

DEAR COLLEAGUE:

After two years of not traveling, the summer has been a whirlwind of conferences. Doty Scientific attended ENC in Orlando, Florida; ISMRM, in London, UK; Rocky Mountain Conf on Magnetic Resonance in Copper Mountain, Colorado; the ICMRBS, in Boston, Massachusetts; and the Alpine Conf on Magnetic Resonance in Chamonix, France. Next, the 50th Southeastern Magnetic Resonance Conf in Tallahassee, Florida November 4th through the 6th. This year SEMRC is hosted by the National High Magnetic Lab.

It was so nice to see everyone in person and learn of the excellent science that was going on even though scientists worked with the disruptions of covid. We are glad to move forward with some “good science” of our own. We have news to report on recent apparatus we delivered: a 20 mm HR Liquids NMR probe and a dual-frequency 9.4 T $^1\text{H}/^{129}\text{Xe}$ rat coil.

David and Judy Doty

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**Large Volume 20 mm Liquids
NB NMR Probe**

**Dual-Frequency MRI Coils:
a $^1\text{H}/^{129}\text{Xe}$ 9.4T Rat Imaging Coil,
 $^1\text{H}/\text{X}$, and $^1\text{H}/^{19}\text{F}$ Coils**

Large Volume 20 mm Liquids NB NMR Probe

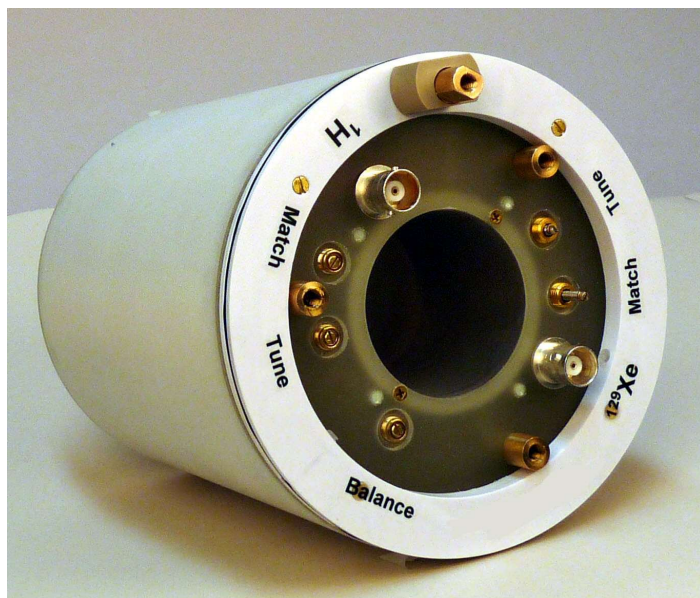


20 mm H/X/Lock NMR Probe, 400 MHz NB

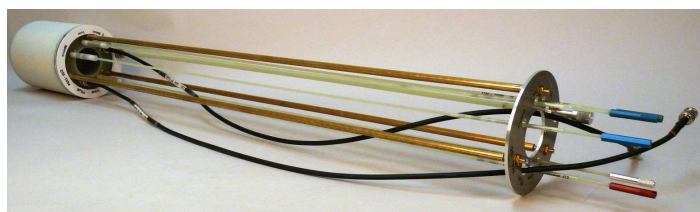
Unique Liquids Probes

- Narrow Bore or Wide Bore.
- 5 mm to 20 mm sample options
- Extended Temperature (XVT) to **+300 °C** - with sample size 5 mm
- Many tuning options:
H/X/lock, H-F/X/lock,
H/C/N/lock, H/F/X/lock.

Dual-Frequency MRI Coils $^1\text{H}/^{129}\text{Xe}$, $^1\text{H}/\text{X}$, and $^1\text{H}/^{19}\text{F}$



9.4 T, $^1\text{H}/^{129}\text{Xe}$, 45 mm x 45 mm Rat Imaging Coil



Imaging Coil with Remote Tuning Hardware

Flexible designs can be customized for your application and MR system.

- Fully optimized from detailed 3D EM simulations in CST for best S/N and B_1 homogeneity.
- Efficient, easy to tune and match over a broad range of sample loadings.
- Channels can be used sequentially, or simultaneously if decoupling is needed.
- Robust design, mechanically stable.

Examples of other recent dual-frequency coils we have supplied (ID x RF length):

- 65 x 52 mm, $^1\text{H}/\text{X}$ $\{^{13}\text{C}, ^{15}\text{N}\}$, @ 3 T; 1.5 T; 1 T; 0.5 T; and 0.3 T.
- 45 x 36 mm, $^1\text{H}/\text{X}$ $\{^{31}\text{P}, ^{13}\text{C}\}$, @ 7 T.
- 38 x 34 mm, $^1\text{H}/\text{X}$, $\{^{31}\text{P}, ^{13}\text{C}\}$, @ 9.4 T.
- 25 x 22 mm, $^1\text{H}/\text{X}$, $\{^{31}\text{P}, ^{13}\text{C}\}$, @ 9.4 T.
- 25 x 22 mm, $^1\text{H}/^{13}\text{C}$, @ **14.1 T**.
- **200 x 160 mm**, $^1\text{H}/^{23}\text{Na}$, @ 4.7 T.
- 38 x 55 mm, **$^1\text{H}/^{19}\text{F}$** , @ 7 T.
- Surface Coil 16 mm, $^1\text{H}/^{15}\text{N}$, @ 7 T.



Rocky Mountain Conf, Copper Mountain Colorado, USA



Alpine Solids NMR Conference, Chamonix, France