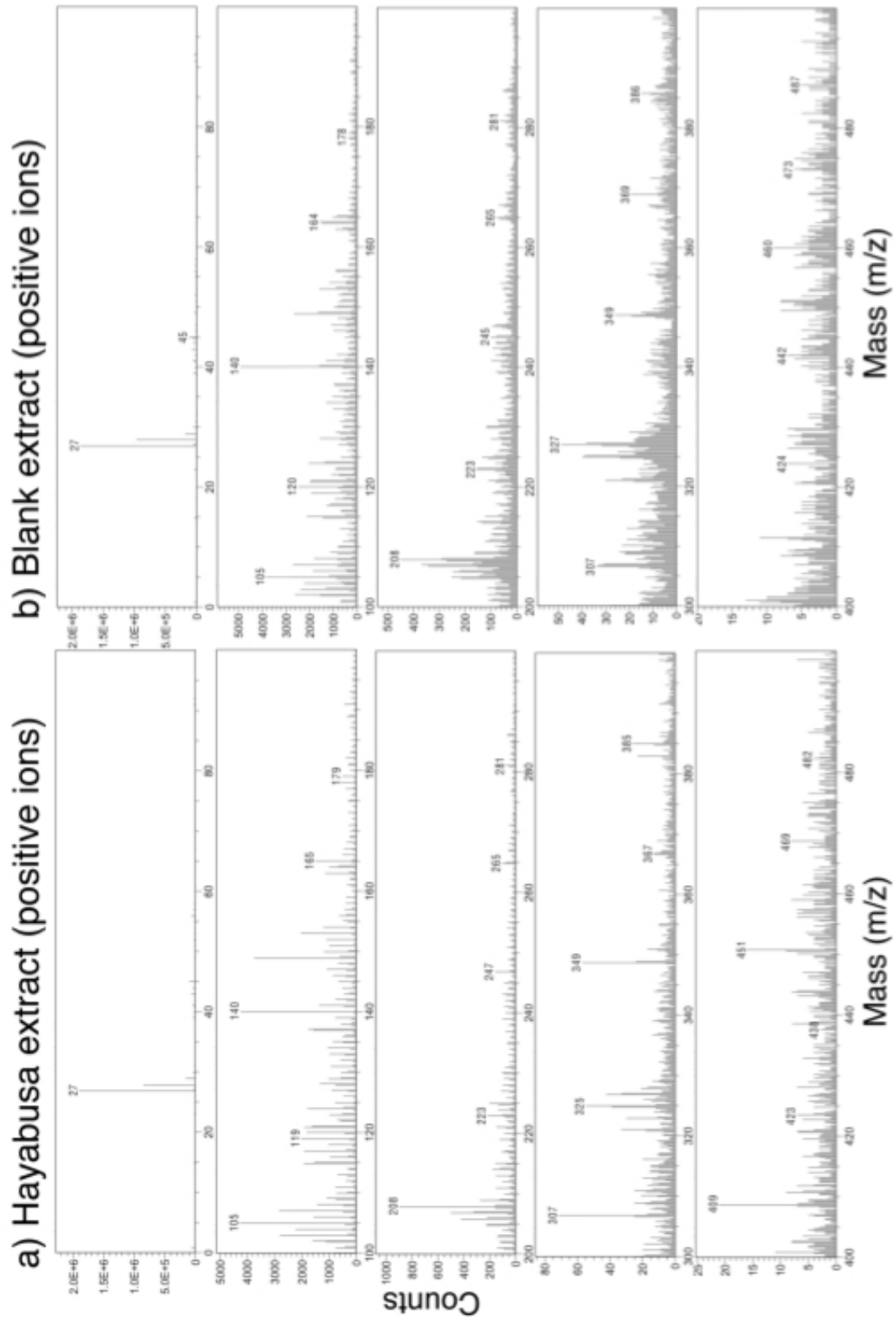


Fig. 5. Mass spectra of positive ions in ToF-SIMS analysis. a) Hayabusa particles extract, and b) blank extract.

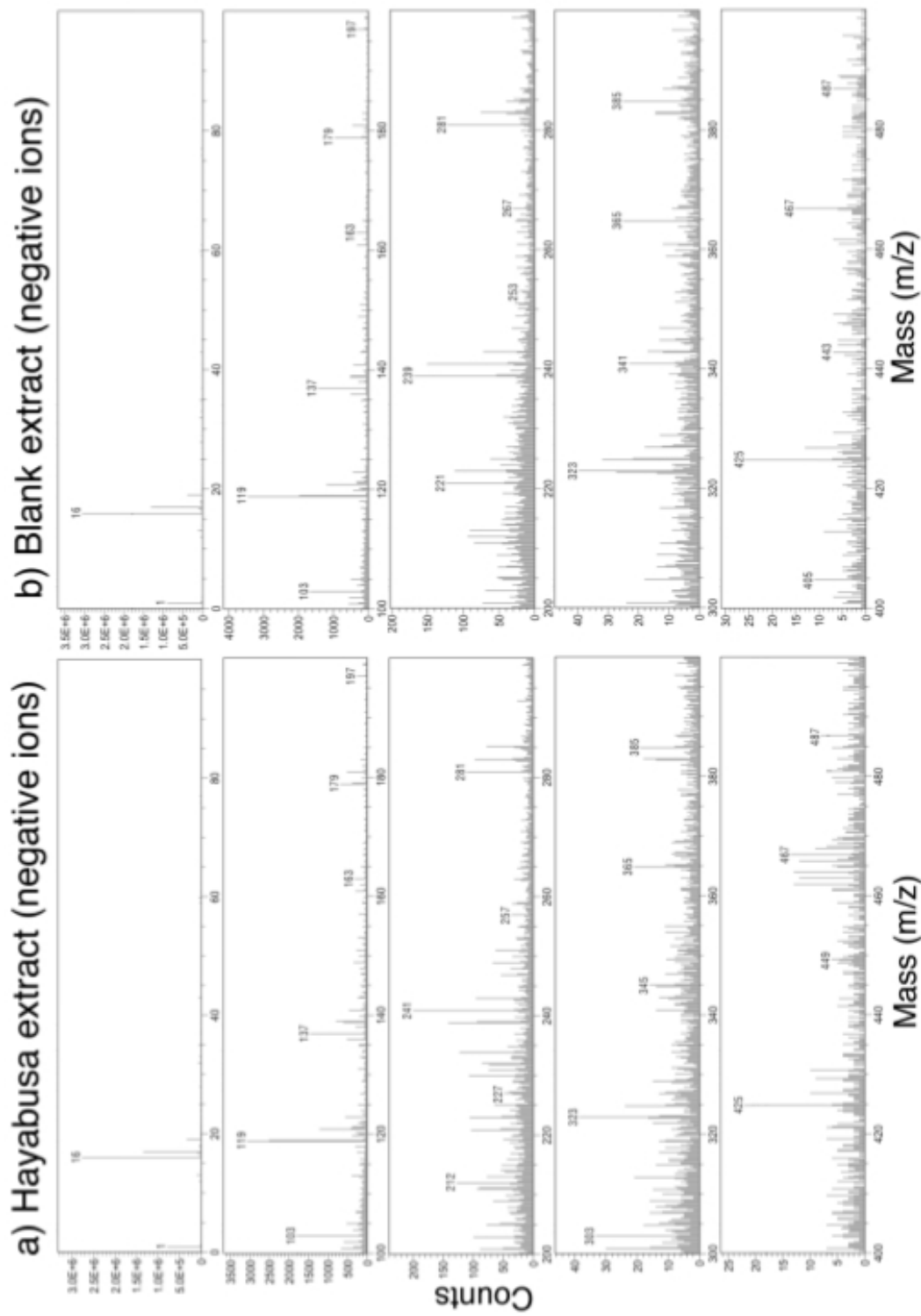


Fig. 6. Mass spectra of negative ions in ToF-SIMS analysis. a) Hayabusa particles extract, and b) blank extract.