

CryoProbes

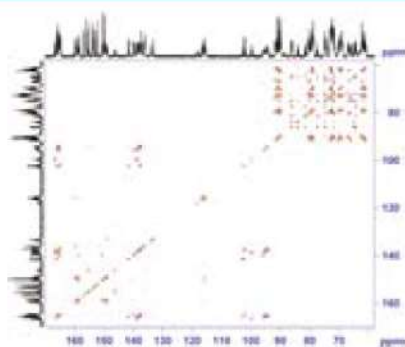
CryoProbe™ technology has delivered the single largest increase in detection sensitivity ever achieved in the evolution of NMR equipment. The factor 3-4 jump in sensitivity allows the use of correspondingly smaller sample quantities that are impractical with conventional probes, or enables the user to increase sample throughput up to 16-fold.

Product Lines

Bruker offers the largest range of CryoProbe configurations from 400 MHz to 1000 MHz, including proton optimized probes such as our 1.7- and 5-mm inverse triple-resonance probes, as well as 10-mm dual ^{13}C observe probes.

The 1.7-mm Micro-CryoProbe offers an increase in sensitivity per mole of more than an order of magnitude compared to a conventional 5-mm probe. For optimal X-nucleus detection we offer the 5-mm Quad CryoProbe in $^{13}\text{C}/^{31}\text{P}/^{19}\text{F}/^1\text{H}$ and $^{15}\text{N}/^{13}\text{C}/^{31}\text{P}/^1\text{H}$ versions. All high-resolution CryoProbes are equipped with a ^2H lock and a Z-gradient. A ^1H micro-imaging CryoProbe is also offered to enhance the study of sample structure and properties in the micrometer range.

QCI CryoProbe: Protein Research



2D ^{13}C observe TOCSY with ^{31}P & ^{15}N & ^1H decoupling, 4 mg $^{15}\text{N}/^{13}\text{C}$ labeled RNA 14-mer, experiment time 40 min.



QCI
CryoProbe

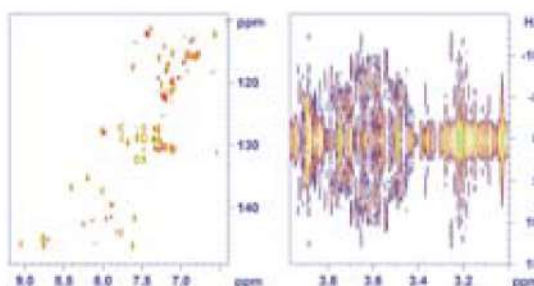
CryoPlatform

Every CryoProbe is interfaced with a fully automated universal CryoPlatform™, which controls the closed-cycled cooling system and guarantees excellent stability during experiments of any length. Once a CryoProbe is in the cold state it is just as easy to use as a conventional probe. The temperature of the sample, while just millimeters away from the cold RF coils, is stabilized at a user-defined value within the usual accessible range.

Nitrogen Liquifier

The Bruker Smart Nitrogen Liquifier (BSNL) is an accessory that uses the extra cooling capacity of the latest generation CryoPlatform™ to re-condense the evaporating nitrogen gas from the magnet dewar. While standard magnets have a nitrogen refill interval of 2–3 weeks, the new BSNL greatly extends this time or even makes refilling unnecessary.

QCI CryoProbe: Small Molecule Applications



2D J-RES aliphatic region. Sample: 350 μl unbuffered male urine in shaped sample tube.