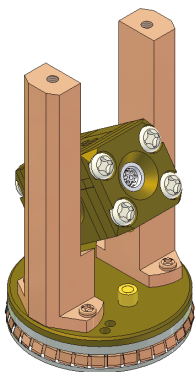


Make it possible to measure a small amount of fluorine samples - ^{19}F MAS probe -



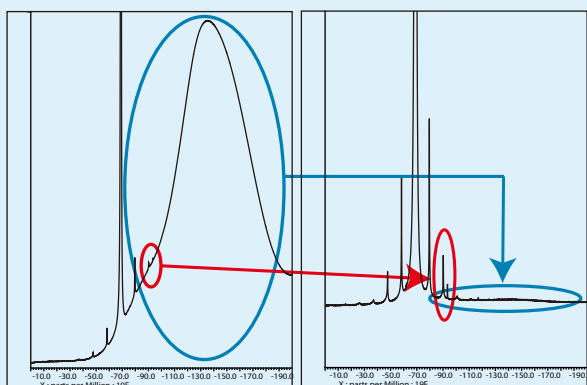
^{19}F MAS probe is recommended for the users who want to:

- Observe small ^{19}F signals;
- Reduce spinning sidebands;
- Improve quantitative evaluation, in ^{19}F solid-state NMR spectroscopy.

Three advantages of ^{19}F MAS probe

- #1. **Significant reduction of ^{19}F background signals.**
Weak signals can be observed.
- #2. **Fast spinning.** (2.5mm: 35kHz, 3.2mm: 24kHz, 4mm: 19kHz)
Spinning sidebands are greatly reduced.
- #3. **Strong RF irradiation.**
Wide frequency ranges are uniformly excited.

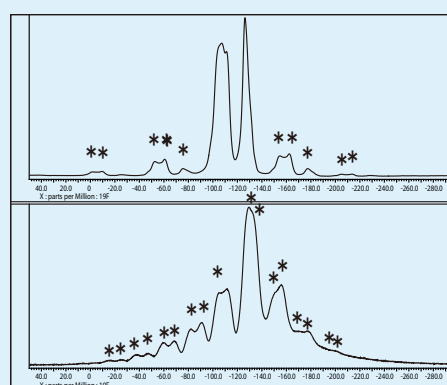
CPMAS vs. ^{19}F MAS probes



^{19}F MAS spectra of a grain of fluorine rubber observed using CPMAS probe (left) and ^{19}F MAS probe (right).

^{19}F background signals become 1/100.

Effects of fast spinning



^{19}F MAS spectra of PCTFE observed at the spinning frequencies of 24kHz (upper) and 10kHz (lower).

Spinning sidebands are greatly reduced.

