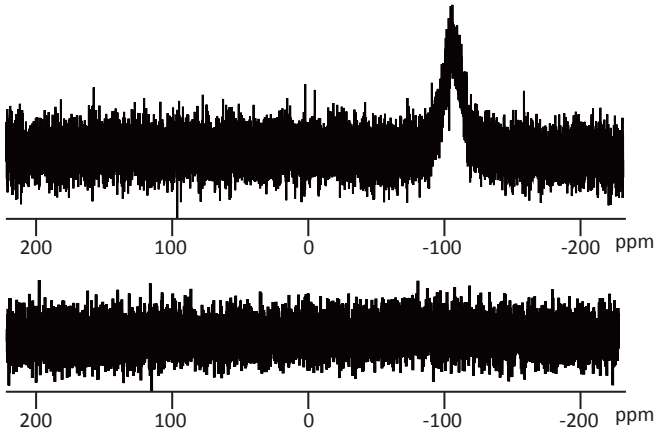
^{29}Si NMR measurement using silicon free probe

Standard materials used in NMR probe construction, as well as normal NMR tubes, inevitably contain silicon which is visible as abroad peak in the spectrum. As this is due to a Q^4unit, it will overlap at similar chemical shifts to Q^3 and Q^4 units in any sample being measured. The use of a silicon free probe and suitable tubes completely suppresses the background signal and even small signals can be clearly seen.

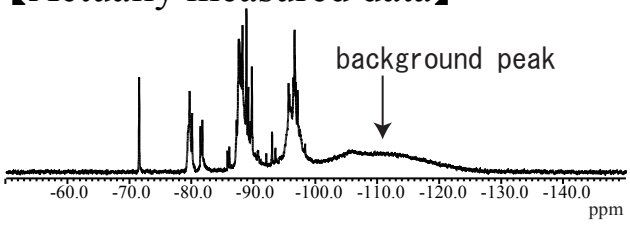
【^{29}Si spectra without sample】



・Standard probe — broad background signal

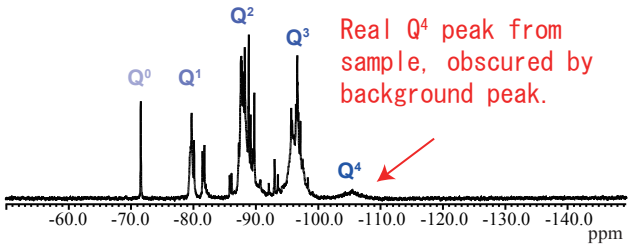
・Silicon free probe — no background signal

【Actually measured data】



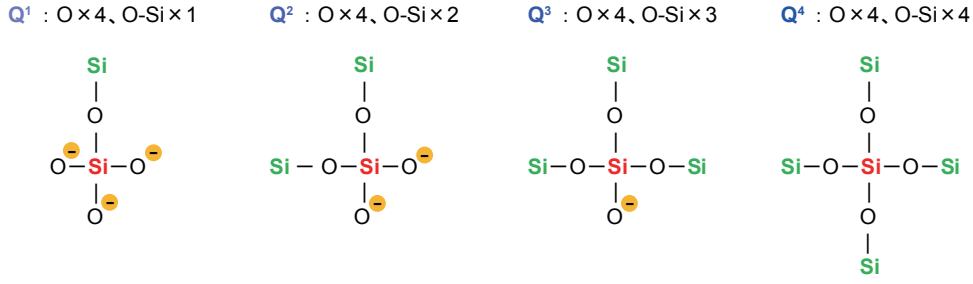
Sample : sodium silicate solution/D_2O
Spectrometer : JNM-ECA Ⅱ 600

Upper spectrum : Data from standard probe with pyrex tube



Lower spectrum : Data from Silicon free probe with teflon tube

This probe is particularly effective for broad peaks and dilute solutions!



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