

Food Analytical Chemistry Laboratory

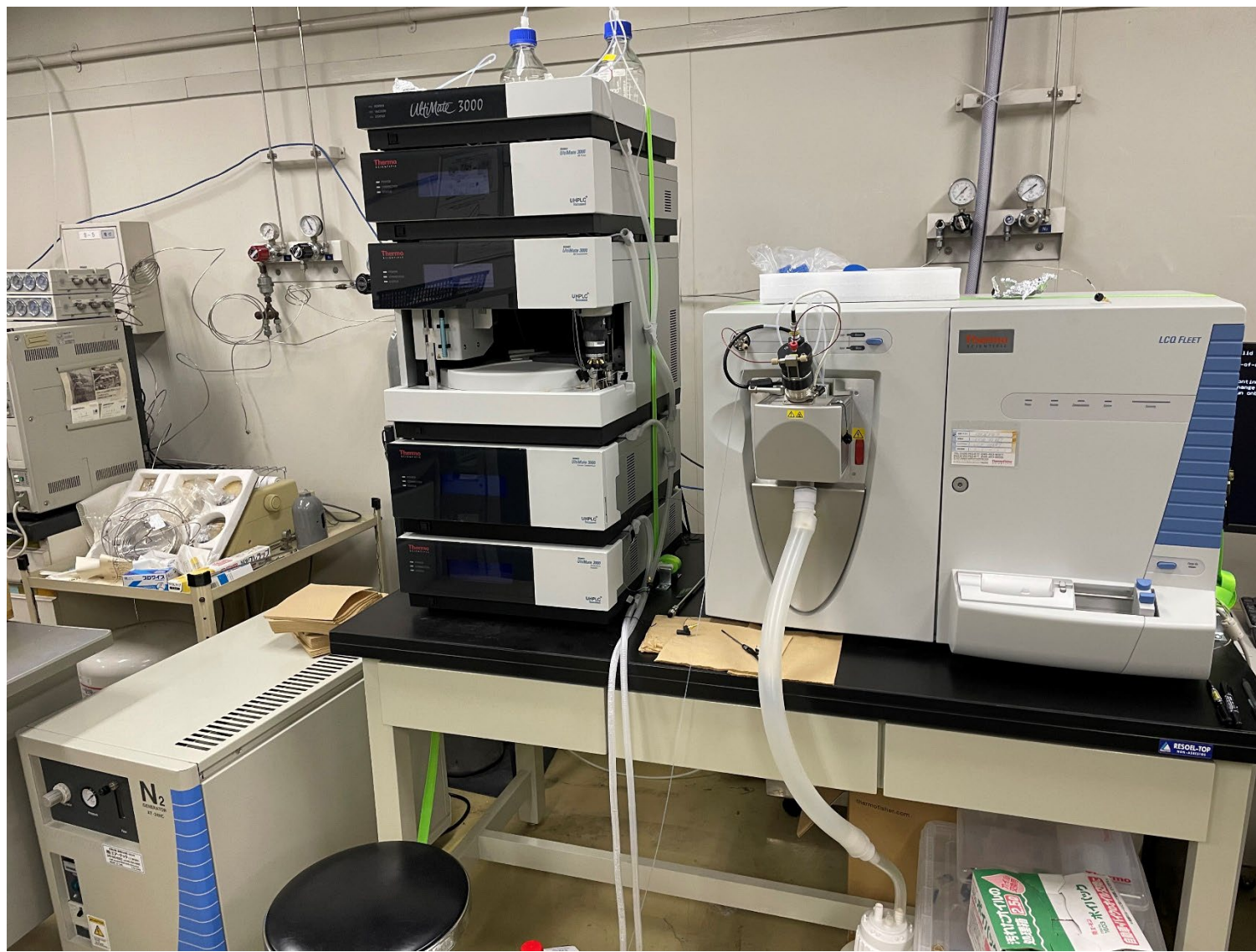


Shigenori Kumazawa
University of Shizuoka, Shizuoka, Japan



HPLC with PDA detector (Jasco)

Photodiode Array (PDA) detector measures the absorption of analytes eluting from the HPLC column and is used for the identification and quantification of molecules.



LC-MS LCQ Fleet (Thermo Fisher Scientific)

LCQ Fleet is an ion-trap based. The instrument is particularly useful for structural characterization of compounds due to its ability to perform tandem mass spectrometry ion fragmentation analyses (MS/MS). The mass spectrometer is on-line coupled to Ultimate 3000 HPLC (Thermo Fisher Scientific).



LC-MS Q-Exactive (Thermo Fisher Scientific)

Q-Exactive is a high-resolution instrument, mainly used for metabolite profiling and analysis of low molecular compounds. The mass spectrometer is on-line coupled to Ultimate 3000 HPLC (Thermo Fisher Scientific).



NMR AVANCE III 400 (Bruker Biospin)

NMR (400 MHz) is employed to determine the structure of molecules in solution and to investigate intermolecular interactions. The instrument is used for both 1D and 2D experiments involving nuclei such as ^1H and ^{13}C . Additionally, multiple samples can be analyzed using the auto-sampler.