

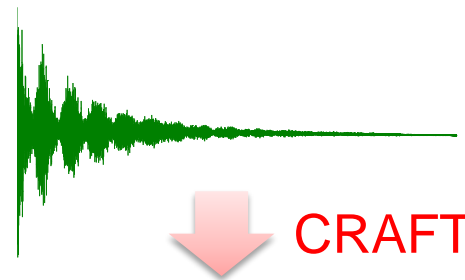
CRAFT (Complete Reduction to Amplitude Frequency Table)

Product used : Nuclear Magnetic Resonance (NMR)

CRAFT is able to transform NMR data from the FID (Free Induction Decay, time domain data) to a table consisted of frequency and amplitude for each frequency component (see right figure). This process is automatically performed by the Bayesian approach.

It is a good solution for analyzing cloudy spectra with overlapped signals where accurate integration is usually difficult to perform. It will also accurately quantify the signal strength against solvent suppressed data even if it has baseline distortions.

Furthermore, CRAFT is suited to high-throughput analysis as it is able to analyze many sets of data simultaneously.



frequency / ppm amplitude / a.u.

7.7668	16.5676
7.7426	234.615
7.6884	13.1068
7.248	45.9141
6.6442	244.444
5.901	118.553
4.2323	286.926
4.1222	42.0581
4.0876	80.1252
4.07	83.7266
4.0448	5.40967
4.0266	91.5615
4.0112	110.386
3.9924	56.1114

⋮

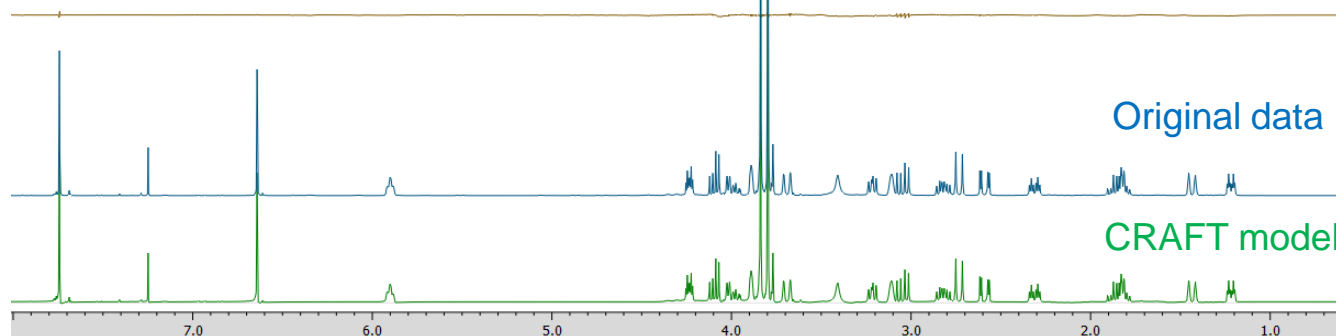
⋮

Application fields

qNMR (quantitative NMR), Metabolomics, Other applications which require integration process.

CRAFT analysis of ¹H-NMR for brucine

CRAFT model data (green) which is reconstructed from each component of the amplitude frequency table is almost identical to (brown) original data (blue).



Copyright © 2017 JEOL Ltd.

Certain products in this brochure are controlled under the "Foreign Exchange and Foreign Trade Law" of Japan in compliance with international security export control. JEOL Ltd. must provide the Japanese Government with "End-user's Statement of Assurance" and "End-use Certificate" in order to obtain the export license needed for export from Japan. If the product to be exported is in this category, the end user will be asked to fill in these certificate forms.