Notes on sample submission

Preparation of the samples

Amount of substance:

- **For ^{1}H measurements**: 5 - 20 mg (natural abundance: 99.9%)
  A higher amount of substance leads to broader signals and poorer resolution

- **For ^{13}C measurements**: 5 mg per ^{13}C atom (natural abundance: 1.1%)
  Smaller amounts of substance lead to longer measurement times (half the amount of substance = four times the measurement time, etc.).

Filling the NMR Tubes:

- Deuterated solvents (anhydrous) or D_2O capillaries should be used (D_2O capillaries not for the Fourier 300). The deuterium signal is used in the NMR spectrometer to counteract the drift of the magnetic field and to ensure the homogeneity of the magnetic field (so-called lock). Measurements without a lock lead to poorer results.

- The solution should be free of suspended matter, air bubbles and magnetic and paramagnetic impurities.

- Filling level: 4 - 6 cm; the spectrometers are shimmed to this filling level (Shimming = Homogenizing the magnetic field).

- Use Parafilm or ground joint glass tubes for strong-smelling samples.

- The information sheet "Length of the NMR tubes" has to be observed.

- **Unclean or damaged NMR tubes and glass vessels will be retained by us!**
  They pose a danger to the spectrometers and the staff!

NMR Order Form

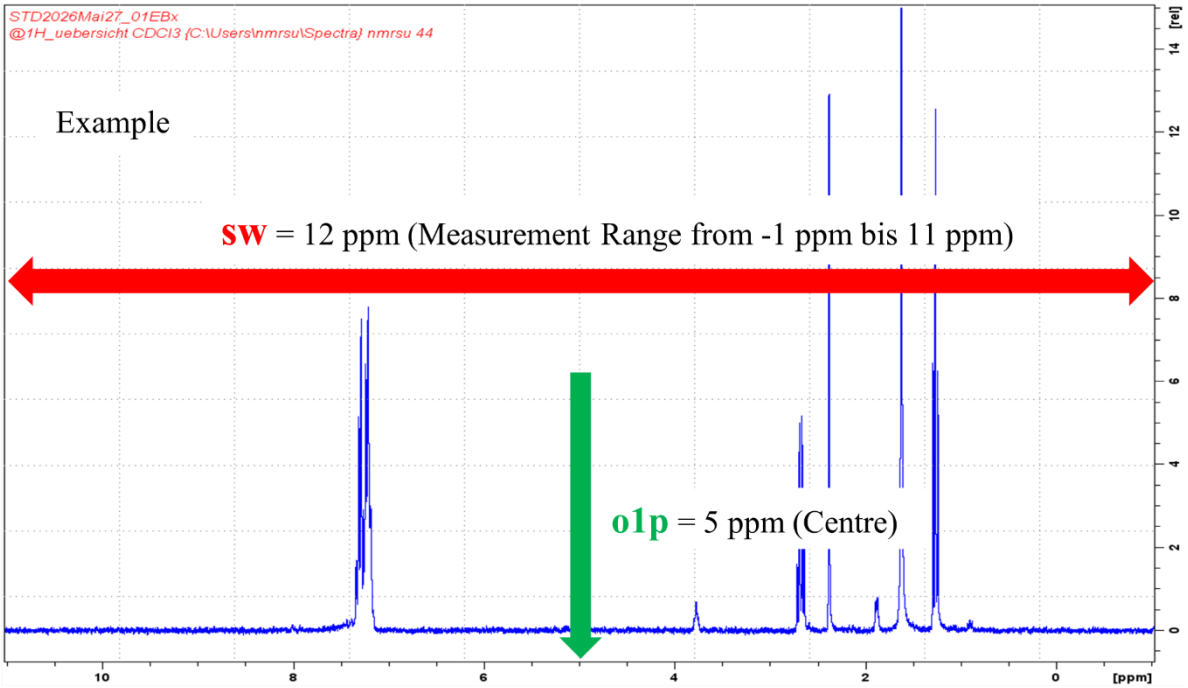
Mandatory fields: Name, date, sample name, solvent, assistant (if available), working group, experiments → tick or possibly enter further experiments in the comments field (reverse side can also be used)

Naming:

- Samples from the "**OC-Anfängerpraktikum**" begin with **OCA** name abbreviation-...
- Samples from the "**Synthesepraktikum**" begin with **ISP-OC**-name abbreviation-... or **ISP-AC**-name abbreviation-...
- Samples from the "**Forschungspraktika**" begin with **OCF**-name abbreviation-... or **ACF**- name abbreviation-...
- Samples from the "**NMR-Praktikum**" begin with **NMR-PR**- name abbreviation-...
- **Bachelor** (recommendation): BA-name abbreviation-...
- **Master** (recommendation): MA-name abbreviation-...
- **Doctoral** (recommendation): D-name abbreviation-...
- **Other**: name abbreviation-...

Measurement Range:
If a different measurement range is required, this is entered accordingly under "sw" and "o1p".

- **sw** (**s**pectral **w**idth – Bruker /**sw**eep – Jeol) = **Measurement Range** of spectrum (ppm)
- **o1p** (frequency **o**ffset [**p**pm]– Bruker / **o**ffset – Jeol) = **Centre** of spectrum (ppm)



Notes on cleanliness

- The NMR tubes have to be tightly closed and clean (cleaned on the outside with isopropanol).

- This applies accordingly to the vessels in which the tubes are stored in. The cotton wool inside and the order forms have to be clean, too. Of course, the sample vessels have also to be free of damage.

- **Unclean or damaged NMR Tubes and glass vessels will be retained by us! They pose a danger to the spectrometers and the staff!**

- Inobservance will lead to gradual contamination of the probes and the spinners. The consequences are: poor shim, sticky tubes in the probe, sending the probe to the manufacturer for cleaning → duration at least 3 months.