

Supplementary Information for

**Adsorption of Proteins to Thin-Films of PDMS and Its Effect
on the Adhesion of Human Endothelial Cells**

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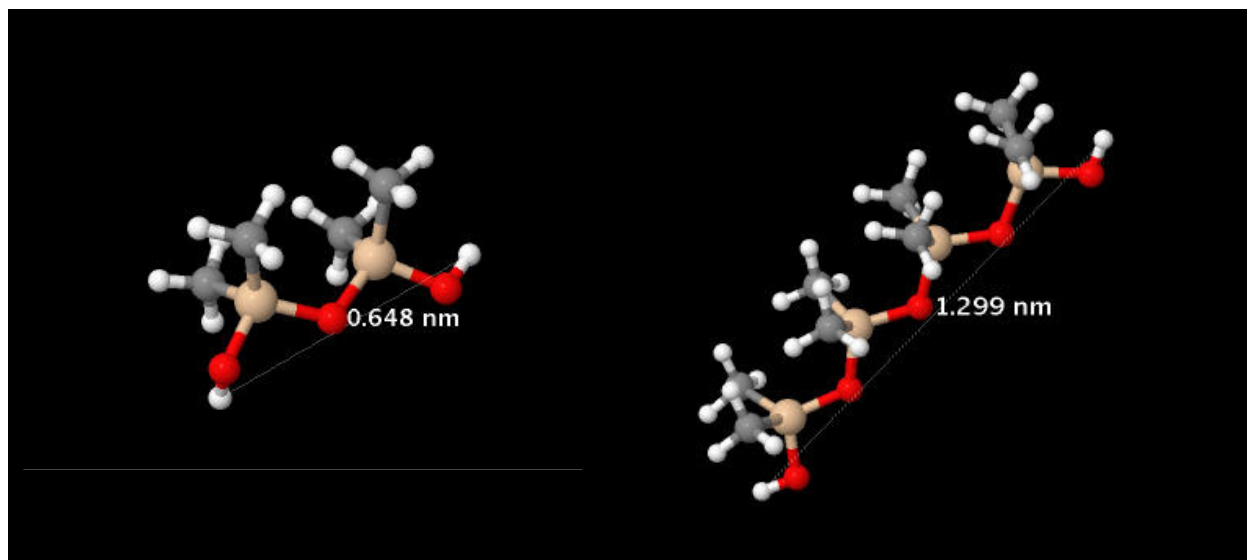
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Molecular dimensions

Molecular dimensions for the selected dimethylsiloxanes, as calculated using Jmol (an open-source Java viewer for chemical structures in 3D, <http://www.jmol.org/>). In both cases, the chlorine terminal atoms were exchanged for –OH, as expected to occur when substrates were rinsed with water.



Nuclear magnetic Resonance

Films produced by the deposition reaction of 1,7-dichloro-octamethyltetrasiloxane were characterized by variable angle spectroscopic ellipsometry, nuclear magnetic resonance (500 MHz ^1H -NMR and ^{13}C -NMR in CDCl_3), scanning electron microscopy (SEM), and atomic force microscopy (AFM). For comparison purposes, the ^1H -NMR of 1,7-dichloro-octamethyltetrasiloxane was also obtained in CDCl_3 . In order to analyze the reaction products, silica beads (>15 nm) were modified with 1,7-dichloro-octamethyltetrasiloxane, suspended in CDCl_3 , and analyzed under conditions similar to those of the precursors in solution.

Karin-S-nano

Archive directory: /export/home/vnmr1/vnmrsys/data
Sample directory:
File: CARBON

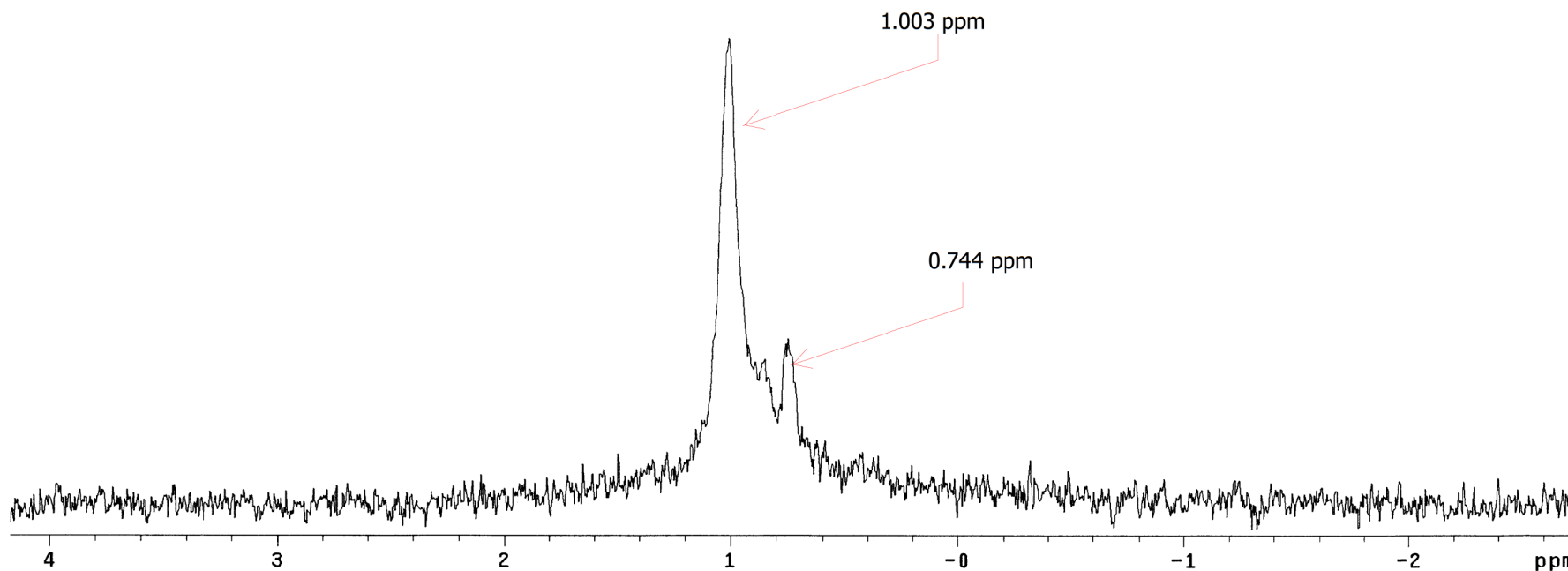
Pulse Sequence: s2pu1

Solvent: CDCl₃
Ambient temperature
Jser: 1-14-87

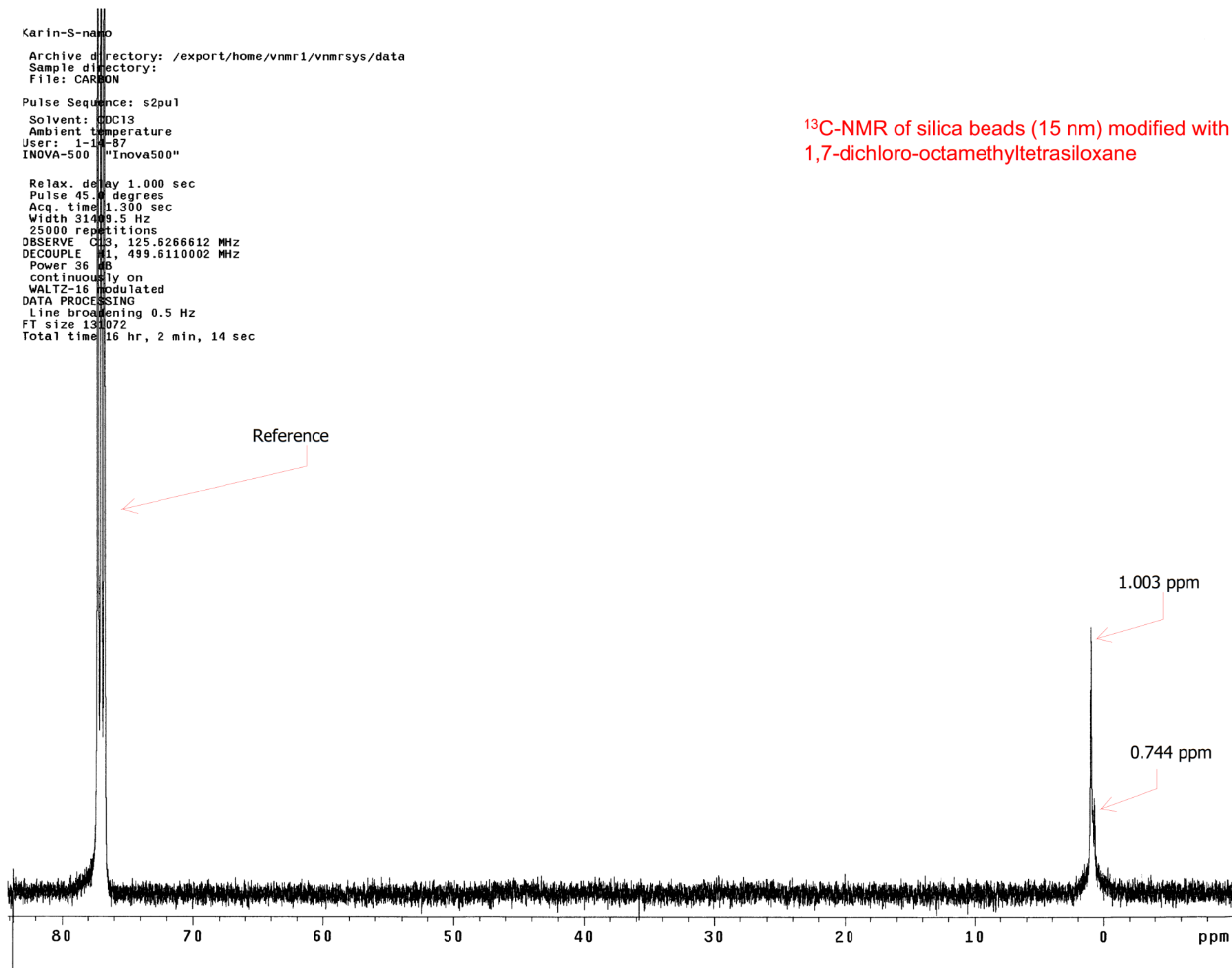
INOVA-500 "Inova500"

Relax. delay 1.000 sec
Pulse 45.0 degrees
Acq. time 1.300 sec
Width 31409.5 Hz
25000 repetitions
OBSERVE C13, 125.6266612 MHz
DECOUPLE H1, 499.6110002 MHz
Power 36 dB
continuously on
WALTZ-16 modulated
DATA PROCESSING
Line broadening 0.5 Hz
FT size 131072
Total time 16 hr, 2 min, 14 sec

¹³C-NMR of silica beads (15 nm) modified with
1,7-dichloro-octamethyltetrasiloxane



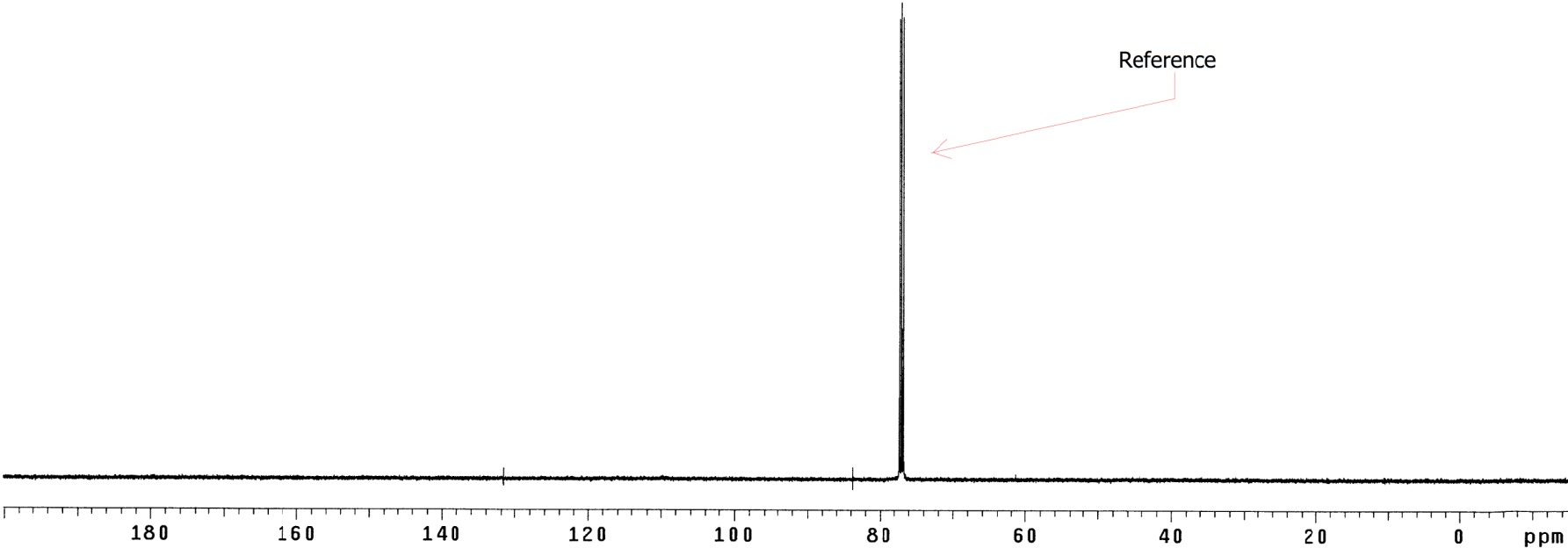
¹³C-NMR of silica beads (15 nm) modified with
1,7-dichloro-octamethyltetrasiloxane



bank-S-Nano-sample
Archive directory: /export/home/vnmr1/vnmrsys/data
Sample directory:
File: CARBON
Pulse Sequence: s2pu1
Solvent: CDCl3
Ambient temperature
User: 1-14-87
INOVA-500 "Inova500"

Relax. delay 1.000 sec
Pulse 45.0 degrees
Acq. time 1.300 sec
Width 31409.5 Hz
8000 repetitions
OBSERVE C13, 125.5266612 MHz
DECOUPLE H1, 499.5110002 MHz
Power 36 dB
continuously on
WALTZ-16 modulated
DATA PROCESSING
Line broadening 0.5 Hz
FT size 131072
Total time 5 hr, 7 min, 54 sec

¹³C-NMR of unmodified silica beads (15 nm)



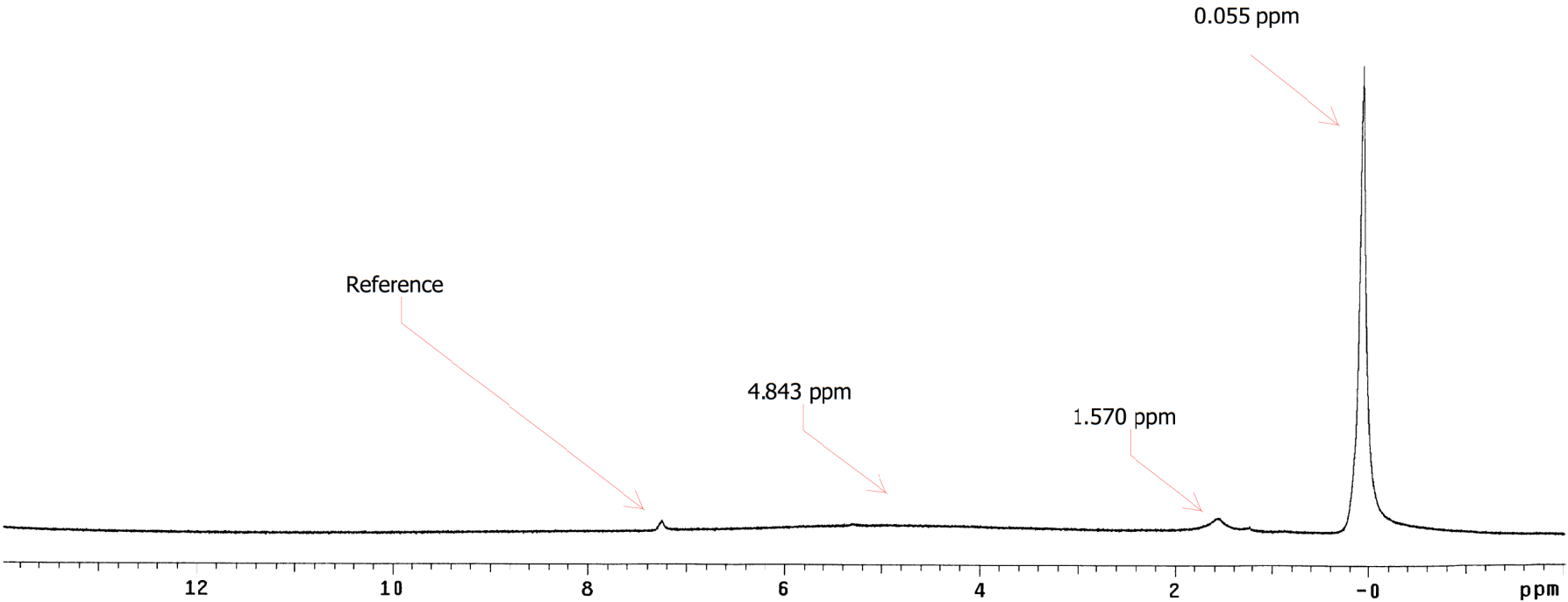
S-nano-1H

Archive directory: /export/home/vnmr1/vnmrsys/data
Sample directory:
File: PROTON

Pulse Sequence: s2pu1
Solvent: CDCl3
Ambient temperature
INOVA-500 "Inova500"

Relax. delay 1.000 sec
Pulse 24.5 degrees
Acq. time 1.892 sec
Width 7995.2 Hz
32 repetitions
OBSERVE H1, 499.6085177 MHz
DATA PROCESSING
FT size 32768
Total time 1 min, 32 sec

¹H-NMR of silica beads (15 nm) modified with
1,7-dichloro-octamethyltetrasiloxane



STANDARD PROTON PARAMETERS

Archive directory: /export/home/vnmr1/vnmrsys/data
Sample directory:
File: PROTON

Pulse Sequence: s2pu1

Solvent: CDCl3
Ambient temperature
INOVA-500 "Inova500"

Relax. delay 1.000 sec
Pulse 24.5 degrees
Acq. time 1.892 sec
Width 7995.2 Hz
258 repetitions
OBSERVE H1, 499.6085456 MHz
DATA PROCESSING
FT size 32768
Total time 12 min, 28 sec

¹H-NMR of unmodified silica beads (15 nm)

