

Delta Tips

NMDT_0037

Integration: Transfer Integral Tool

NMR data processing software

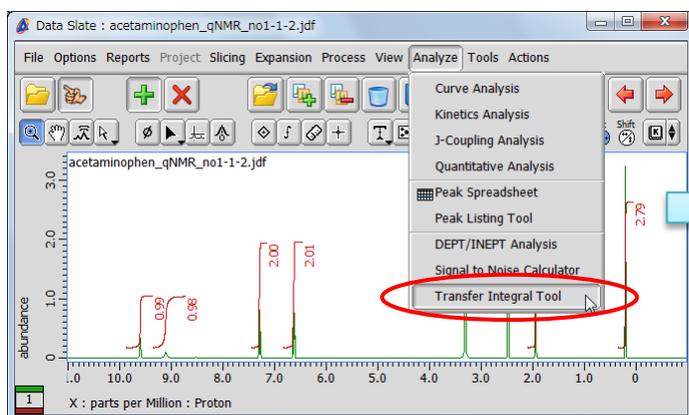
Delta
NMR Software
v5.0



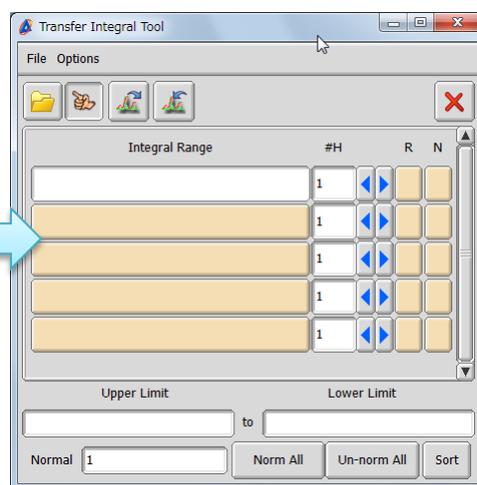
This issue of Delta Tips relates to integration of multiple spectra and quantitative analysis (qNMR). The **Transfer Integral Tool** can be used to integrate several spectra in identical integral ranges. It conveniently copies integral ranges from one spectrum to another one. The procedure shown below applies to 1D Processor and Data Slate. We will use a Data Slate window in the example.

- 1 Select **Analyze – Transfer Integral Tool**.

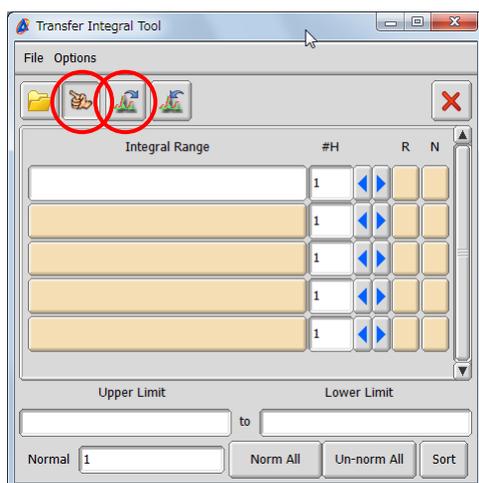
Data Slate



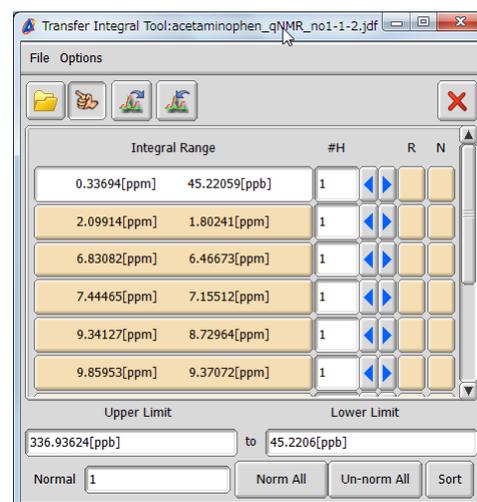
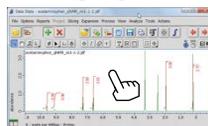
Transfer Integral Tool



- 2 Click the  and  buttons in the Transfer Integral Tool window. Then select the spectrum to load the integral ranges by the cursor.



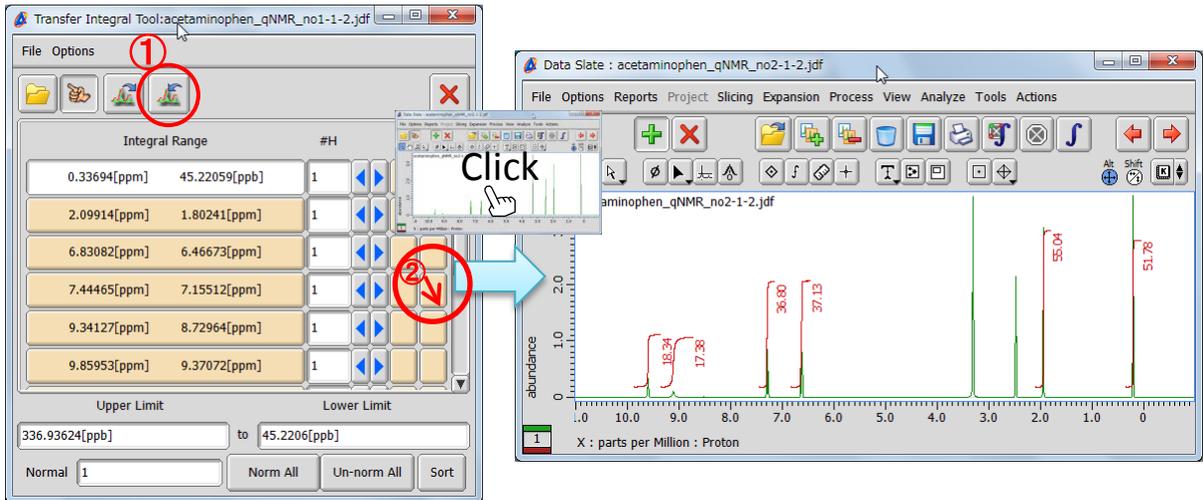
Click





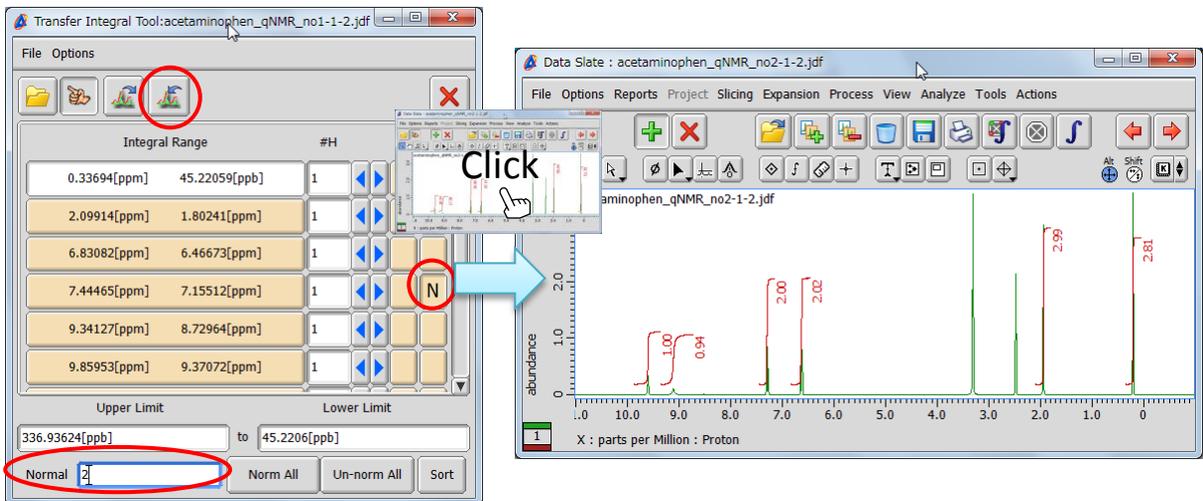
Delta Tips

- ③ Click the  button in the Transfer Integral Tool window. Then select the spectrum to apply the integral ranges into by the cursor.



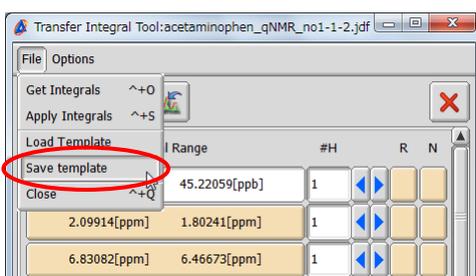
The screenshot shows the 'Transfer Integral Tool' window on the left and the 'Data Slate' window on the right. In the 'Transfer Integral Tool' window, the 'Integral Range' table is visible. A red circle labeled '1' highlights the 'Transfer Integral' icon in the toolbar. A red circle labeled '2' highlights the 'Apply' button in the '#H' column for the 7.44-7.16 ppm range. A blue arrow points from this button to the 'Data Slate' window, where a cursor is clicking on the spectrum to apply the integral ranges. The spectrum shows peaks with integration values: 18.34, 17.38, 36.80, 37.13, 55.04, and 51.78.

- ★ To normalize an integral click the  button in the 'N' column of the integral (e.g. 7.44 – 7.16 ppm). Then input the value into the 'Normal' input box, click the  button and select the spectrum by the cursor.



The screenshot shows the 'Transfer Integral Tool' window on the left and the 'Data Slate' window on the right. In the 'Transfer Integral Tool' window, the 'Integral Range' table is visible. A red circle labeled '1' highlights the 'Transfer Integral' icon in the toolbar. A red circle labeled '2' highlights the 'N' button in the '#H' column for the 7.44-7.16 ppm range. A blue arrow points from this button to the 'Data Slate' window, where a cursor is clicking on the spectrum. The spectrum shows peaks with integration values: 1.00, 0.94, 2.00, 2.00, 2.99, and 2.81. In the 'Transfer Integral Tool' window, the 'Normal' input box is highlighted with a red circle and contains the value '2'.

- ★ Select **File – Save Template** to save the integral ranges to a file (JIL format).



The screenshot shows the 'Transfer Integral Tool' window. The 'File' menu is open, and the 'Save Template' option is highlighted with a red circle. The 'Integral Range' table is visible below the menu.

#H: Number of protons
R: Reset slope and offset of integral

