

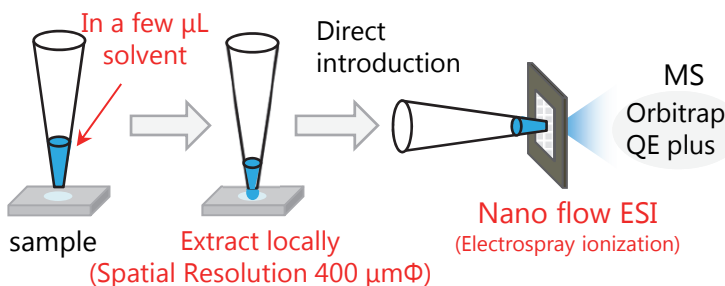
# Nano ESI-MS with LESA

## -Sensitive Qualification of Surface Contamination and Attachments-

For structural analysis of very small amounts of organic components and low molecular weight components attached to surfaces, high-sensitivity NanoESI (Electro Spray Ionization) with "LESA" (Liquid Extraction Surface Analysis)-Nano ESI-MS measurements are useful.

### Introduction of extraction sampling-MS by "LESA"

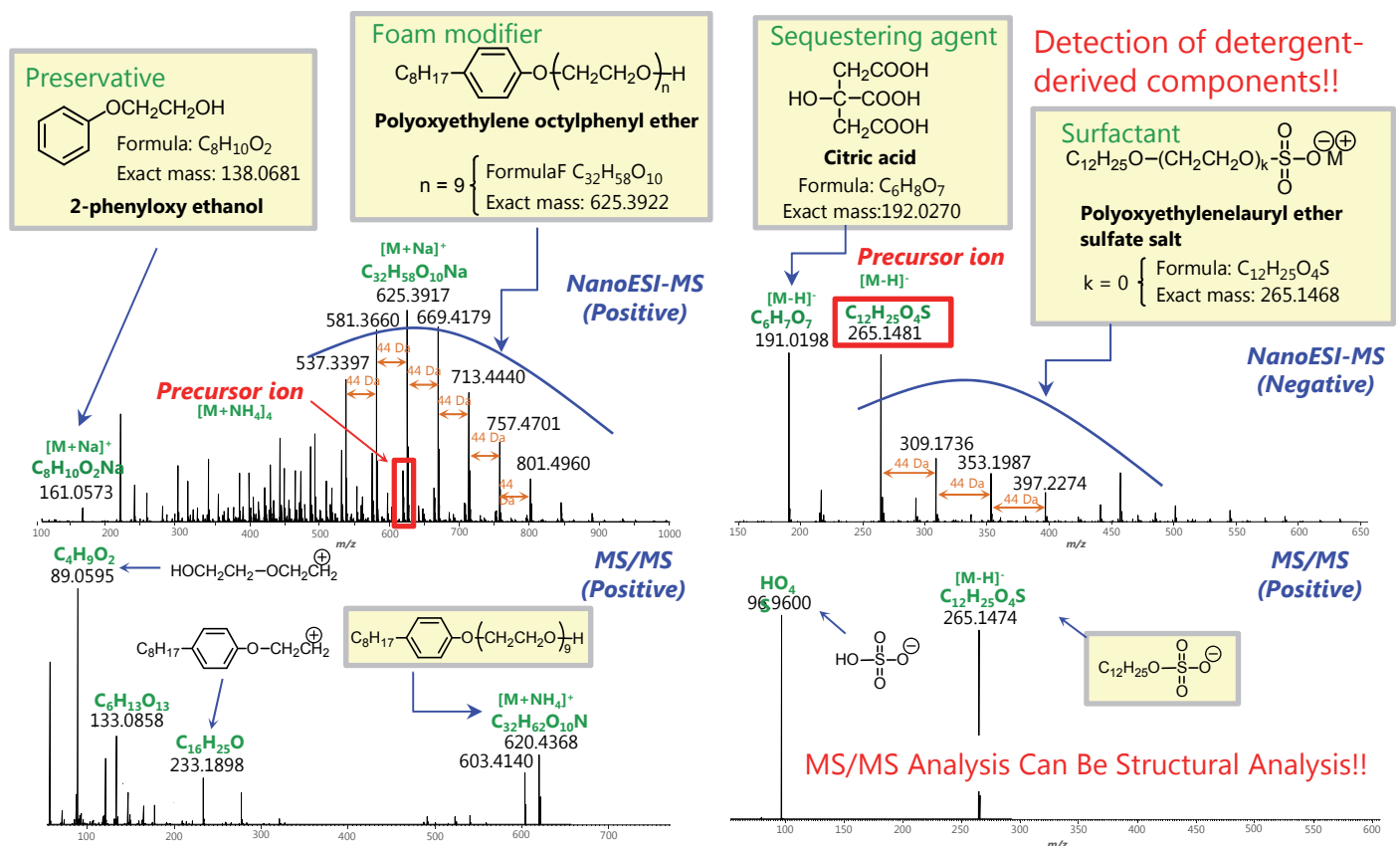
The extracted solution on the sample surface is directly introduced to Nano ESI-MS, and the detailed structural analysis could be carried out by using Orbitrap mass spectrometer.



	LESA-NanoESI-MS	TOF-SIMS
Mass spectrometer	Orbitrap	TOF
Mass range	$m/z$ 50-6000	$m/z$ 1-5000
Mass resolution	140,000	Several thousand
Spatial-resolution	>400 $\mu\text{m}\Phi$	~ 300 $\text{nm}\Phi$
Measurement environment	At atmospheric pressure	Under vacuum
Detected ion	Molecular ion (including organometallic complexes)	Secondary ion (including fragment ions)

### Results of LESA-NanoESI-MS of the substrate surfaces

The cleaned substrates were subjected to solvent-extraction and NanoESI-MS measurements of the surfaces.



NanoESI-MS measurements using LESA allow local qualitative analyses of surface contaminants and cleaning solution residues!