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Requested Dates: Monday September 5th to Wednesday September 7th
Requested Equipment:
3.2mm HFXY probe, shall work with proton,carbon and fluorine platforms, spinning not more than 20Khz. 2.5mm HFXY might be required too for the same work but not certain.

Sample Information:
Powdered asphaltene fluorinated with XeF2, molecular weight, density varies.
Melting point(should be more than 200C) and freezing point don't apply as not certain, no major safety concern, might be a little electrostatic

Research Proposal:
1H decoupled 19F NMR(~ 1 hr)
19F decoupled 1H NMR (~1 hr)
1H to 13C CP, with and without 19F decoupling (~12hrs)
19F to 13C CP, with and without 1H decoupling(~12hrs)
1H to 13C CP, with double decoupling(~12hrs)
19F to 13C CP, with double decoupling(~12hrs)

Previous Work:
This is the first time I am using these fluorinated samples. Previous work was done on the non-fluorinated variety of the sample.Attaching the parameters and experiments of the previous session below, in the a powerpoint file which has all the parameters and spectra obtained in the last session.

Relevant Literature References:
1)Desando, M. A.; Lahajnar, G.; Ripmeester, J. A.; Ivan, Z. Fuel 1999, 78, 31.The low temperature oxidation of Athabasca oil sand asphaltene observed from 13C, 19F, and pulsed field gradient spin-echo proton n.m.r. spectra

2)Desando, M. A.; Ripmeester, J. A. Fuel 2002, 81, 1305.Chemical derivatization of Athabasca oil sand asphaltene for analysis of hydroxyl and carboxyl groups via nuclear magnetic resonance spectroscopy