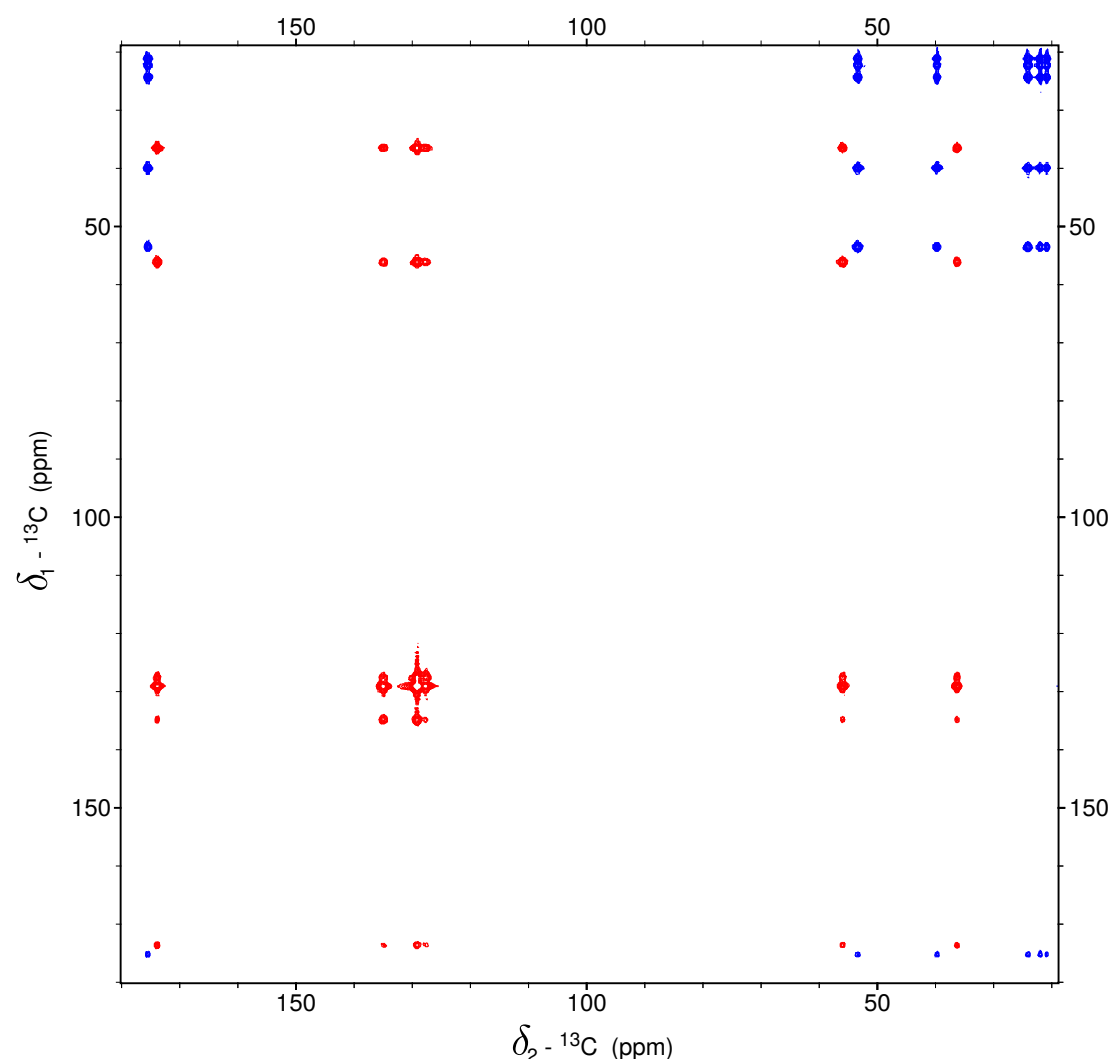




0.1 M leucine and 0.1 M phenylalanine in D₂O

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Field strength: 14.1 T / 0.33 T

Why is this your favorite spectrum?

This is the first ¹³C two-field-TOCSY spectrum acquired with a unique two-field NMR spectrometer. Spin polarization and signal detection were performed at 14.1 T. The sample was moved to a second magnetic center at 0.33 T for isotropic mixing to benefit from the dramatically reduced range of carbon frequencies (ca. 600 Hz). A moderate TOCSY radiofrequency field amplitude (1.5 kHz) is sufficient to observe all expected correlations across the full carbon-13 spectrum in isotopically labeled amino acids. For instance, correlations between methyl and carbonyl carbon-13 nuclei were observed in leucine (separated by 154.7 ppm). The peaks for leucine (blue) and phenylalanine (red) are distinguished by color.

The spectrum was acquired with a two-field NMR spectrometer, therefore two fields are provided in the "Field Strength" field of this document.