

Sapphire NMR tubes

- optically translucent
- single crystal

High field NMR cell selection
Pick tube and manifold

Zirconia NMR tubes

- Best pressure to volume ratio
- More robust than sapphire
- Yttria (YSZ) or Mg (MSZ) stabilized zirconia

10 mm

5 mm or 10 mm
NMR tube?

5 mm

NMR tube cost tracks with pressure rating

Yes

Optically
translucent?

No

300 bar

500 bar

1,000 bar

10 mm x 7 mm x
149 mm length,
300 bar rated
Sapphire

10 mm x 7 mm x
149 mm length,
500 bar rated
MSZ material

10 mm x 7 mm x
149 mm length,
1,000 bar rated
YSZ material

300 bar

Operational
Pressure (bar)

3,000 bar

1,000 bar

5 mm x 3.6 mm x
92 mm length
300 bar rated
MSZ material

5 mm x 3.6 mm x
92 mm length
1,000 bar rated
YSZ material

5 mm x 2.6 mm x
92 mm length,
3,000 bar rated
YSZ material

Manifold selection

Static

Static or dynamic pressure requirements

* **Static manifolds** have an integrated valve permitting samples to be prepared away from the magnet, sealed, then carried to the NMR for analysis.

* **Dynamic manifolds** connect to an external pressure source while inserted in the NMR. This allows pressure to be changed without removing the NMR cell

Dynamic

Manifold with integrated
needle valve with 1/4" - 28
side-wall inlet port threads

Manifold with 1/2"-20 inlet
port threads. Requires high
pressure tubing tether

Specify Bruker or Agilent

Additional items:

- 100 TS01 single-use seals
- Safety Box
- CST – Cell setup tool
- Torque wrench