



## Applications of 10 mm SuperCOOL Probe

### Summary

### Information

# NM150007E

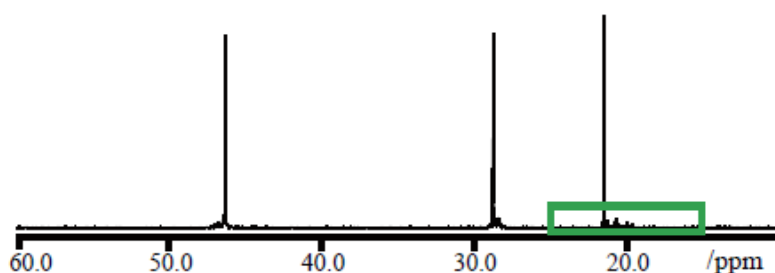
## Liquid Nitrogen Cooled Probes are Suitable for:

- Samples with a low degree of solubility
- Samples with high viscosity that require longer data acquisition

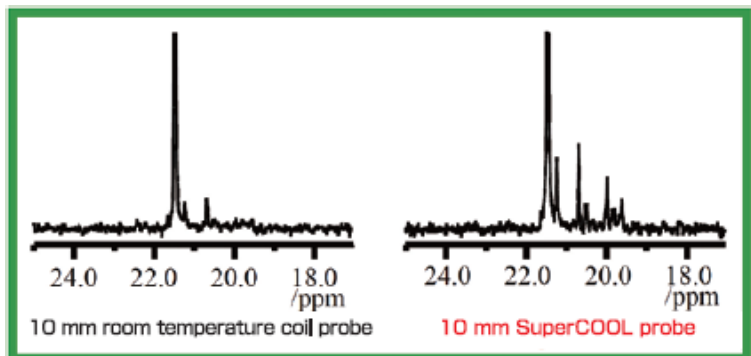
## 10mm SuperCOOL Probe

- Observable nuclei:  $^{31}\text{P}$ ,  $^{13}\text{C}$ ,  $^{15}\text{N}$ ,  $^{29}\text{Si}$ ,  $^1\text{H}$ ,  $^{19}\text{F}$
- Sensitivity: 3 times or more higher for  $^{13}\text{C}$  compared to JEOL 10 mm room temperature probes
- Supports long term high temperature measurement with variable temperature up to  $150^\circ\text{C}$
- Two types of cooling units available for detection circuit and preamp: closed-cycle circulation system and open-cycle system with liquid nitrogen as a coolant
- PFG (Pulse Field Gradient) coil to support complex pulse sequences
- Continuous operation for over 1 year without coolant consumption (closed-cycle)
- Power consumption reduced to 1/4 (closed-cycle) of the UltraCOOL probe for lower running cost

$^{13}\text{C}$  spectrum acquired from polypropylene/80 % ODCB, 20 % Benzene- $\text{d}_6$



Magnified spectra of micro components of methyl group (y axis x10)



Both spectra were accumulated with 1,000 scans at a temperature of 150°C.

The 10 mm SuperCOOL probe observed more signals in less than 1 hour of data accumulation.

## SEARCH APPLICATIONS

- Applied Measurement
- Solid
- Solution
- Cryogenic Temperature
- Accessories
- Software
- Hardware

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## Related Products