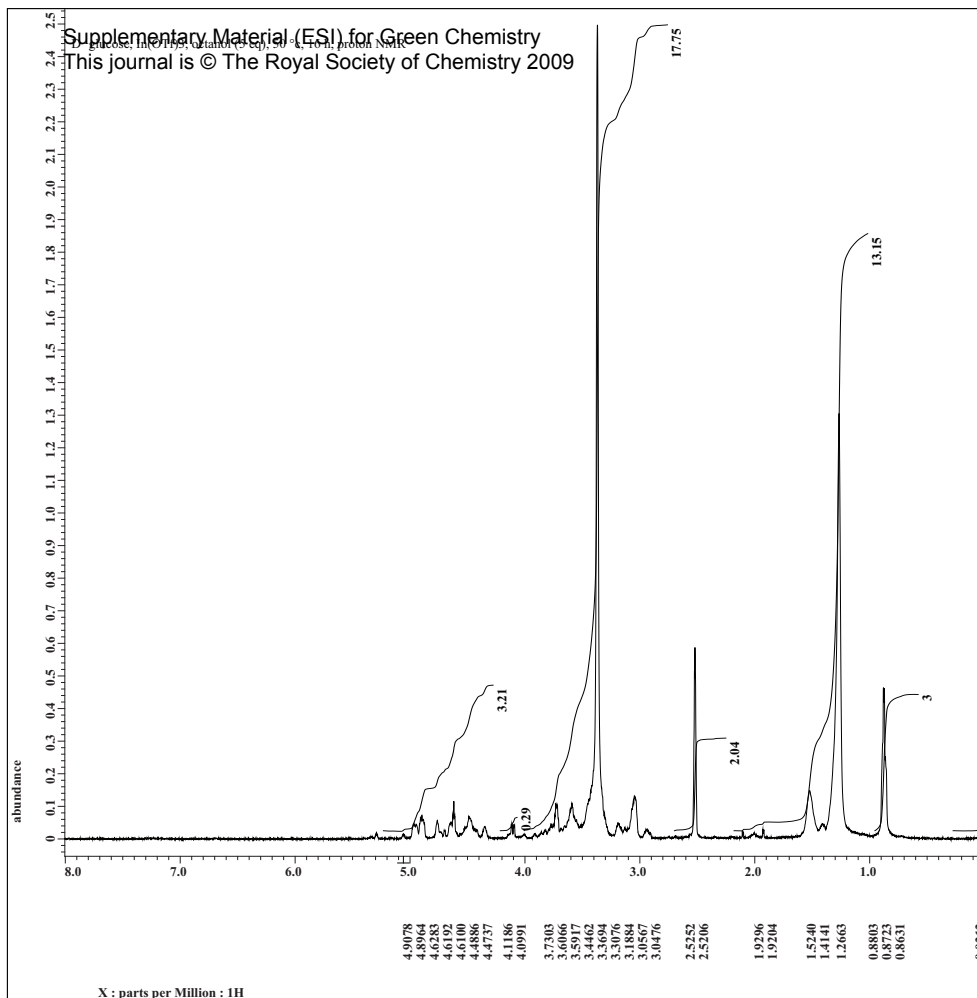


Ionic Liquid Promoted Atom Economic Glycosylation under Lewis Acid Catalysis

Jacques Augé,* Gwenaëlle Sizun

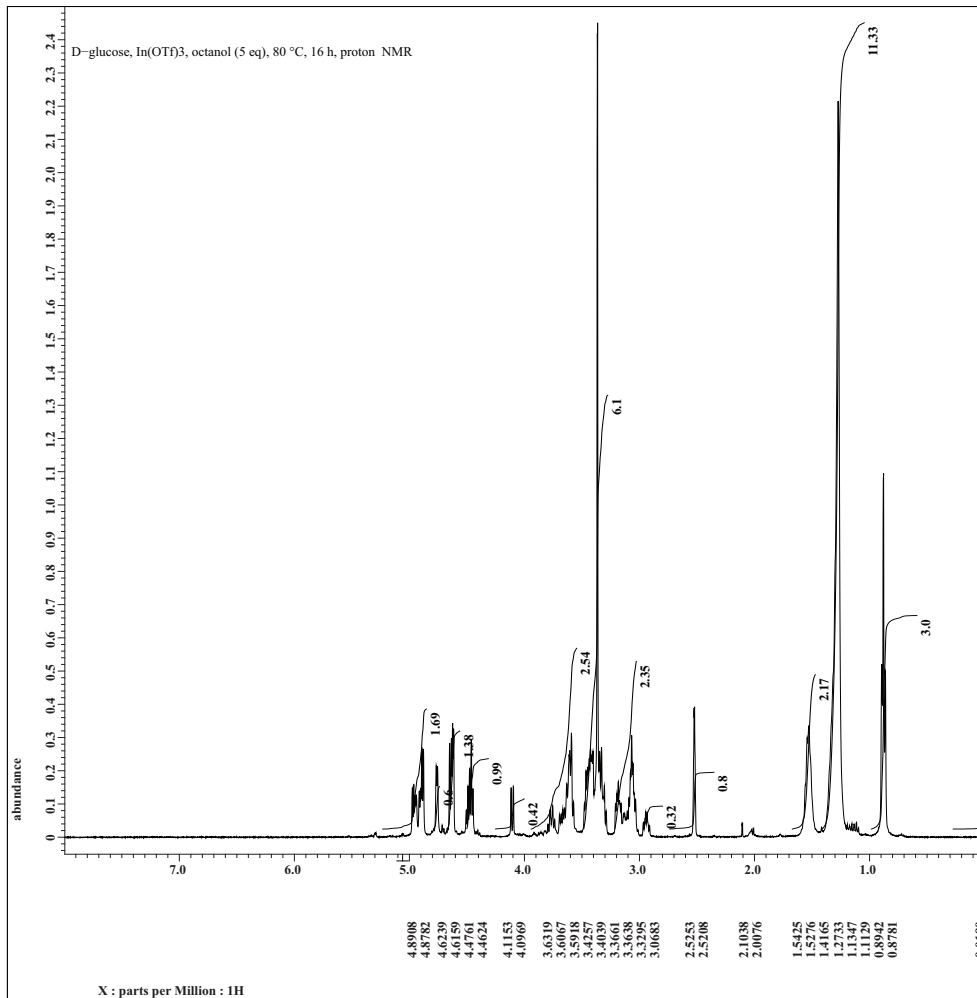
Electronic Supplementary Information

NMR spectra

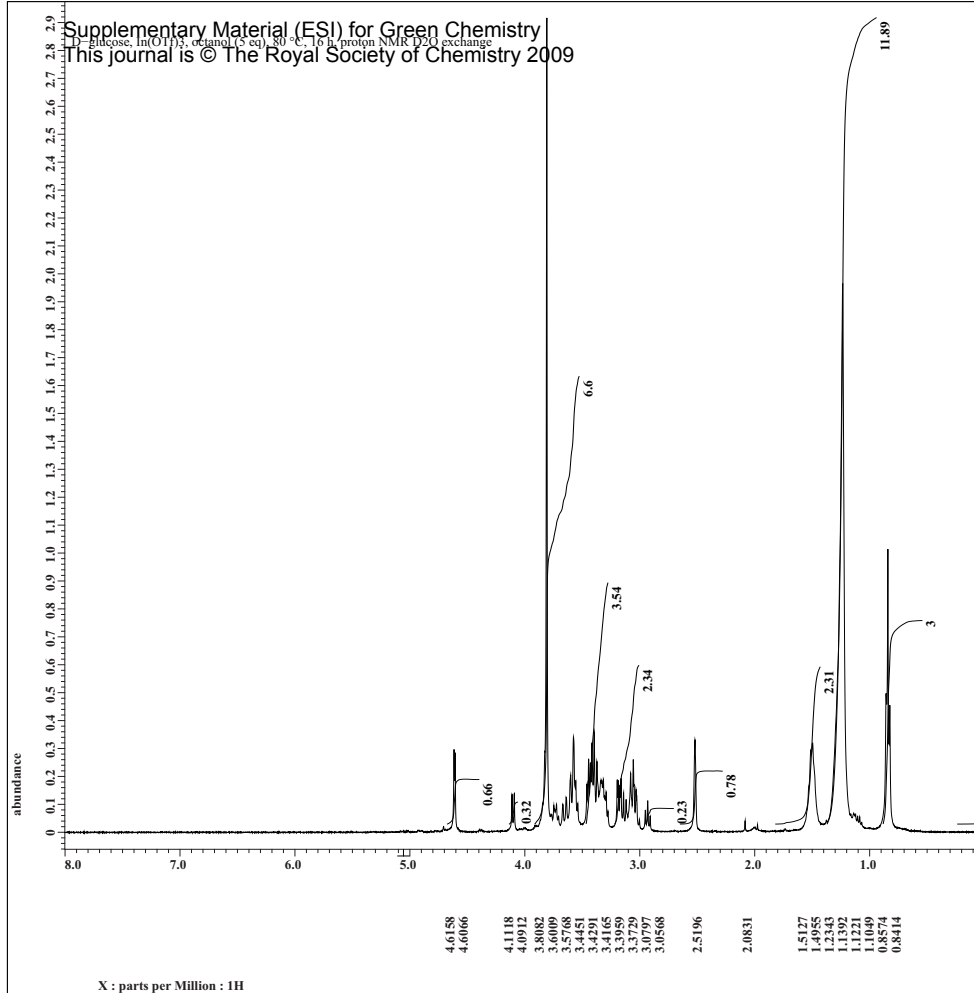


Filename = gsrr22f14a22_PROTON-7
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gsrr22f14a22
 Solvent = DMSO-D6
 Creation time = 7-MAR-2008 11:10:41
 Revision time = 18-FEB-2009 15:15:49
 Current time = 18-FEB-2009 15:16:16
 Comment = 60
 Data format = 1D COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR
 Field strength = 9.389766 [T] (400 [MHz])
 X acq duration = 2.18365952 [s]
 X domain = 1H
 X freq = 399.78219838 [MHz]
 X offset = 5 [ppm]
 X points = 16384
 X prescans = 1
 X resolution = 0.45794685 [Hz]
 X sweep = 7.5030012 [kHz]
 Irr domain = 1H
 Irr freq = 399.78219838 [MHz]
 Irr offset = 5 [ppm]
 Tri domain = 1H
 Tri freq = 399.78219838 [MHz]
 Tri offset = 5 [ppm]
 Clipped = FALSE
 Mod return = 1
 Scans = 16
 Total scans = 16
 X 90 width = 15 [us]
 X acq time = 2.18365952 [s]
 X angle = 45 [deg]
 X attn = 0 [dB]
 X pulse = 7.5 [us]
 Irr mode = Off
 Tri mode = Off
 Dante presat = FALSE
 Initial wait = 1 [s]
 Recvr gain = 40
 Relaxation delay = 1 [s]
 Repetition time = 3.18365952 [s]
 Temp get = 19.9 [dC]

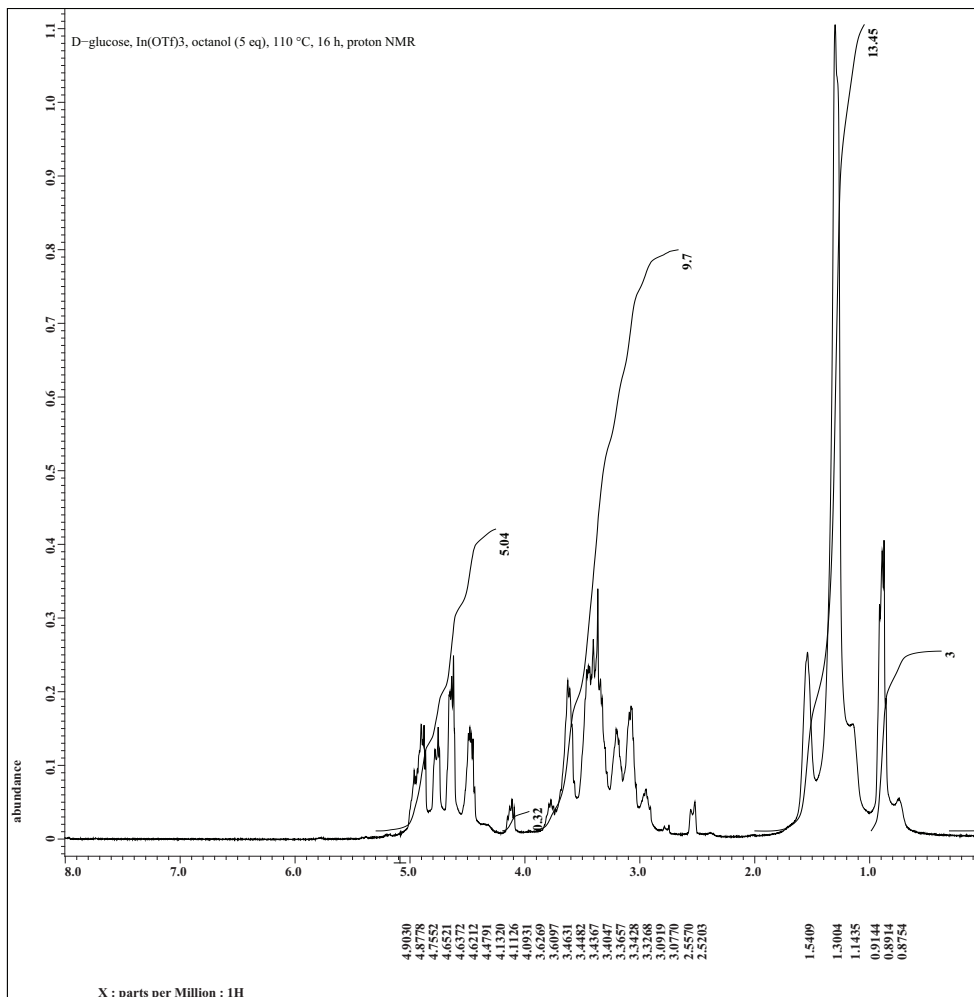
D-glucose, In(OTf)₃, octanol (5 eq), 80 °C, 16 h, proton NMR



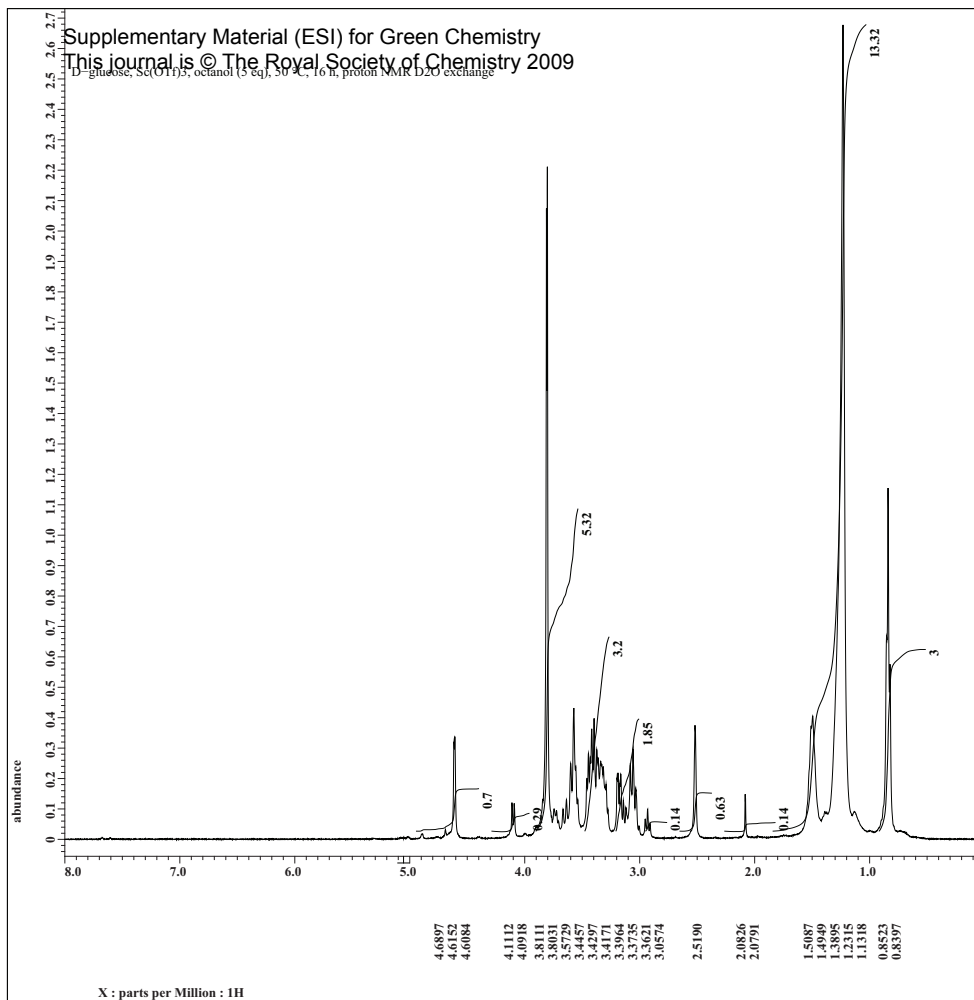
Filename = gsrr20f26a39_PROTON-1
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gsrr20f26a39
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 Creation time = 5-MAR-2008 09:56:30
 Revision time = 18-FEB-2009 14:33:06
 Current time = 18-FEB-2009 14:33:16
 Comment = 41
 Data format = 1D COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR
 Field strength = 9.389766 [T] (400 [MHz])
 X acq duration = 2.18365952 [s]
 X domain = 1H
 X freq = 399.78219838 [MHz]
 X offset = 5 [ppm]
 X points = 16384
 X prescans = 1
 X resolution = 0.45794685 [Hz]
 X sweep = 7.5030012 [kHz]
 Irr domain = 1H
 Irr freq = 399.78219838 [MHz]
 Irr offset = 5 [ppm]
 Tri domain = 1H
 Tri freq = 399.78219838 [MHz]
 Tri offset = 5 [ppm]
 Clipped = FALSE
 Mod return = 1
 Scans = 16
 Total scans = 16
 X 90 width = 15 [us]
 X acq time = 2.18365952 [s]
 X angle = 45 [deg]
 X attn = 0 [dB]
 X pulse = 7.5 [us]
 Irr mode = Off
 Tri mode = Off
 Dante presat = FALSE
 Initial wait = 1 [s]
 Recvr gain = 36
 Relaxation delay = 1 [s]
 Repetition time = 3.18365952 [s]
 Temp get = 20.1 [dC]



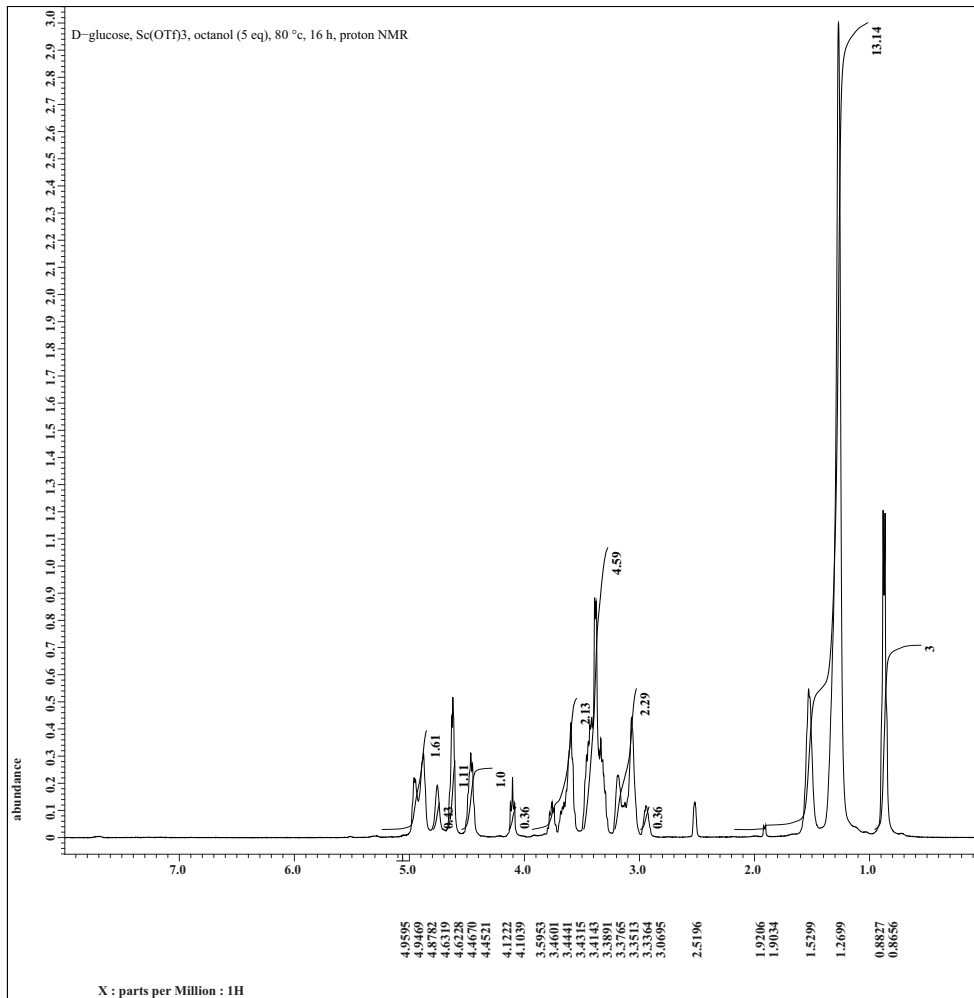
Filename	= gszzr20f26a39etd2o_PRO
Author	= delta
Experiment	= single pulse.ex2
Sample id	= gszzr20f26a39etd2o
Solvent	= DMSO-D6
Creation time	= 5-MAR-2008 10:48:00
Revision time	= 18-FEB-2009 15:08:05
Current time	= 18-FEB-2009 15:08:10
Comment	= 40
Data format	= 1D COMPLEX
Dim size	= 13107
Dim title	= 1H
Dim units	= [ppm]
Dimensions	= X
Site	= ECX 400
Spectrometer	= DELTA2 NMR
Field strength	= 9.389766 [T] (400 [MHz])
X acq duration	= 2.18365952 [s]
X domain	= 1H
X freq	= 399.78219838 [MHz]
X offset	= 5 [ppm]
X points	= 16384
X prescans	= 1
X resolution	= 0.45794685 [Hz]
X sweep	= 7.5030012 [kHz]
Irr domain	= 1H
Irr freq	= 399.78219838 [MHz]
Irr offset	= 5 [ppm]
Tri domain	= 1H
Tri freq	= 399.78219838 [MHz]
Tri offset	= 5 [ppm]
Clipped	= FALSE
Mod return	= 1
Scans	= 16
Total scans	= 16
X 90 width	= 15 [us]
X acq time	= 2.18365952 [s]
X angle	= 45 [deg]
X attn	= 0 [dB]
X pulse	= 7.5 [us]
Irr mode	= Off
Tri mode	= Off
Dante presat	= FALSE
Initial wait	= 1 [s]
Recvr gain	= 38
Relaxation delay	= 1 [s]
Repetition time	= 3.18365952 [s]
Temp get	= 20.6 [dC]



Filename	= gszzr6f21a37_PROTON-7.
Author	= delta
Experiment	= single pulse.ex2
Sample id	= gszzr6f21a37
Solvent	= DMSO-D6
Creation time	= 3-MAR-2008 14:58:10
Revision time	= 24-FEB-2009 10:23:03
Current time	= 24-FEB-2009 10:23:11
Comment	= 6
Data format	= 1D COMPLEX
Dim size	= 13107
Dim title	= 1H
Dim units	= [ppm]
Dimensions	= X
Site	= ECX 400
Spectrometer	= DELTA2 NMR
Field strength	= 9.389766 [T] (400 [MHz])
X acq duration	= 2.18365952 [s]
X domain	= 1H
X freq	= 399.78219838 [MHz]
X offset	= 5 [ppm]
X points	= 16384
X prescans	= 1
X resolution	= 0.45794685 [Hz]
X sweep	= 7.5030012 [kHz]
Irr domain	= 1H
Irr freq	= 399.78219838 [MHz]
Irr offset	= 5 [ppm]
Tri domain	= 1H
Tri freq	= 399.78219838 [MHz]
Tri offset	= 5 [ppm]
Clipped	= FALSE
Mod return	= 1
Scans	= 16
Total scans	= 16
X 90 width	= 15 [us]
X acq time	= 2.18365952 [s]
X angle	= 45 [deg]
X attn	= 0 [dB]
X pulse	= 7.5 [us]
Irr mode	= Off
Tri mode	= Off
Dante presat	= FALSE
Initial wait	= 1 [s]
Recvr gain	= 30
Relaxation delay	= 1 [s]
Repetition time	= 3.18365952 [s]
Temp get	= 20.8 [dC]



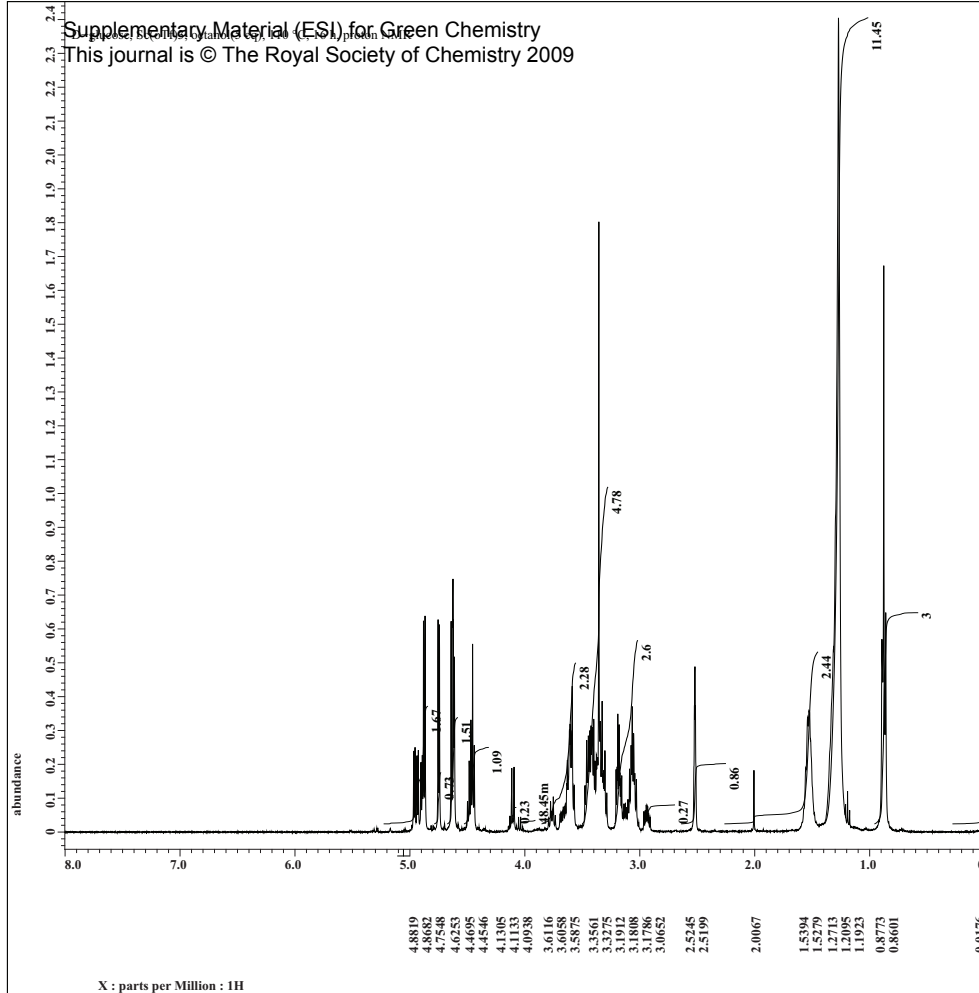
Filename = gszr13f16a27etd2o_PRO
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gszr13f16a27etd2o
 Solvent = DMSO-D6
 Creation time = 5-MAR-2008 18:14:14
 Revision time = 18-FEB-2009 09:31:31
 Current time = 18-FEB-2009 09:32:08
 Comment = 30
 Data format = 1D COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR
 Field strength = 9.389766 [T] (400 [MHz])
 X acq duration = 2.18365952 [s]
 X domain = 1H
 X freq = 399.78219838 [MHz]
 X offset = 5 [ppm]
 X points = 16384
 X prescans = 1
 X resolution = 0.45794685 [Hz]
 X sweep = 7.5030012 [kHz]
 Irr domain = 1H
 Irr freq = 399.78219838 [MHz]
 Irr offset = 5 [ppm]
 Tri domain = 1H
 Tri freq = 399.78219838 [MHz]
 Tri offset = 5 [ppm]
 Clipped = FALSE
 Mod return = 1
 Scans = 16
 Total scans = 16
 X 90 width = 15 [us]
 X acq time = 2.18365952 [s]
 X angle = 45 [deg]
 X attn = 0 [dB]
 X pulse = 7.5 [us]
 Irr mode = Off
 Tri mode = Off
 Dante presat = FALSE
 Initial wait = 1 [s]
 Recvr gain = 36
 Relaxation delay = 1 [s]
 Repetition time = 3.18365952 [s]
 Temp_get = 20.4 [dC]



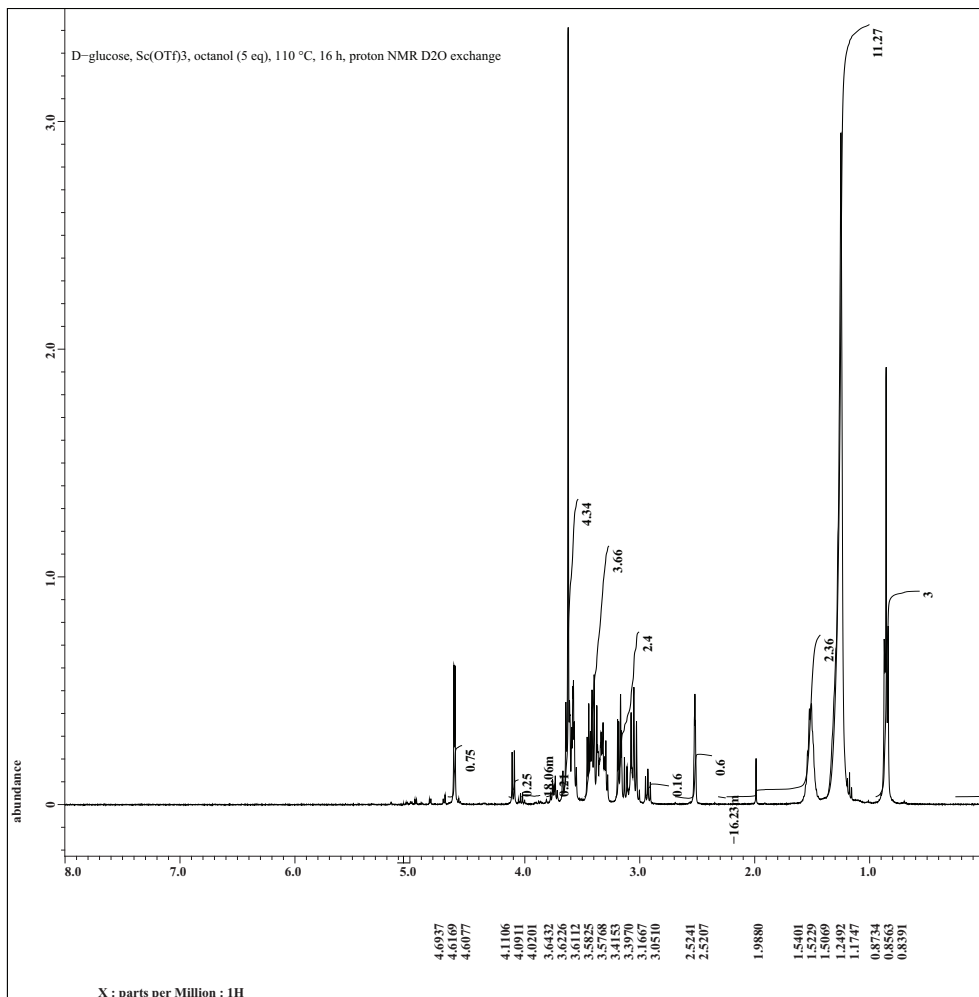
Filename = gszr17f14a27_PROTON-7
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gszr17f14a27
 Solvent = DMSO-D6
 Creation time = 3-MAR-2008 15:12:39
 Revision time = 24-FEB-2009 11:04:32
 Current time = 24-FEB-2009 11:04:52
 Comment = 28
 Data format = 1D COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR
 Field strength = 9.389766 [T] (400 [MHz])
 X acq duration = 2.18365952 [s]
 X domain = 1H
 X freq = 399.78219838 [MHz]
 X offset = 5 [ppm]
 X points = 16384
 X prescans = 1
 X resolution = 0.45794685 [Hz]
 X sweep = 7.5030012 [kHz]
 Irr domain = 1H
 Irr freq = 399.78219838 [MHz]
 Irr offset = 5 [ppm]
 Tri domain = 1H
 Tri freq = 399.78219838 [MHz]
 Tri offset = 5 [ppm]
 Clipped = FALSE
 Mod return = 1
 Scans = 16
 Total scans = 16
 X 90 width = 15 [us]
 X acq time = 2.18365952 [s]
 X angle = 45 [deg]
 X attn = 0 [dB]
 X pulse = 7.5 [us]
 Irr mode = Off
 Tri mode = Off
 Dante presat = FALSE
 Initial wait = 1 [s]
 Recvr gain = 30
 Relaxation delay = 1 [s]
 Repetition time = 3.18365952 [s]
 Temp_get = 20.8 [dC]

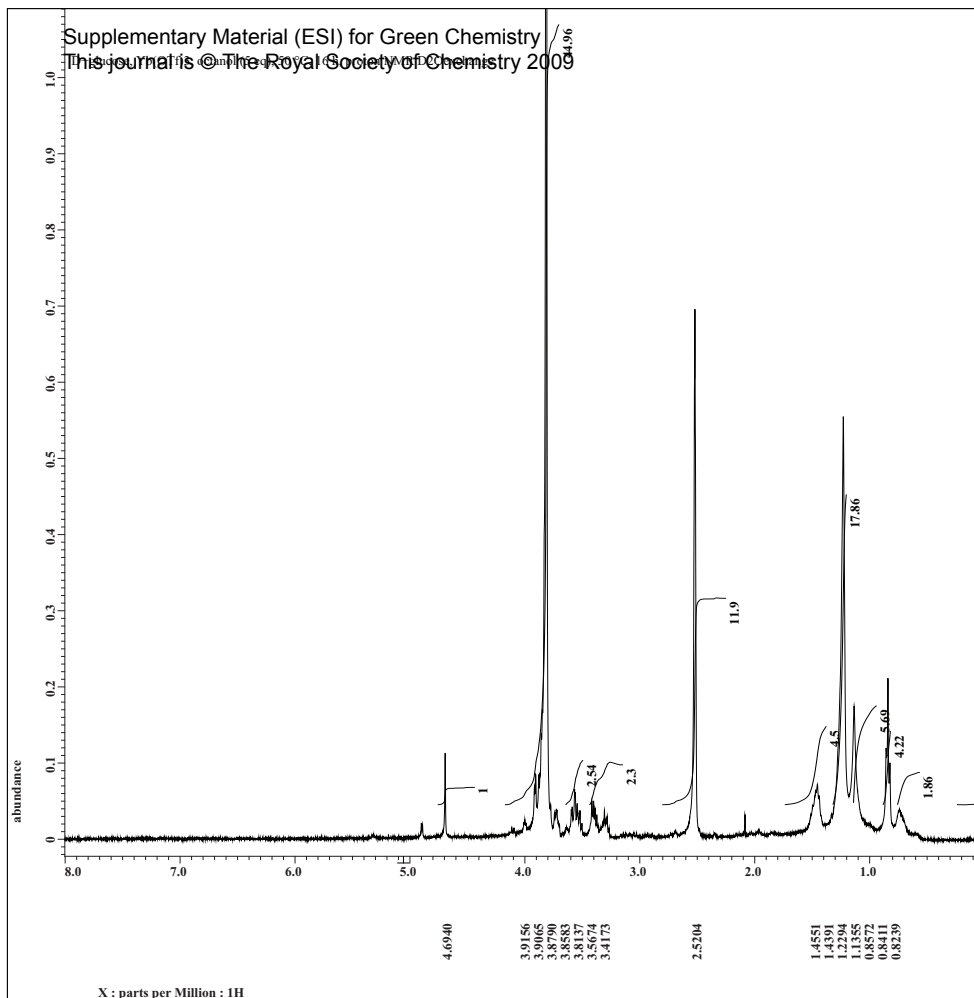


Filename = gsrr27f16a30_PROTON-7
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gsrr27f16a30
 Solvent = DMSO-D6
 Creation time = 12-MAR-2008 13:32:30
 Revision time = 18-FEB-2009 15:35:34
 Current time = 18-FEB-2009 15:36:04
 Comment = 60
 Data format = 1D COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR
 Field strength = 9.389766 [T] (400 [MHz])
 X acq duration = 2.18365952 [s]
 X domain = 1H
 X freq = 399.78219838 [MHz]
 X offset = 5 [ppm]
 X points = 16384
 X prescans = 1
 X resolution = 0.45794685 [Hz]
 X sweep = 7.5030012 [kHz]
 Irr domain = 1H
 Irr freq = 399.78219838 [MHz]
 Irr offset = 5 [ppm]
 Tri domain = 1H
 Tri freq = 399.78219838 [MHz]
 Tri offset = 5 [ppm]
 Clipped = FALSE
 Mod return = 1
 Scans = 16
 Total scans = 16
 X 90 width = 15 [us]
 X acq time = 2.18365952 [s]
 X angle = 45 [deg]
 X attn = 0 [dB]
 X pulse = 7.5 [us]
 Irr mode = Off
 Tri mode = Off
 Dante presat = FALSE
 Initial wait = 1 [s]
 Recvr gain = 38
 Relaxation delay = 1 [s]
 Repetition time = 3.18365952 [s]
 Temp_get = 20.5 [dC]



Filename = gsrr27f16a30etd2o_PRO
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gsrr27f16a30etd2o
 Solvent = DMSO-D6
 Creation time = 12-MAR-2008 14:38:22
 Revision time = 18-FEB-2009 15:49:10
 Current time = 18-FEB-2009 15:49:27
 Comment = 60
 Data format = 1D COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR
 Field strength = 9.389766 [T] (400 [MHz])
 X acq duration = 2.18365952 [s]
 X domain = 1H
 X freq = 399.78219838 [MHz]
 X offset = 5 [ppm]
 X points = 16384
 X prescans = 1
 X resolution = 0.45794685 [Hz]
 X sweep = 7.5030012 [kHz]
 Irr domain = 1H
 Irr freq = 399.78219838 [MHz]
 Irr offset = 5 [ppm]
 Tri domain = 1H
 Tri freq = 399.78219838 [MHz]
 Tri offset = 5 [ppm]
 Clipped = FALSE
 Mod return = 1
 Scans = 16
 Total scans = 16
 X 90 width = 15 [us]
 X acq time = 2.18365952 [s]
 X angle = 45 [deg]
 X attn = 0 [dB]
 X pulse = 7.5 [us]
 Irr mode = Off
 Tri mode = Off
 Dante presat = FALSE
 Initial wait = 1 [s]
 Recvr gain = 38
 Relaxation delay = 1 [s]
 Repetition time = 3.18365952 [s]
 Temp_get = 20.5 [dC]





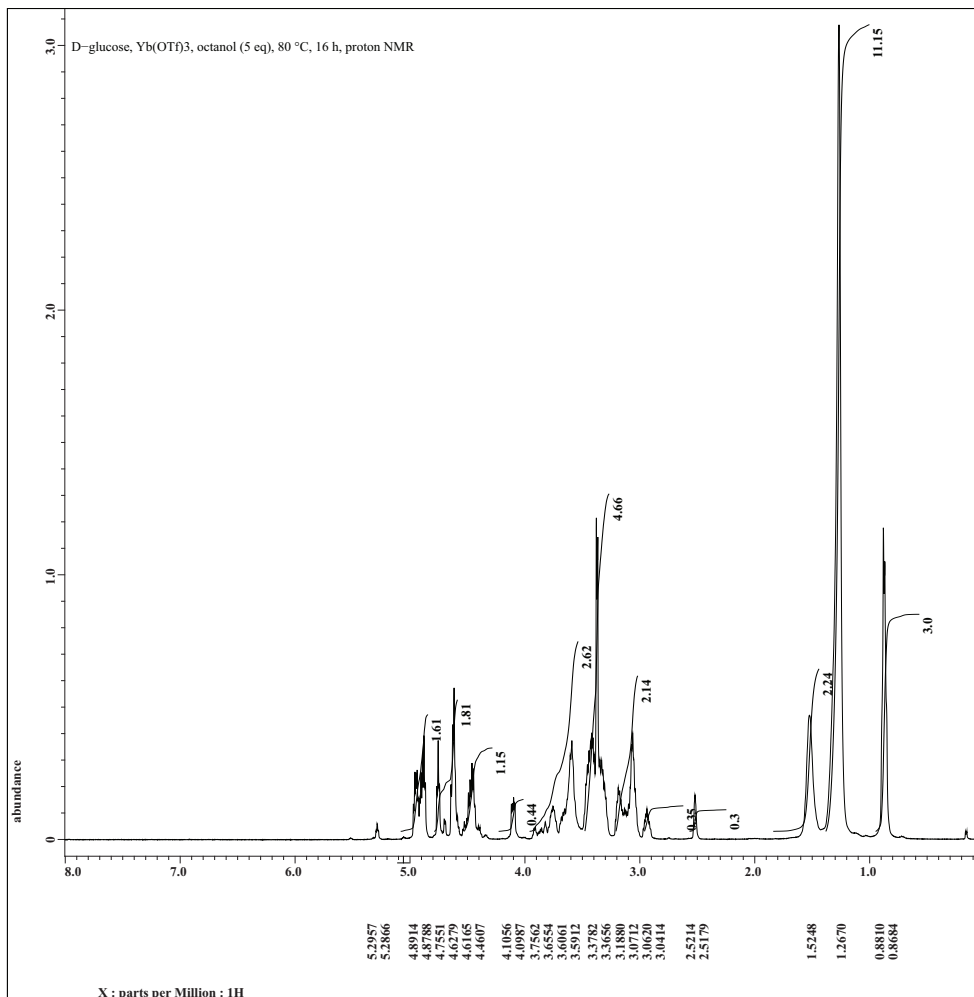
Filename = gszr18f16a23etd2o_PRO
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gszr18f16a23etd2o
 Solvent = DMSO-D6
 Creation time = 5-MAR-2008 10:33:24
 Revision time = 18-FEB-2009 10:22:35
 Current time = 18-FEB-2009 10:26:24

Comment = 20
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 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR

Field strength = 9.389766 [T] (400 [MHz])
 X acq duration = 2.18365952 [s]
 X domain = 1H
 X freq = 399.78219838 [MHz]
 X offset = 5 [ppm]
 X points = 16384
 X prescans = 1
 X resolution = 0.45794685 [Hz]
 X sweep = 7.5030012 [kHz]
 Irr domain = 1H
 Irr freq = 399.78219838 [MHz]
 Irr offset = 5 [ppm]
 Tri domain = 1H
 Tri freq = 399.78219838 [MHz]
 Tri offset = 5 [ppm]
 Clipped = FALSE
 Mod return = 1
 Scans = 16
 Total scans = 16

X 90 width = 15 [us]
 X acq time = 2.18365952 [s]
 X angle = 45 [deg]
 X attn = 0 [dB]
 X pulse = 7.5 [us]
 Irr mode = Off
 Tri mode = Off
 Dante presat = FALSE
 Initial wait = 1 [s]
 Recvr gain = 44
 Relaxation delay = 1 [s]
 Repetition time = 3.18365952 [s]
 Temp_get = 20.3 [dC]

D-glucose, Yb(OTf)₃, octanol (5 eq), 80 °C, 16 h, proton NMR

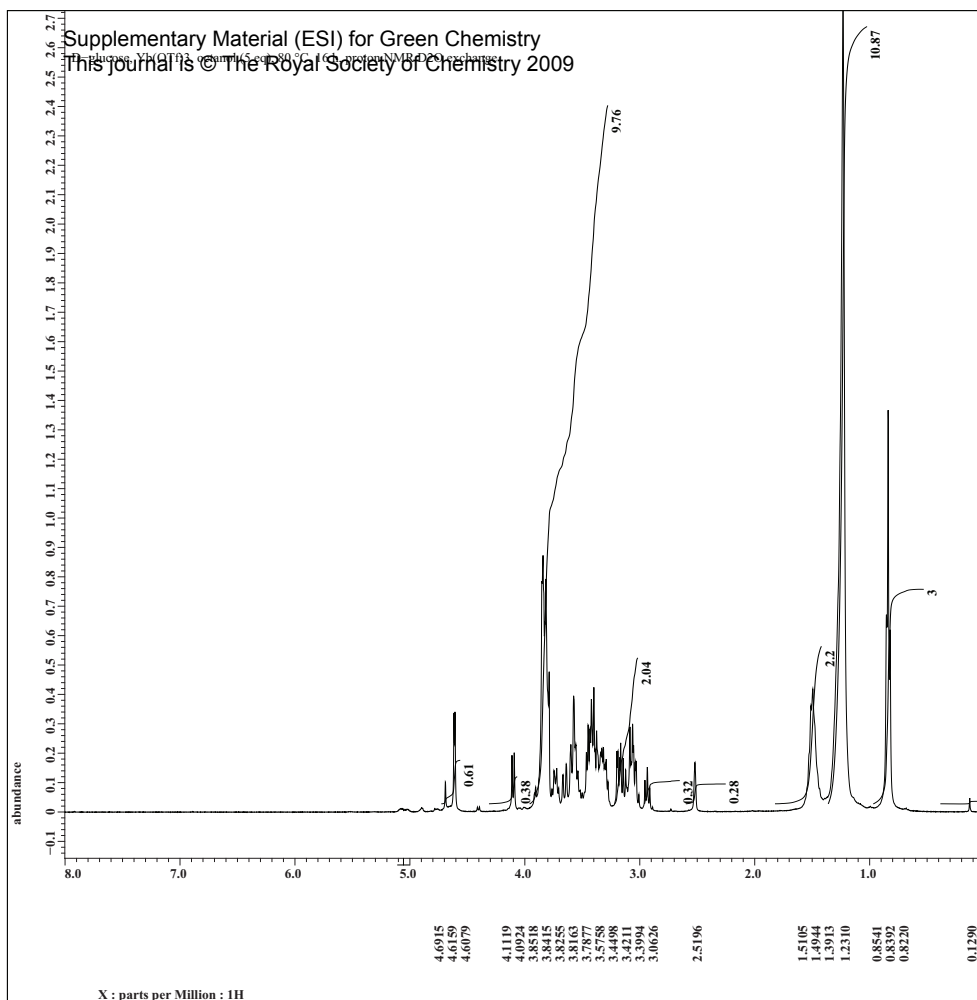


Filename = gszr21f21a36_PROTON-7
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gszr21f21a36
 Solvent = DMSO-D6
 Creation time = 6-MAR-2008 14:49:07
 Revision time = 18-FEB-2009 10:38:10
 Current time = 18-FEB-2009 10:38:18

Comment = 40
 Data format = 1D COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR

Field strength = 9.389766 [T] (400 [MHz])
 X acq duration = 2.18365952 [s]
 X domain = 1H
 X freq = 399.78219838 [MHz]
 X offset = 5 [ppm]
 X points = 16384
 X prescans = 1
 X resolution = 0.45794685 [Hz]
 X sweep = 7.5030012 [kHz]
 Irr domain = 1H
 Irr freq = 399.78219838 [MHz]
 Irr offset = 5 [ppm]
 Tri domain = 1H
 Tri freq = 399.78219838 [MHz]
 Tri offset = 5 [ppm]
 Clipped = FALSE
 Mod return = 1
 Scans = 16
 Total scans = 16

X 90 width = 15 [us]
 X acq time = 2.18365952 [s]
 X angle = 45 [deg]
 X attn = 0 [dB]
 X pulse = 7.5 [us]
 Irr mode = Off
 Tri mode = Off
 Dante presat = FALSE
 Initial wait = 1 [s]
 Recvr gain = 30
 Relaxation delay = 1 [s]
 Repetition time = 3.18365952 [s]
 Temp_get = 20.8 [dC]



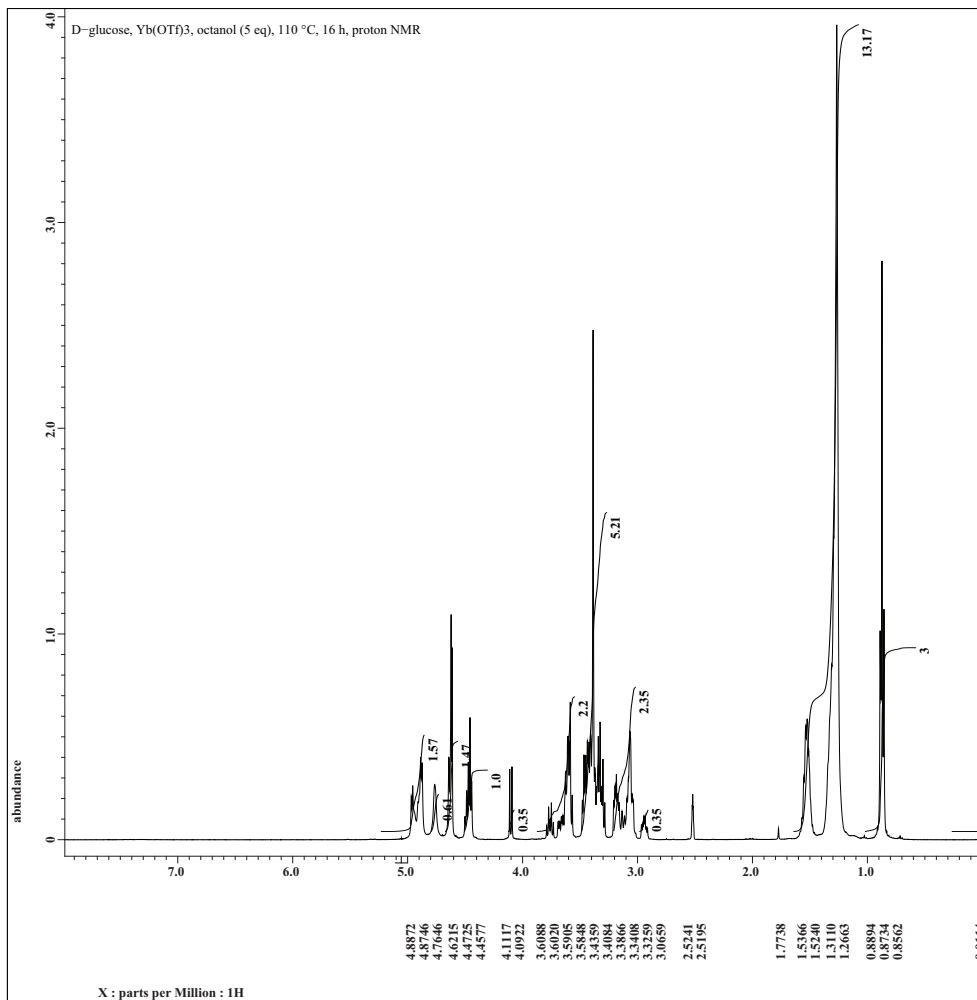
Filename = gszr21f21a36etd2o_PRO
Author = delta
Experiment = single pulse.ex2
Sample id = gszr21f21a36etd2o
Solvent = DMSO-D6
Creation time = 6-MAR-2008 15:21:22
Revision time = 18-FEB-2009 11:07:52
Current time = 18-FEB-2009 11:08:00

Comment = 30
Data format = 1D COMPLEX
Dim size = 13107
Dim title = 1H
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2 NMR

Field strength = 9.389766 [T] (400 [MHz])
X acq duration = 2.18365952 [s]
X domain = 1H
X freq = 399.78219838 [MHz]
X offset = 5 [ppm]
X points = 16384
X prescans = 1
X resolution = 0.45794685 [Hz]
X sweep = 7.5030012 [kHz]
Irr domain = 1H
Irr freq = 399.78219838 [MHz]
Irr offset = 5 [ppm]
Tri domain = 1H
Tri freq = 399.78219838 [MHz]
Tri offset = 5 [ppm]
Clipped = FALSE
Mod return = 1
Scans = 16
Total scans = 16

X 90 width = 15 [us]
X acq time = 2.18365952 [s]
X angle = 45 [deg]
X attn = 0 [dB]
X pulse = 7.5 [us]
Irr mode = Off
Tri mode = Off
Dante presat = FALSE
Initial wait = 1 [s]
Recvr gain = 30
Relaxation delay = 1 [s]
Repetition time = 3.18365952 [s]
Temp_get = 20.8 [dC]

D-glucose, Yb(OTf)₃, octanol (5 eq), 110 °C, 16 h, proton NMR



Filename = gszr5f21a28_PROTON-7.
Author = delta
Experiment = single pulse.ex2
Sample id = gszr5f21a28
Solvent = DMSO-D6
Creation time = 5-MAR-2008 15:00:40
Revision time = 24-FEB-2009 10:43:39
Current time = 24-FEB-2009 10:43:46

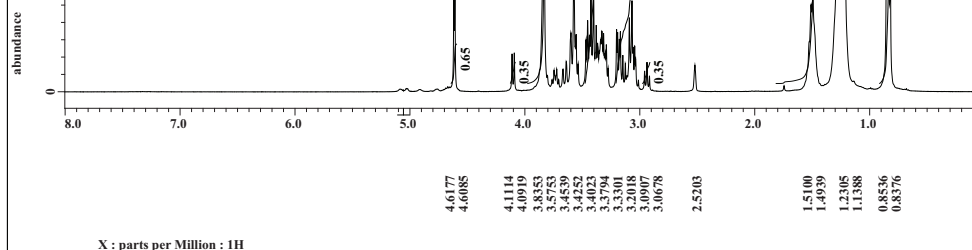
Comment = 35
Data format = 1D COMPLEX
Dim size = 13107
Dim title = 1H
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2 NMR

Field strength = 9.389766 [T] (400 [MHz])
X acq duration = 2.18365952 [s]
X domain = 1H
X freq = 399.78219838 [MHz]
X offset = 5 [ppm]
X points = 16384
X prescans = 1
X resolution = 0.45794685 [Hz]
X sweep = 7.5030012 [kHz]
Irr domain = 1H
Irr freq = 399.78219838 [MHz]
Irr offset = 5 [ppm]
Tri domain = 1H
Tri freq = 399.78219838 [MHz]
Tri offset = 5 [ppm]
Clipped = FALSE
Mod return = 1
Scans = 16
Total scans = 16

X 90 width = 15 [us]
X acq time = 2.18365952 [s]
X angle = 45 [deg]
X attn = 0 [dB]
X pulse = 7.5 [us]
Irr mode = Off
Tri mode = Off
Dante presat = FALSE
Initial wait = 1 [s]
Recvr gain = 28
Relaxation delay = 1 [s]
Repetition time = 3.18365952 [s]
Temp_get = 20.6 [dC]



Filename = gsrr5f21a28etd2o_PROT
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gsrr5f21a28etd2o
 Solvent = DMSO-D6
 Creation time = 5-MAR-2008 16:32:39
 Revision time = 24-FEB-2009 10:38:27
 Current time = 24-FEB-2009 10:38:37
 Comment = 15
 Data format = 1D_COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR
 Field strength = 9.389766 [T] (400 [MHz])
 X_acq_duration = 2.18365952 [s]
 X_domain = 1H
 X_freq = 399.78219838 [MHz]
 X_offset = 5 [ppm]
 X_points = 16384
 X_prescans = 1
 X_resolution = 0.45794685 [Hz]
 X_sweep = 7.5030012 [kHz]
 Irr_domain = 1H
 Irr_freq = 399.78219838 [MHz]
 Irr_offset = 5 [ppm]
 Tri_domain = 1H
 Tri_freq = 399.78219838 [MHz]
 Tri_offset = 5 [ppm]
 Clipped = FALSE
 Mod_return = 1
 Scans = 16
 Total_scans = 16
 X_90_width = 15 [us]
 X_acq_time = 2.18365952 [s]
 X_angle = 45 [deg]
 X_atn = 0 [dB]
 X_pulse = 7.5 [us]
 Irr_mode = Off
 Tri_mode = Off
 Dante_presat = FALSE
 Initial_wait = 1 [s]
 Recvr_gain = 28
 Relaxation_delay = 1 [s]
 Repetition_time = 3.18365952 [s]
 Temp_get = 20.3 [dC]

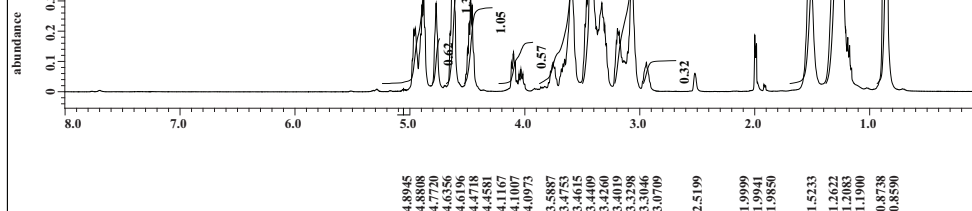


X : parts per Million : 1H

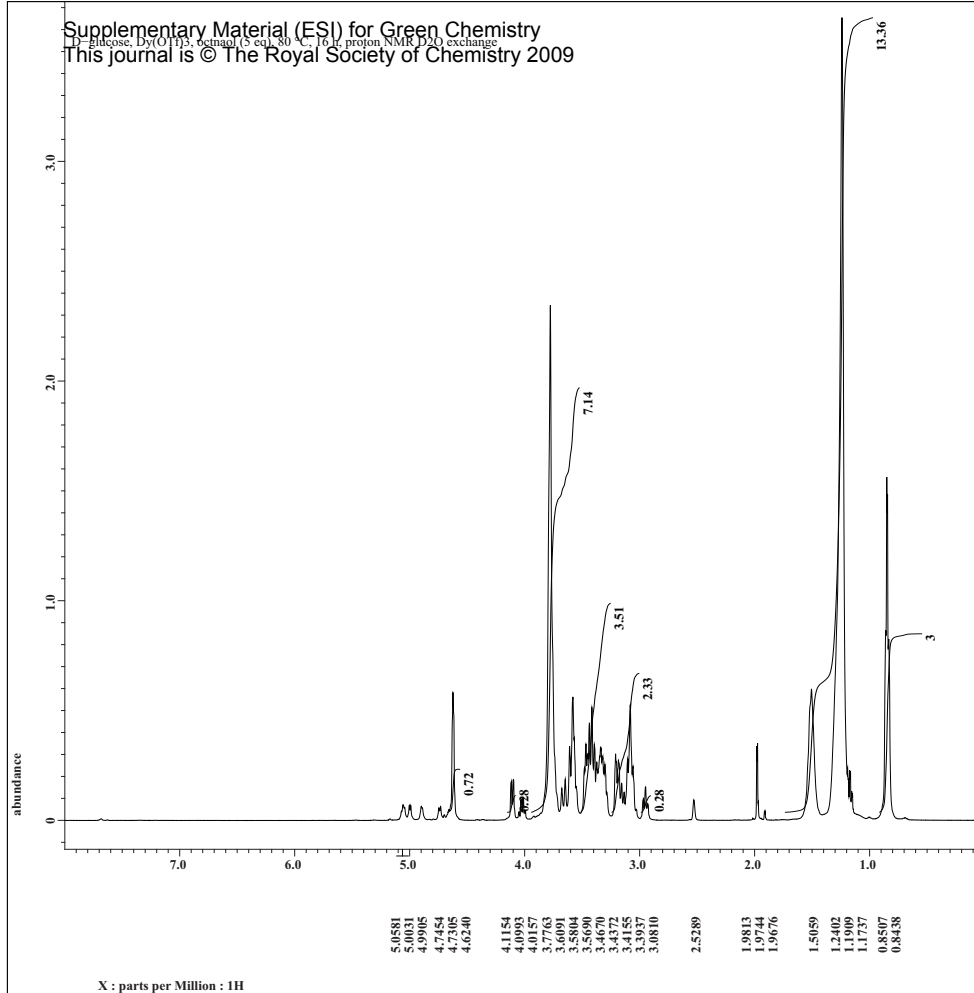
D-glucose, Dy(OTf)₃, octanol (5 eq), 80 °C, 16 h, proton NMR



Filename = gsrr88f30a49_PROTON-7
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gsrr88f30a49
 Solvent = DMSO-D6
 Creation time = 4-JUN-2008 12:10:15
 Revision time = 24-FEB-2009 10:05:12
 Current time = 24-FEB-2009 10:05:19
 Comment = 30
 Data format = 1D_COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR
 Field strength = 9.389766 [T] (400 [MHz])
 X_acq_duration = 2.18365952 [s]
 X_domain = 1H
 X_freq = 399.78219838 [MHz]
 X_offset = 5 [ppm]
 X_points = 16384
 X_prescans = 1
 X_resolution = 0.45794685 [Hz]
 X_sweep = 7.5030012 [kHz]
 Irr_domain = 1H
 Irr_freq = 399.78219838 [MHz]
 Irr_offset = 5 [ppm]
 Tri_domain = 1H
 Tri_freq = 399.78219838 [MHz]
 Tri_offset = 5 [ppm]
 Clipped = FALSE
 Mod_return = 1
 Scans = 16
 Total_scans = 16
 X_90_width = 15 [us]
 X_acq_time = 2.18365952 [s]
 X_angle = 45 [deg]
 X_atn = 0 [dB]
 X_pulse = 7.5 [us]
 Irr_mode = Off
 Tri_mode = Off
 Dante_presat = FALSE
 Initial_wait = 1 [s]
 Recvr_gain = 22
 Relaxation_delay = 1 [s]
 Repetition_time = 3.18365952 [s]
 Temp_get = 19.7 [dC]



X : parts per Million : 1H

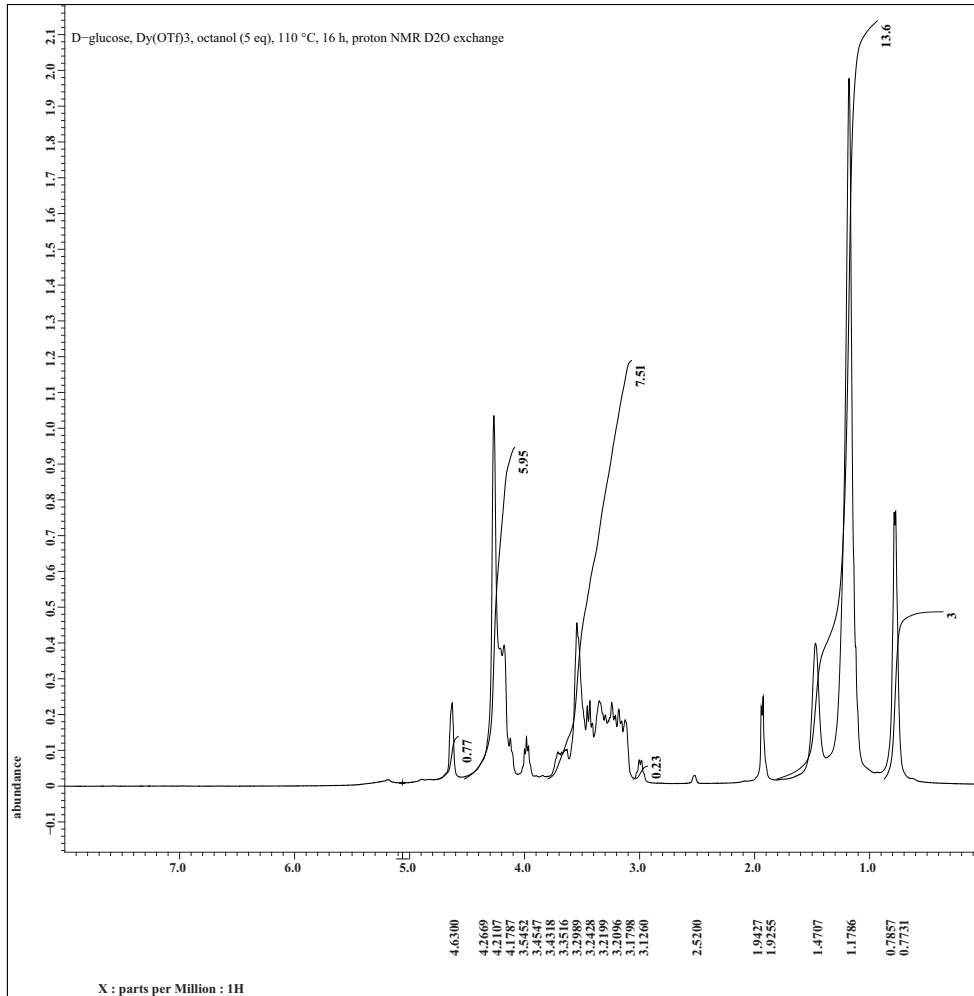


Filename = gszr88f30a49etd2o_PRO
Author = delta
Experiment = single pulse.ex2
Sample id = gszr88f30a49etd2o
Solvent = DMSO-D6
Creation time = 4-JUN-2008 12:56:58
Revision time = 24-FEB-2009 10:11:42
Current_time = 24-FEB-2009 10:11:49

Comment = 60
Data format = 1D COMPLEX
Dim size = 13107
Dim title = 1H
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2 NMR

Field strength = 9.389766 [T] (400 [MHz])
X_acq_duration = 2.18365952 [s]
X_domain = 1H
X_freq = 399.78219838 [MHz]
X_offset = 5 [ppm]
X_points = 16384
X_prescans = 1
X_resolution = 0.45794685 [Hz]
X_sweep = 7.5030012 [kHz]
Irr_domain = 1H
Irr_freq = 399.78219838 [MHz]
Irr_offset = 5 [ppm]
Tri_domain = 1H
Tri_freq = 399.78219838 [MHz]
Tri_offset = 5 [ppm]
Clipped = FALSE
Mod_return = 1
Scans = 16
Total_scans = 16

X_90_width = 15 [us]
X_acq_time = 2.18365952 [s]
X_angle = 45 [deg]
X_atn = 0 [dB]
X_pulse = 7.5 [us]
Irr_mode = Off
Tri_mode = Off
Dante_presat = FALSE
Initial_wait = 1 [s]
Recvr_gain = 24
Relaxation_delay = 1 [s]
Repetition_time = 3.18365952 [s]
Temp_get = 19.6 [dC]



Filename = gszr91f15a35etd2o_PRO
Author = delta
Experiment = single pulse.ex2
Sample id = gszr91f15a35etd2o
Solvent = DMSO-D6
Creation time = 6-JUN-2008 12:42:01
Revision time = 24-FEB-2009 10:17:15
Current_time = 24-FEB-2009 10:17:45

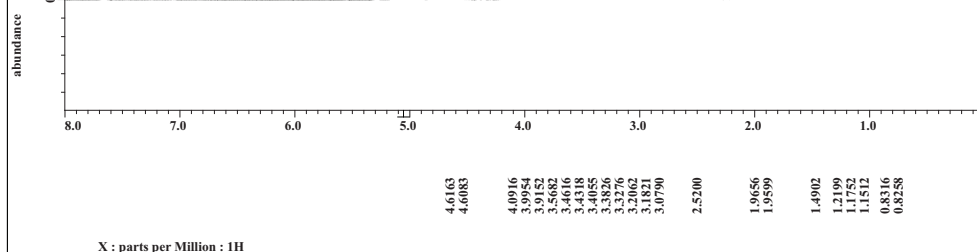
Comment = 35
Data format = 1D COMPLEX
Dim size = 13107
Dim title = 1H
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2 NMR

Field strength = 9.389766 [T] (400 [MHz])
X_acq_duration = 2.18365952 [s]
X_domain = 1H
X_freq = 399.78219838 [MHz]
X_offset = 5 [ppm]
X_points = 16384
X_prescans = 1
X_resolution = 0.45794685 [Hz]
X_sweep = 7.5030012 [kHz]
Irr_domain = 1H
Irr_freq = 399.78219838 [MHz]
Irr_offset = 5 [ppm]
Tri_domain = 1H
Tri_freq = 399.78219838 [MHz]
Tri_offset = 5 [ppm]
Clipped = FALSE
Mod_return = 1
Scans = 16
Total_scans = 16

X_90_width = 15 [us]
X_acq_time = 2.18365952 [s]
X_angle = 45 [deg]
X_atn = 0 [dB]
X_pulse = 7.5 [us]
Irr_mode = Off
Tri_mode = Off
Dante_presat = FALSE
Initial_wait = 1 [s]
Recvr_gain = 22
Relaxation_delay = 1 [s]
Repetition_time = 3.18365952 [s]
Temp_get = 19.4 [dC]



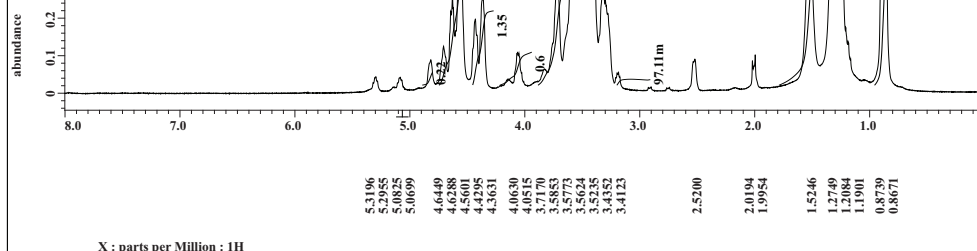
Filename = gszr71f31a43etd2o_PRO
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gszr71f31a43etd2o
 Solvent = DMSO-D6
 Creation time = 15-MAY-2008 13:51:30
 Revision time = 18-FEB-2009 16:03:26
 Current time = 18-FEB-2009 16:03:40
 Comment = 55
 Data format = 1D_COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR
 Field strength = 9.389766 [T] (400 [MHz])
 X_acq_duration = 2.18365952 [s]
 X_domain = 1H
 X_freq = 399.78219838 [MHz]
 X_offset = 5 [ppm]
 X_points = 16384
 X_prescans = 1
 X_resolution = 0.45794685 [Hz]
 X_sweep = 7.5030012 [kHz]
 Irr_domain = 1H
 Irr_freq = 399.78219838 [MHz]
 Irr_offset = 5 [ppm]
 Tri_domain = 1H
 Tri_freq = 399.78219838 [MHz]
 Tri_offset = 5 [ppm]
 Clipped = FALSE
 Mod_return = 1
 Scans = 16
 Total_scans = 16
 X_90_width = 15 [us]
 X_acq_time = 2.18365952 [s]
 X_angle = 45 [deg]
 X_atn = 0 [dB]
 X_pulse = 7.5 [us]
 Irr_mode = Off
 Tri_mode = Off
 Dante_presat = FALSE
 Initial_wait = 1 [s]
 Recvr_gain = 26
 Relaxation_delay = 1 [s]
 Repetition_time = 3.18365952 [s]
 Temp_get = 20.3 [dC]



D-galactose, Sc(OTf)₃, octanol (5 eq), 80 °C, 24 h, proton NMR

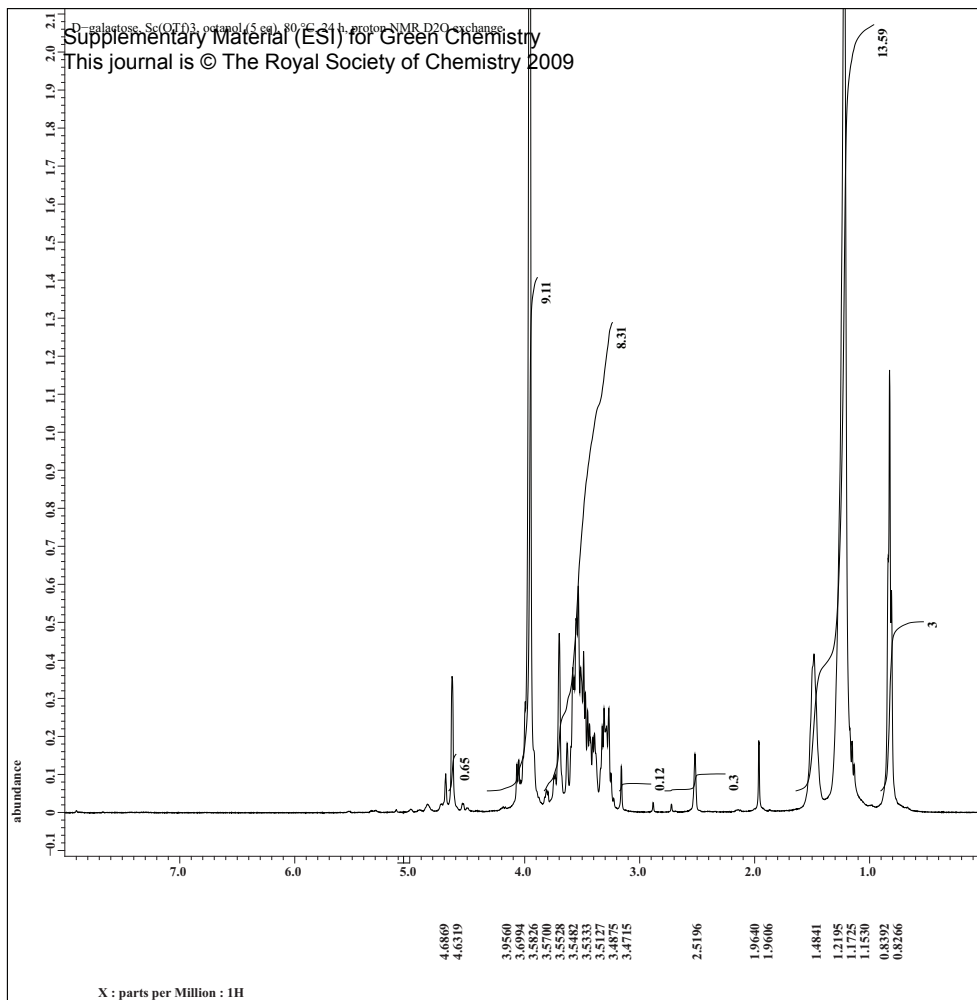


Filename = gszr135f39a65_PROTON-
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gszr135f39a65
 Solvent = DMSO-D6
 Creation time = 4-AUG-2008 14:56:43
 Revision time = 23-FEB-2009 17:14:00
 Current time = 23-FEB-2009 17:14:04
 Comment = 45
 Data format = 1D_COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR
 Field strength = 9.389766 [T] (400 [MHz])
 X_acq_duration = 2.18365952 [s]
 X_domain = 1H
 X_freq = 399.78219838 [MHz]
 X_offset = 5 [ppm]
 X_points = 16384
 X_prescans = 1
 X_resolution = 0.45794685 [Hz]
 X_sweep = 7.5030012 [kHz]
 Irr_domain = 1H
 Irr_freq = 399.78219838 [MHz]
 Irr_offset = 5 [ppm]
 Tri_domain = 1H
 Tri_freq = 399.78219838 [MHz]
 Tri_offset = 5 [ppm]
 Clipped = FALSE
 Mod_return = 1
 Scans = 16
 Total_scans = 16
 X_90_width = 15 [us]
 X_acq_time = 2.18365952 [s]
 X_angle = 45 [deg]
 X_atn = 0 [dB]
 X_pulse = 7.5 [us]
 Irr_mode = Off
 Tri_mode = Off
 Dante_presat = FALSE
 Initial_wait = 1 [s]
 Recvr_gain = 30
 Relaxation_delay = 1 [s]
 Repetition_time = 3.18365952 [s]
 Temp_get = 20.7 [dC]

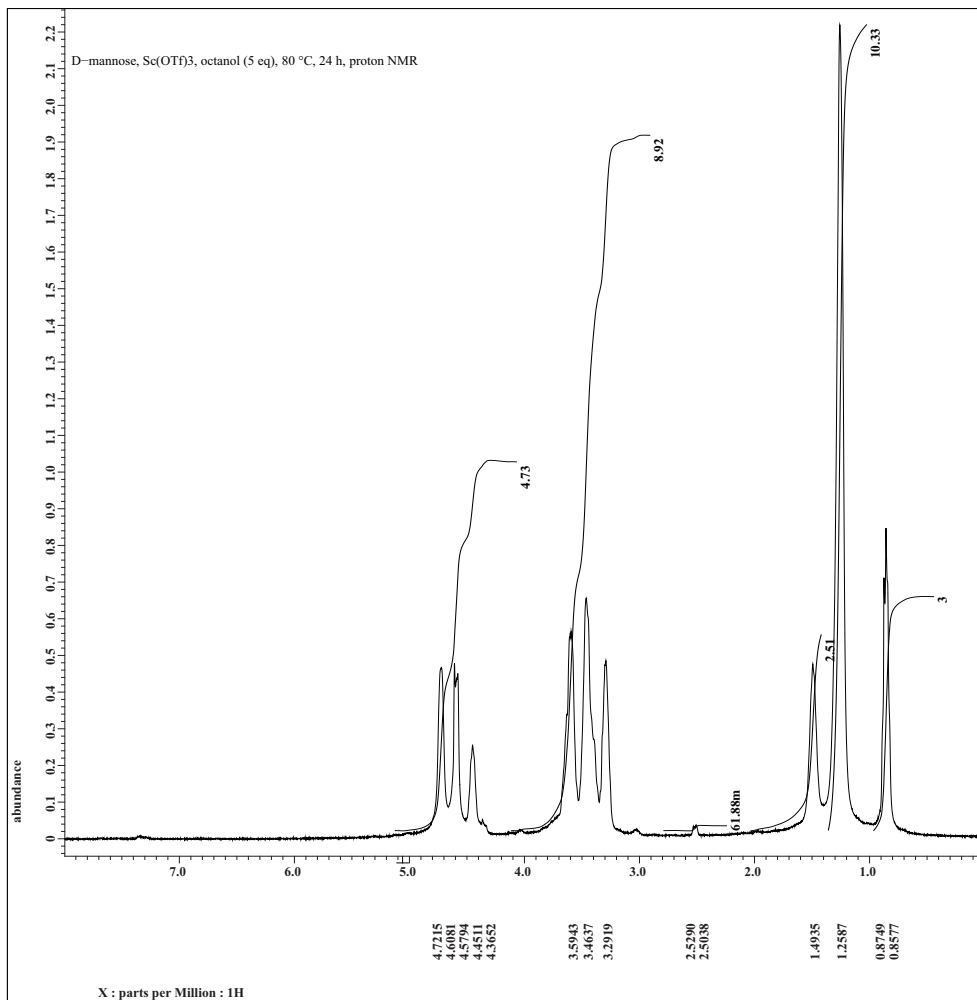


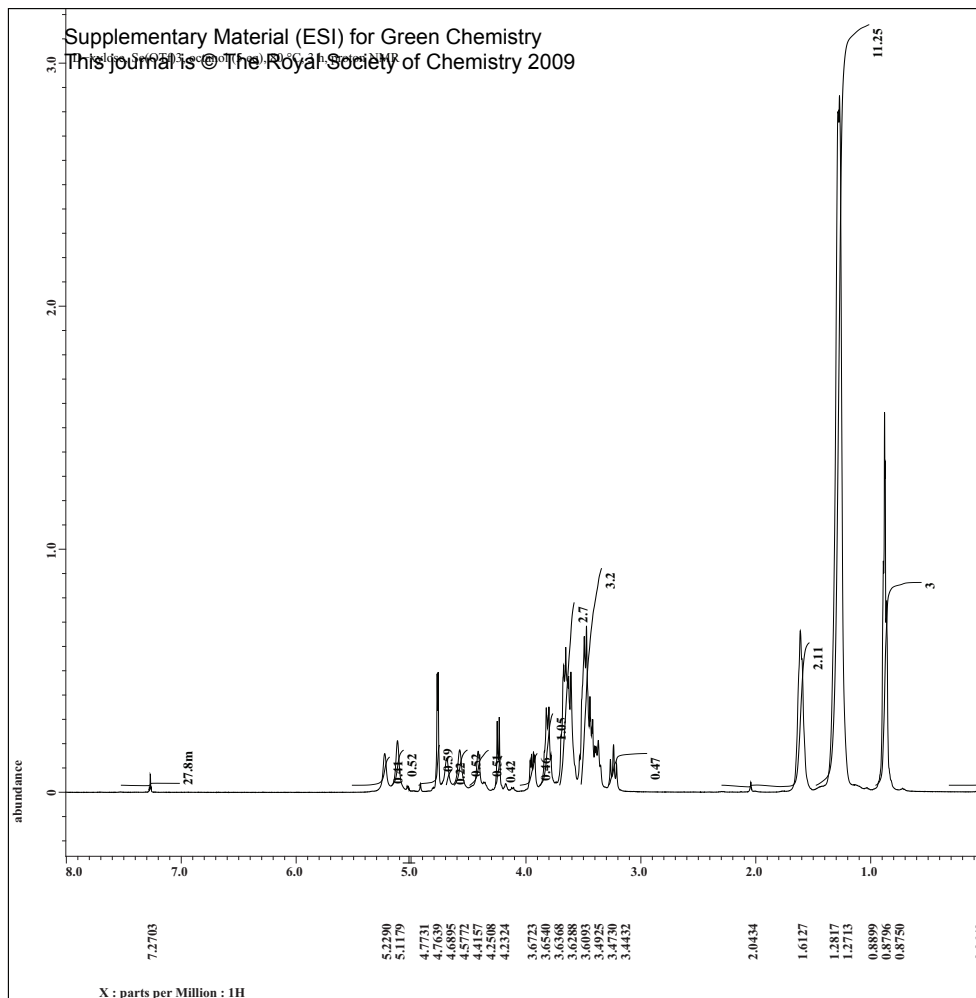


Filename = gszr135f39a65etd2o_PR
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gszr135f39a65etd2o
 Solvent = DMSO-D6
 Creation time = 4-AUG-2008 15:27:21
 Revision time = 23-FEB-2009 17:19:27
 Current time = 23-FEB-2009 17:19:36
 Comment = 45
 Data format = 1D COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR
 Field strength = 9.389766 [T] (400 [MHz])
 X_acq_duration = 2.18365952 [s]
 X_domain = 1H
 X_freq = 399.78219838 [MHz]
 X_offset = 5 [ppm]
 X_points = 16384
 X_prescans = 1
 X_resolution = 0.45794685 [Hz]
 X_sweep = 7.5030012 [kHz]
 Irr_domain = 1H
 Irr_freq = 399.78219838 [MHz]
 Irr_offset = 5 [ppm]
 Tri_domain = 1H
 Tri_freq = 399.78219838 [MHz]
 Tri_offset = 5 [ppm]
 Clipped = FALSE
 Mod_return = 1
 Scans = 16
 Total_scans = 16
 X_90_width = 15 [us]
 X_acq_time = 2.18365952 [s]
 X_angle = 45 [deg]
 X_atn = 0 [dB]
 X_pulse = 7.5 [us]
 Irr_mode = Off
 Tri_mode = Off
 Dante_presat = FALSE
 Initial_wait = 1 [s]
 Recvr_gain = 30
 Relaxation_delay = 1 [s]
 Repetition_time = 3.18365952 [s]
 Temp_get = 21.1 [dC]



Filename = gszr136f19a55_PROTON-
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gszr136f19a55
 Solvent = DMSO-D6
 Creation time = 4-AUG-2008 15:04:01
 Revision time = 18-FEB-2009 16:53:50
 Current time = 18-FEB-2009 16:53:55
 Comment = 50
 Data format = 1D COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR
 Field strength = 9.389766 [T] (400 [MHz])
 X_acq_duration = 2.18365952 [s]
 X_domain = 1H
 X_freq = 399.78219838 [MHz]
 X_offset = 5 [ppm]
 X_points = 16384
 X_prescans = 1
 X_resolution = 0.45794685 [Hz]
 X_sweep = 7.5030012 [kHz]
 Irr_domain = 1H
 Irr_freq = 399.78219838 [MHz]
 Irr_offset = 5 [ppm]
 Tri_domain = 1H
 Tri_freq = 399.78219838 [MHz]
 Tri_offset = 5 [ppm]
 Clipped = FALSE
 Mod_return = 1
 Scans = 16
 Total_scans = 16
 X_90_width = 15 [us]
 X_acq_time = 2.18365952 [s]
 X_angle = 45 [deg]
 X_atn = 0 [dB]
 X_pulse = 7.5 [us]
 Irr_mode = Off
 Tri_mode = Off
 Dante_presat = FALSE
 Initial_wait = 1 [s]
 Recvr_gain = 20
 Relaxation_delay = 1 [s]
 Repetition_time = 3.18365952 [s]
 Temp_get = 20.8 [dC]





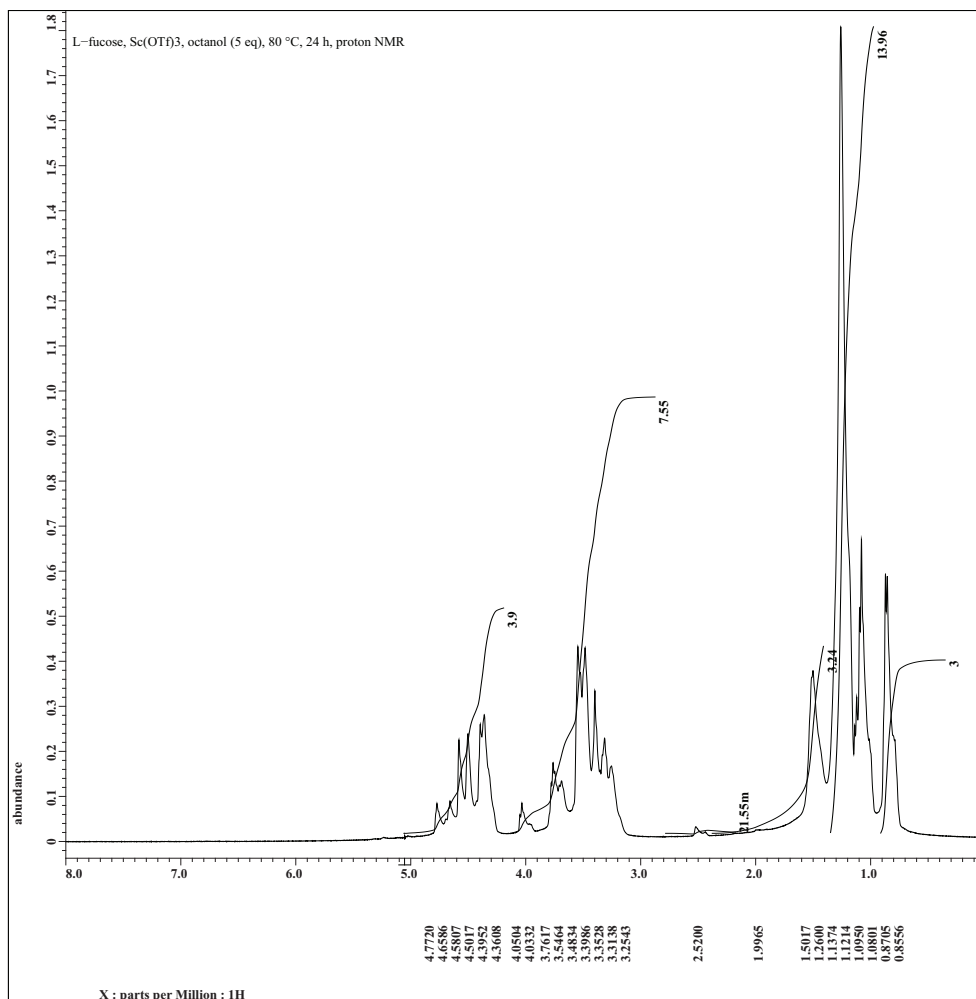
Filename = gszr152f16a55_PROTON-
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gszr152f16a55
 Solvent = CHLOROFORM-D
 Creation time = 25-AUG-2008 17:05:38
 Revision time = 18-FEB-2009 17:13:06
 Current time = 18-FEB-2009 17:13:13

Comment = 10
 Data format = 1D COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR

Field strength = 9.389766 [T] (400 [MHz])
 X acq duration = 2.18365952 [s]
 X domain = 1H
 X freq = 399.78219838 [MHz]
 X offset = 5 [ppm]
 X points = 16384
 X prescans = 1
 X resolution = 0.45794685 [Hz]
 X sweep = 7.5030012 [kHz]
 Irr domain = 1H
 Irr freq = 399.78219838 [MHz]
 Irr offset = 5 [ppm]
 Tri domain = 1H
 Tri freq = 399.78219838 [MHz]
 Tri offset = 5 [ppm]
 Clipped = FALSE
 Mod return = 1
 Scans = 16
 Total scans = 16

X 90 width = 15 [us]
 X acq time = 2.18365952 [s]
 X angle = 45 [deg]
 X attn = 0 [dB]
 X pulse = 7.5 [us]
 Irr mode = Off
 Tri mode = Off
 Dante presat = FALSE
 Initial wait = 1 [s]
 Recvr gain = 28
 Relaxation delay = 1 [s]
 Repetition time = 3.18365952 [s]
 Temp_get = 19.8 [dC]

L-fucose, Sc(OTf)3, octanol (5 eq), 80 °C, 24 h, proton NMR



Filename = gszr198f23a59_PROTON-
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gszr198f23a59
 Solvent = DMSO-D6
 Creation time = 23-OCT-2008 16:24:39
 Revision time = 19-FEB-2009 09:30:50
 Current time = 19-FEB-2009 09:31:17

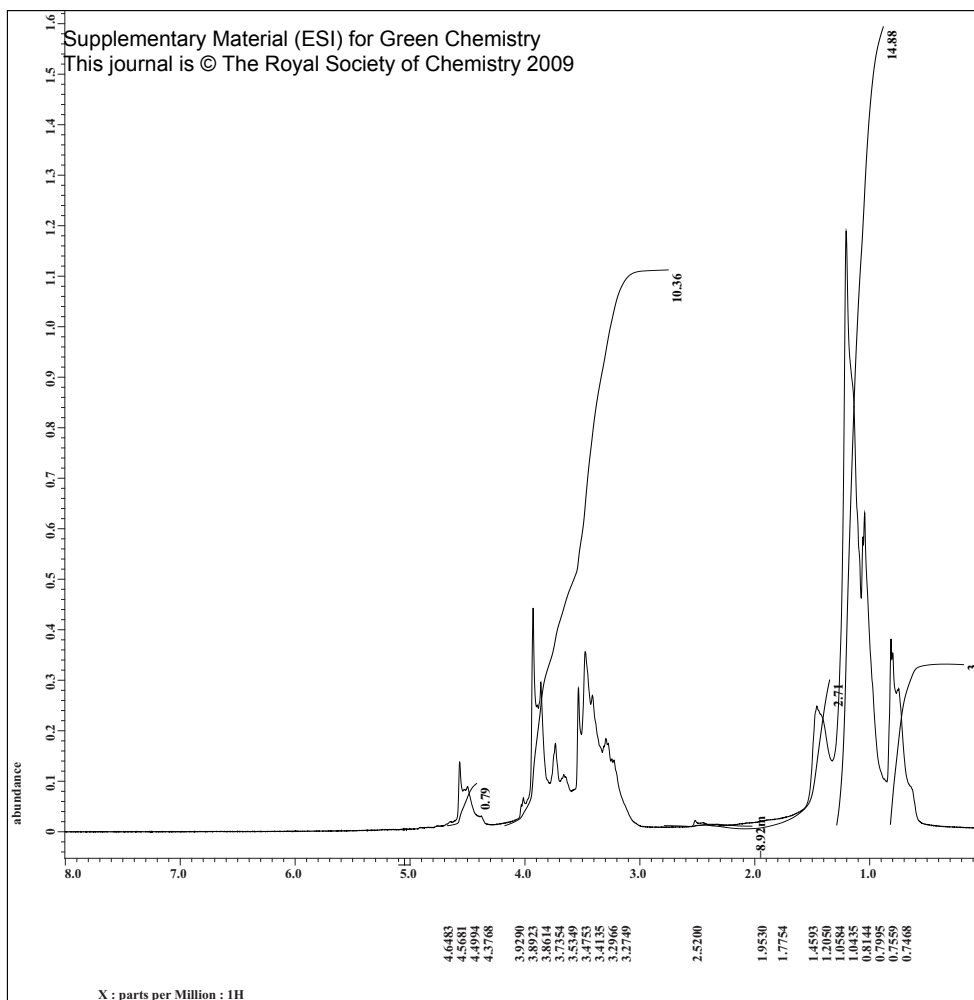
Comment = 35
 Data format = 1D COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR

Field strength = 9.389766 [T] (400 [MHz])
 X acq duration = 2.18365952 [s]
 X domain = 1H
 X freq = 399.78219838 [MHz]
 X offset = 5 [ppm]
 X points = 16384
 X prescans = 1
 X resolution = 0.45794685 [Hz]
 X sweep = 7.5030012 [kHz]
 Irr domain = 1H
 Irr freq = 399.78219838 [MHz]
 Irr offset = 5 [ppm]
 Tri domain = 1H
 Tri freq = 399.78219838 [MHz]
 Tri offset = 5 [ppm]
 Clipped = FALSE
 Mod return = 1
 Scans = 16
 Total scans = 16

X 90 width = 15 [us]
 X acq time = 2.18365952 [s]
 X angle = 45 [deg]
 X attn = 0 [dB]
 X pulse = 7.5 [us]
 Irr mode = Off
 Tri mode = Off
 Dante presat = FALSE
 Initial wait = 1 [s]
 Recvr gain = 26
 Relaxation delay = 1 [s]
 Repetition time = 3.18365952 [s]
 Temp_get = 20.4 [dC]



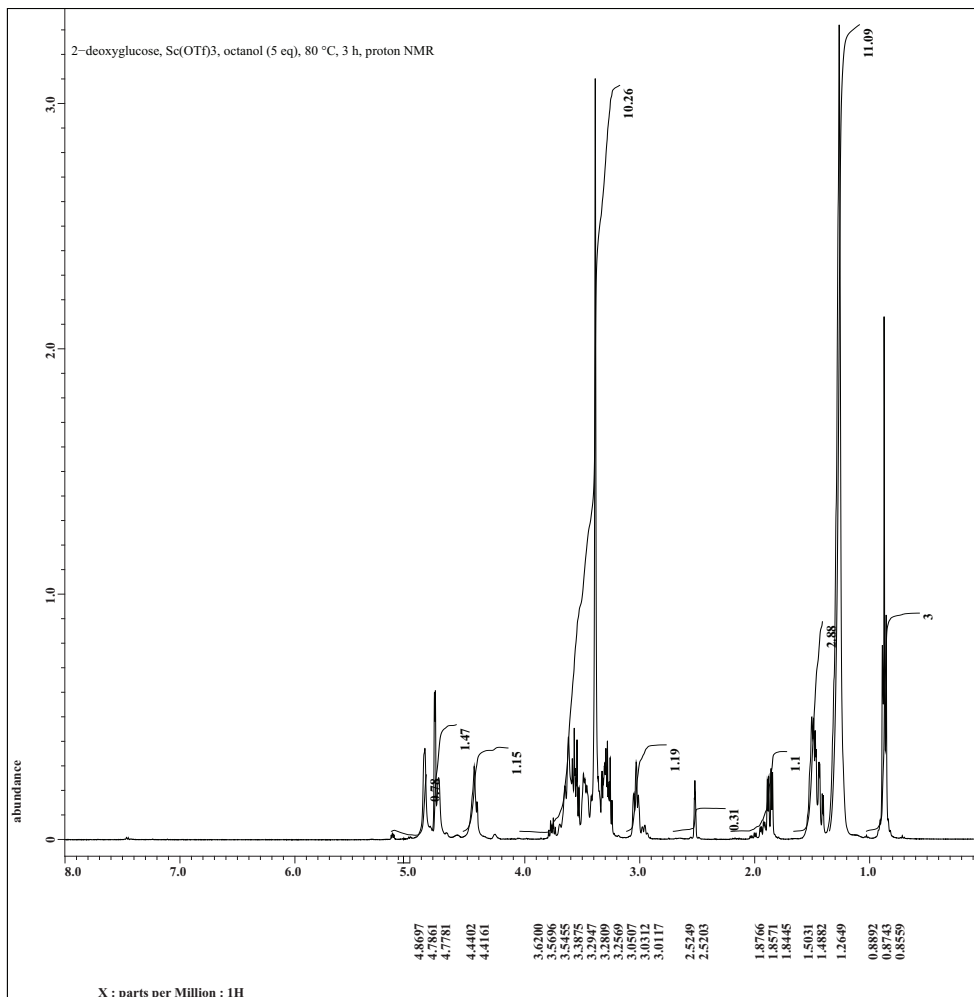
Filename = gsrr198f23a59etd2o_PR
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gsrr198f23a59etd2o
 Solvent = DMSO-D6
 Creation time = 23-OCT-2008 17:45:41
 Revision time = 19-FEB-2009 09:40:24
 Current time = 19-FEB-2009 09:41:24
 Comment = 15
 Data format = 1D_COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR
 Field strength = 9.389766 [T] (400 [MHz])
 X acq duration = 2.18365952 [s]
 X domain = 1H
 X freq = 399.78219838 [MHz]
 X offset = 5 [ppm]
 X points = 16384
 X prescans = 1
 X resolution = 0.45794685 [Hz]
 X sweep = 7.5030012 [kHz]
 Irr domain = 1H
 Irr freq = 399.78219838 [MHz]
 Irr offset = 5 [ppm]
 Tri domain = 1H
 Tri freq = 399.78219838 [MHz]
 Tri offset = 5 [ppm]
 Clipped = FALSE
 Mod return = 1
 Scans = 16
 Total scans = 16
 X 90 width = 15 [us]
 X acq time = 2.18365952 [s]
 X angle = 45 [deg]
 X attn = 0 [dB]
 X pulse = 7.5 [us]
 Irr mode = Off
 Tri mode = Off
 Dante presat = FALSE
 Initial wait = 1 [s]
 Recvr gain = 26
 Relaxation delay = 1 [s]
 Repetition time = 3.18365952 [s]
 Temp_get = 20.5 [dC]

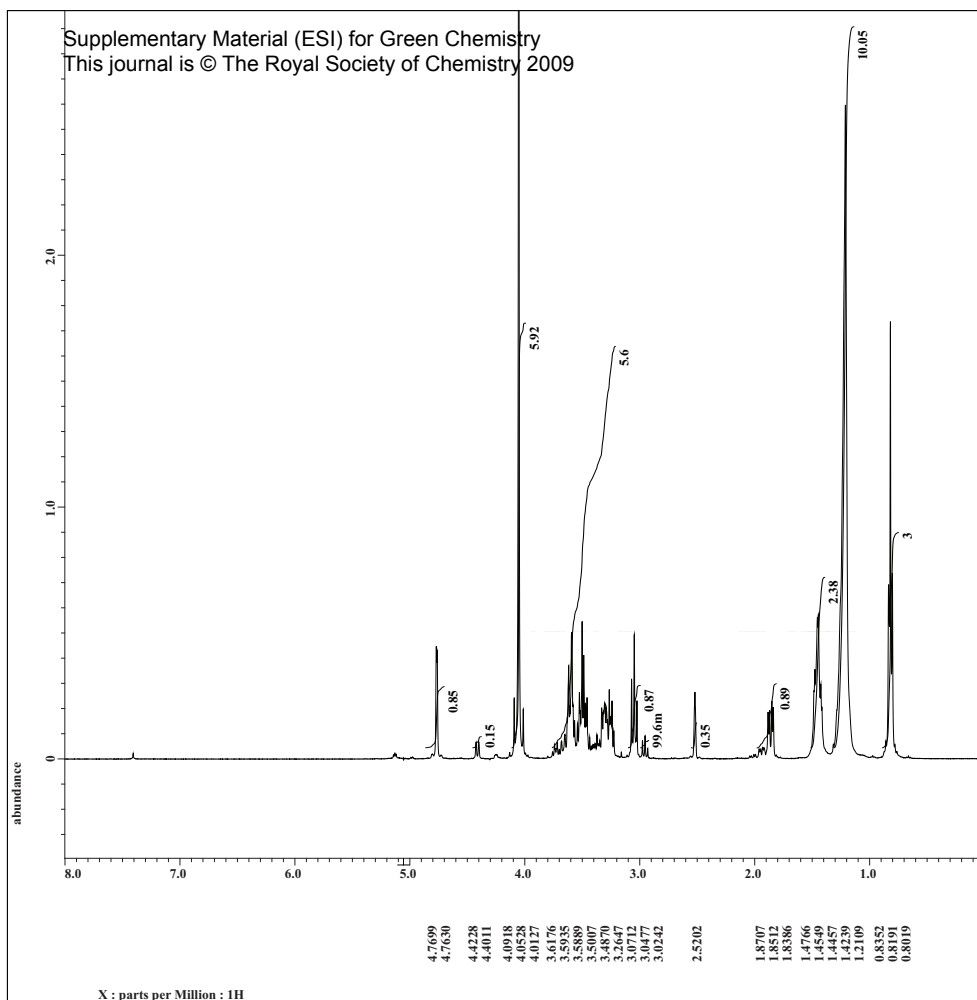


2-deoxyglucose, Sc(OTf)₃, octanol (5 eq), 80 °C, 3 h, proton NMR



Filename = gsrr203f15a39b_PROTON
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gsrr203f15a39b
 Solvent = DMSO-D6
 Creation time = 28-OCT-2008 13:28:35
 Revision time = 19-FEB-2009 09:55:06
 Current time = 19-FEB-2009 09:55:11
 Comment = 55
 Data format = 1D_COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR
 Field strength = 9.389766 [T] (400 [MHz])
 X acq duration = 2.18365952 [s]
 X domain = 1H
 X freq = 399.78219838 [MHz]
 X offset = 5 [ppm]
 X points = 16384
 X prescans = 1
 X resolution = 0.45794685 [Hz]
 X sweep = 7.5030012 [kHz]
 Irr domain = 1H
 Irr freq = 399.78219838 [MHz]
 Irr offset = 5 [ppm]
 Tri domain = 1H
 Tri freq = 399.78219838 [MHz]
 Tri offset = 5 [ppm]
 Clipped = FALSE
 Mod return = 1
 Scans = 16
 Total scans = 16
 X 90 width = 15 [us]
 X acq time = 2.18365952 [s]
 X angle = 45 [deg]
 X attn = 0 [dB]
 X pulse = 7.5 [us]
 Irr mode = Off
 Tri mode = Off
 Dante presat = FALSE
 Initial wait = 1 [s]
 Recvr gain = 30
 Relaxation delay = 1 [s]
 Repetition time = 3.18365952 [s]
 Temp_get = 20.4 [dC]





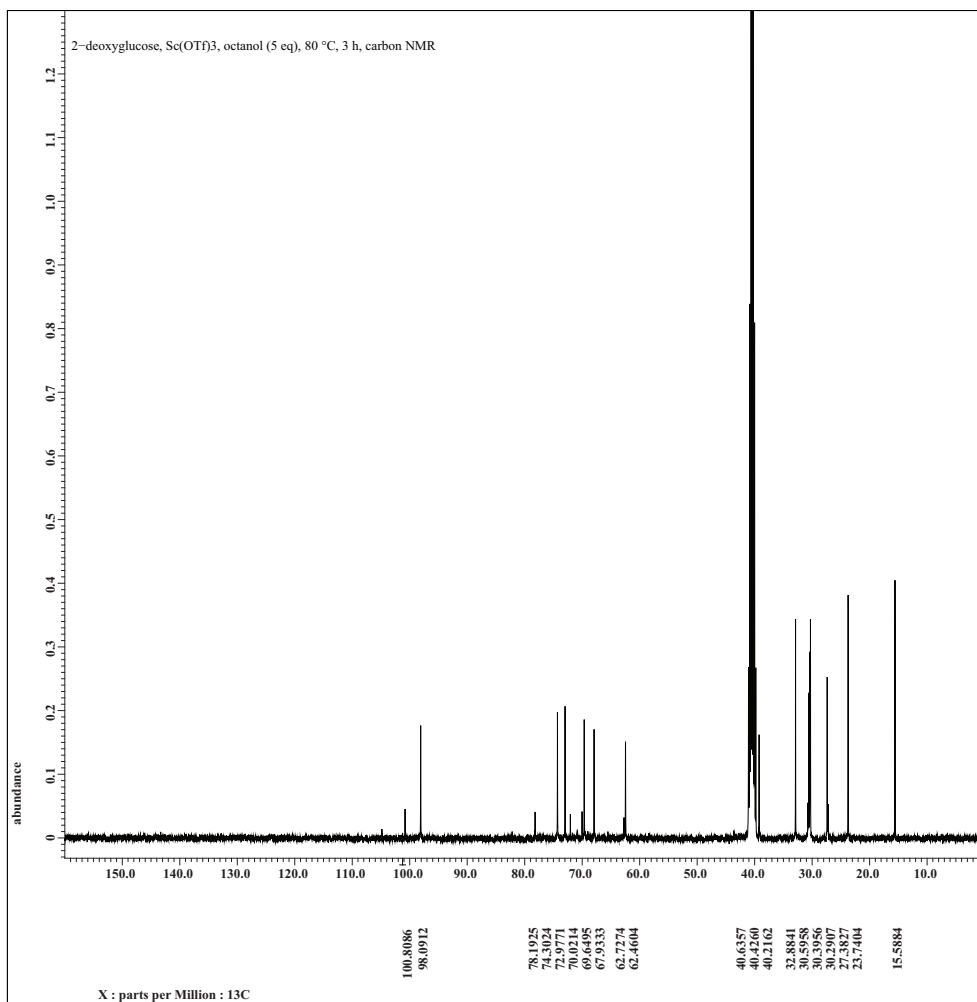
Filename = gsrr203f15a39etd2o_PR
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gsrr203f15a39etd2o
 Solvent = DMSO-D6
 Creation time = 28-OCT-2008 20:05:32
 Revision time = 19-FEB-2009 10:02:27
 Current time = 19-FEB-2009 10:03:49

Comment = DMSO slot40
 Data format = 1D COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR

Field strength = 9.389766 [T] (400 [MHz])
 X_acq_duration = 2.18365952 [s]
 X_domain = 1H
 X_freq = 399.78219838 [MHz]
 X_offset = 5 [ppm]
 X_points = 16384
 X_prescans = 1
 X_resolution = 0.45794685 [Hz]
 X_sweep = 7.5030012 [kHz]
 Irr_domain = 1H
 Irr_freq = 399.78219838 [MHz]
 Irr_offset = 5 [ppm]
 Tri_domain = 1H
 Tri_freq = 399.78219838 [MHz]
 Tri_offset = 5 [ppm]
 Clipped = FALSE
 Mod_return = 1
 Scans = 16
 Total_scans = 16

X_90_width = 15 [us]
 X_acq_time = 2.18365952 [s]
 X_angle = 45 [deg]
 X_atn = 0 [dB]
 X_pulse = 7.5 [us]
 Irr_mode = Off
 Tri_mode = Off
 Dante_preset = FALSE
 Initial_wait = 1 [s]
 Recvr_gain = 30
 Relaxation_delay = 4 [s]
 Repetition_time = 6.18365952 [s]
 Temp_get = 35.3 [dC]

2-deoxyglucose, Sc(OTf)₃, octanol (5 eq), 80 °C, 3 h, carbon NMR



Filename = gsrr203f15a39etd2o_CA
 Author = delta
 Experiment = single pulse dec
 Sample id = gsrr203f15a39etd2o
 Solvent = DMSO-D6
 Creation time = 28-OCT-2008 20:58:04
 Revision time = 19-FEB-2009 10:16:30
 Current time = 19-FEB-2009 10:16:40

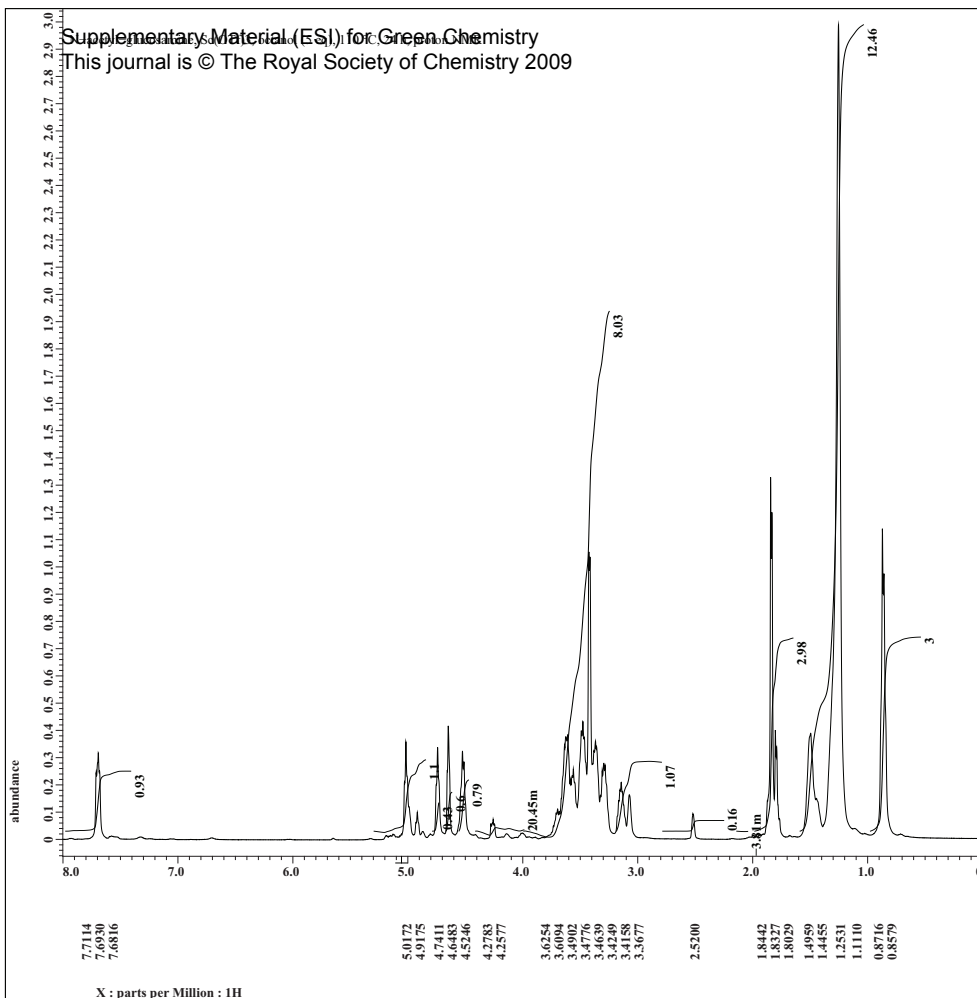
Comment = DMSO slot40
 Data format = 1D COMPLEX
 Dim size = 26214
 Dim title = 13C
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR

Field strength = 9.389766 [T] (400 [MHz])
 X_acq_duration = 1.04333312 [s]
 X_domain = 13C
 X_freq = 100.52530333 [MHz]
 X_offset = 100 [ppm]
 X_points = 32768
 X_prescans = 4
 X_resolution = 0.95846665 [Hz]
 X_sweep = 31.40703518 [kHz]
 Irr_domain = 1H
 Irr_freq = 399.78219838 [MHz]
 Irr_offset = 5 [ppm]
 Mod_return = TRUE
 Scans = 1024
 Total_scans = 1024

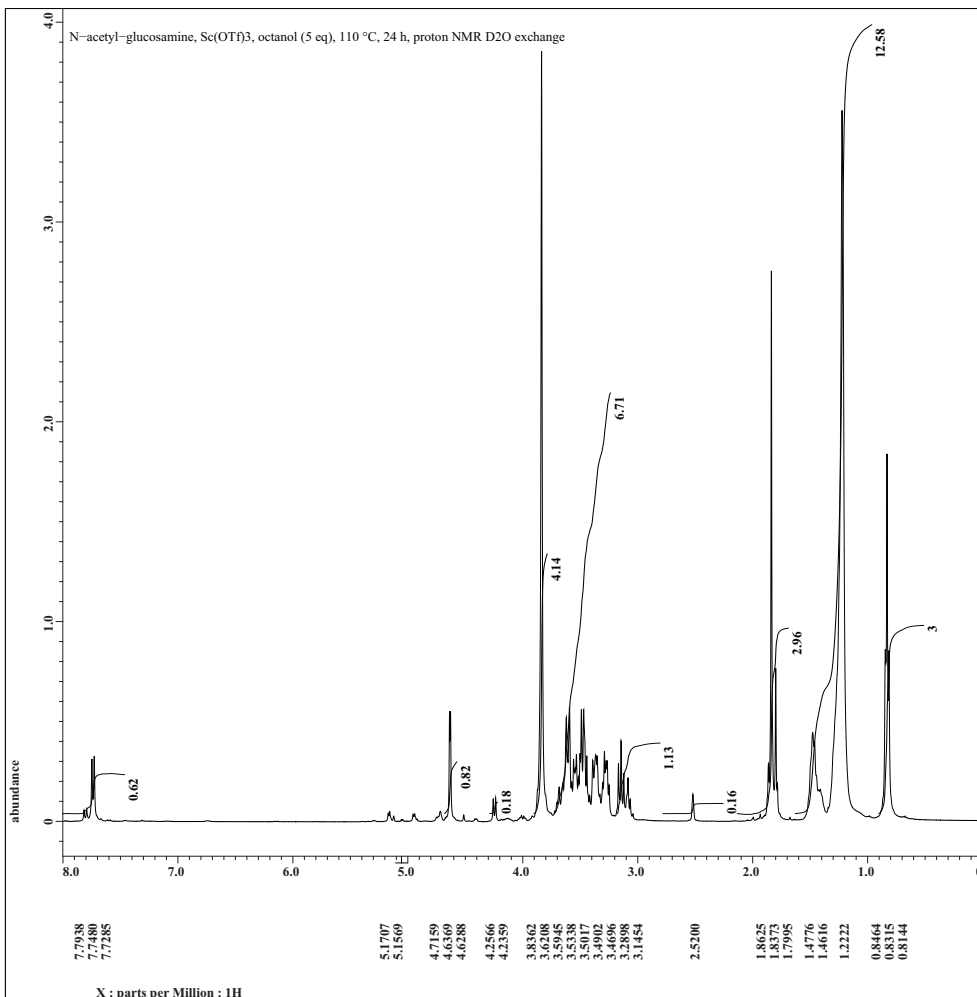
X_90_width = 9.1 [us]
 X_acq_time = 1.04333312 [s]
 X_angle = 30 [deg]
 X_atn = 7 [dB]
 X_pulse = 3.03333333 [us]
 Irr_atn_dec = 11 [dB]
 Irr_atn_noe = 16 [dB]
 Irr_noise = WALTZ
 Decoupling = TRUE
 Initial_wait = 1 [s]
 Noe = TRUE
 Noe_time = 2 [s]
 Recvr_gain = 60
 Relaxation_delay = 2 [s]
 Repetition_time = 3.04333312 [s]
 Temp_get = 36.2 [dC]



Filename = gszr92f21a47_PROTON-7
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gszr92f21a47
 Solvent = DMSO-D6
 Creation time = 9-JUN-2008 14:48:13
 Revision time = 23-FEB-2009 16:49:28
 Current time = 23-FEB-2009 16:49:36
 Comment = 20
 Data format = 1D COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR
 Field strength = 9.389766 [T] (400 [MHz])
 X acq duration = 2.18365952 [s]
 X domain = 1H
 X freq = 399.78219838 [MHz]
 X offset = 5 [ppm]
 X points = 16384
 X prescans = 1
 X resolution = 0.45794685 [Hz]
 X sweep = 7.5030012 [kHz]
 Irr domain = 1H
 Irr freq = 399.78219838 [MHz]
 Irr offset = 5 [ppm]
 Tri domain = 1H
 Tri freq = 399.78219838 [MHz]
 Tri offset = 5 [ppm]
 Clipped = FALSE
 Mod return = 1
 Scans = 16
 Total scans = 16
 X 90 width = 15 [us]
 X acq time = 2.18365952 [s]
 X angle = 45 [deg]
 X attn = 0 [dB]
 X pulse = 7.5 [us]
 Irr mode = Off
 Tri mode = Off
 Dante presat = FALSE
 Initial wait = 1 [s]
 Recvr gain = 24
 Relaxation delay = 1 [s]
 Repetition time = 3.18365952 [s]
 Temp_get = 20.6 [dC]

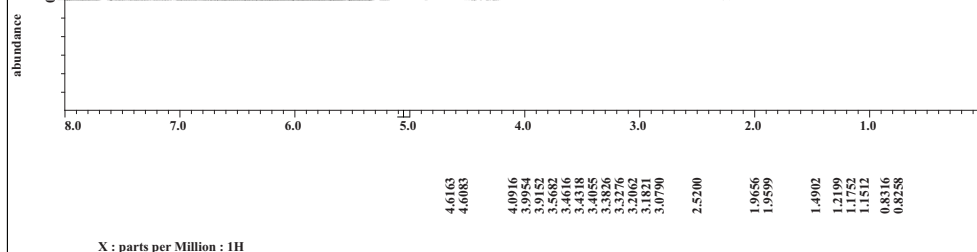


Filename = gszr92f21a47etd2o_PRO
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gszr92f21a47etd2o
 Solvent = DMSO-D6
 Creation time = 9-JUN-2008 16:32:29
 Revision time = 23-FEB-2009 16:55:45
 Current time = 23-FEB-2009 16:55:53
 Comment = 55
 Data format = 1D COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR
 Field strength = 9.389766 [T] (400 [MHz])
 X acq duration = 2.18365952 [s]
 X domain = 1H
 X freq = 399.78219838 [MHz]
 X offset = 5 [ppm]
 X points = 16384
 X prescans = 1
 X resolution = 0.45794685 [Hz]
 X sweep = 7.5030012 [kHz]
 Irr domain = 1H
 Irr freq = 399.78219838 [MHz]
 Irr offset = 5 [ppm]
 Tri domain = 1H
 Tri freq = 399.78219838 [MHz]
 Tri offset = 5 [ppm]
 Clipped = FALSE
 Mod return = 1
 Scans = 16
 Total scans = 16
 X 90 width = 15 [us]
 X acq time = 2.18365952 [s]
 X angle = 45 [deg]
 X attn = 0 [dB]
 X pulse = 7.5 [us]
 Irr mode = Off
 Tri mode = Off
 Dante presat = FALSE
 Initial wait = 1 [s]
 Recvr gain = 26
 Relaxation delay = 1 [s]
 Repetition time = 3.18365952 [s]
 Temp_get = 20.6 [dC]





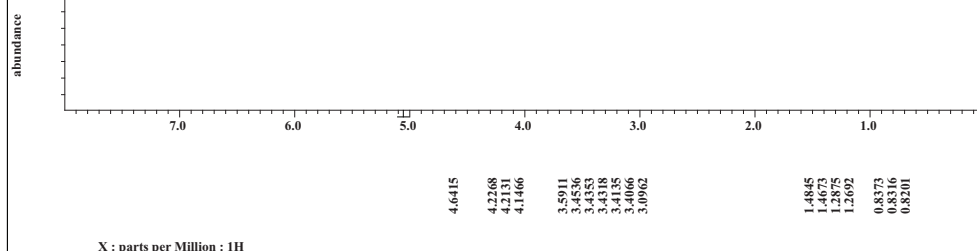
Filename = gszr71f31a43etd2o_PRO
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gszr71f31a43etd2o
 Solvent = DMSO-D6
 Creation time = 15-MAY-2008 13:51:30
 Revision time = 18-FEB-2009 16:03:26
 Current_time = 18-FEB-2009 16:03:40
 Comment = 55
 Data format = 1D COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR
 Field strength = 9.389766 [T] (400 [MHz])
 X_acq_duration = 2.18365952 [s]
 X_domain = 1H
 X_freq = 399.78219838 [MHz]
 X_offset = 5 [ppm]
 X_points = 16384
 X_prescans = 1
 X_resolution = 0.45794685 [Hz]
 X_sweep = 7.5030012 [kHz]
 Irr_domain = 1H
 Irr_freq = 399.78219838 [MHz]
 Irr_offset = 5 [ppm]
 Tri_domain = 1H
 Tri_freq = 399.78219838 [MHz]
 Tri_offset = 5 [ppm]
 Clipped = FALSE
 Mod_return = 1
 Scans = 16
 Total_scans = 16
 X_90_width = 15 [us]
 X_acq_time = 2.18365952 [s]
 X_angle = 45 [deg]
 X_atn = 0 [dB]
 X_pulse = 7.5 [us]
 Irr_mode = Off
 Tri_mode = Off
 Dante_presat = FALSE
 Initial_wait = 1 [s]
 Recvr_gain = 26
 Relaxation_delay = 1 [s]
 Repetition_time = 3.18365952 [s]
 Temp_get = 20.3 [dC]



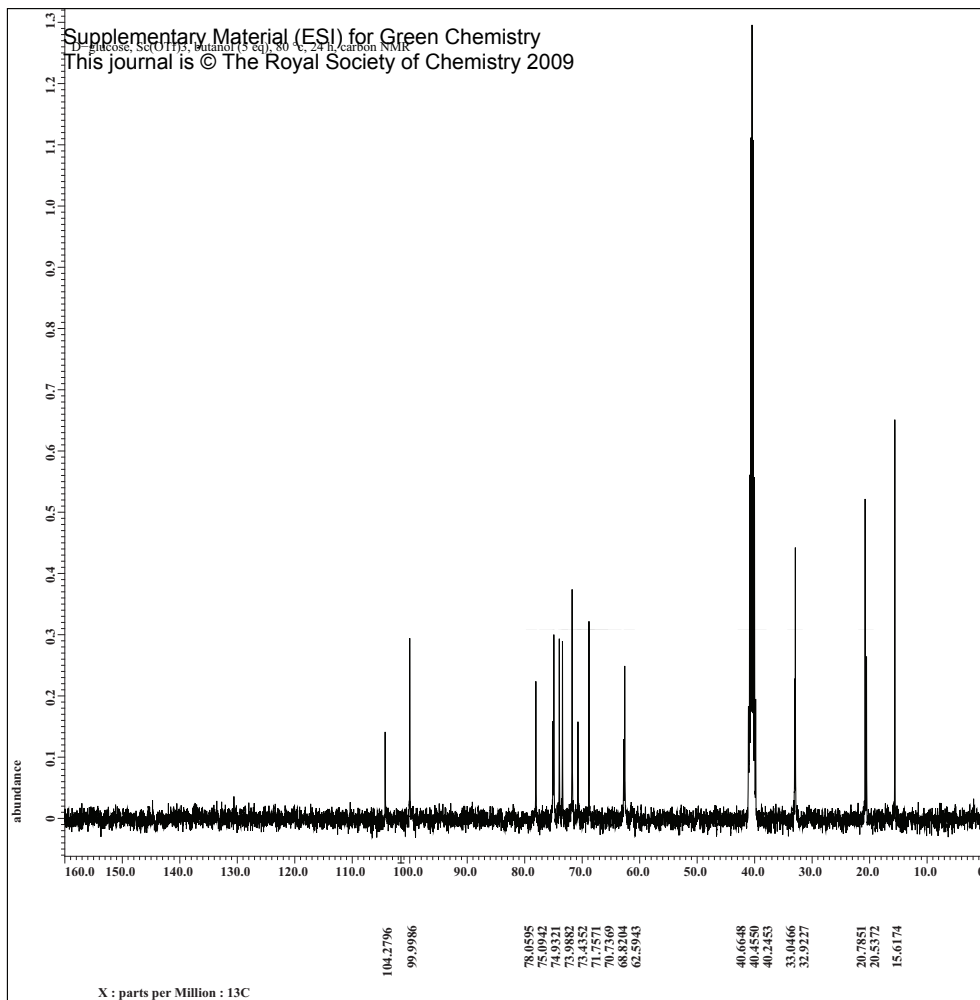
D-glucose, Sc(OTf)₃, butanol (5 eq), 80 °C, 24 h, proton NMR D₂O exchange



Filename = gszr202f31a59etd2o_PR
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gszr202f31a59etd2o
 Solvent = DMSO-D6
 Creation time = 29-OCT-2008 11:14:53
 Revision time = 23-FEB-2009 15:31:08
 Current_time = 23-FEB-2009 15:32:02
 Comment = 45
 Data format = 1D COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR
 Field strength = 9.389766 [T] (400 [MHz])
 X_acq_duration = 2.18365952 [s]
 X_domain = 1H
 X_freq = 399.78219838 [MHz]
 X_offset = 5 [ppm]
 X_points = 16384
 X_prescans = 1
 X_resolution = 0.45794685 [Hz]
 X_sweep = 7.5030012 [kHz]
 Irr_domain = 1H
 Irr_freq = 399.78219838 [MHz]
 Irr_offset = 5 [ppm]
 Tri_domain = 1H
 Tri_freq = 399.78219838 [MHz]
 Tri_offset = 5 [ppm]
 Clipped = FALSE
 Mod_return = 1
 Scans = 16
 Total_scans = 16
 X_90_width = 15 [us]
 X_acq_time = 2.18365952 [s]
 X_angle = 45 [deg]
 X_atn = 0 [dB]
 X_pulse = 7.5 [us]
 Irr_mode = Off
 Tri_mode = Off
 Dante_presat = FALSE
 Initial_wait = 1 [s]
 Recvr_gain = 28
 Relaxation_delay = 4 [s]
 Repetition_time = 6.18365952 [s]
 Temp_get = 20.8 [dC]



D-glucose, Sc(OTf)₃, butanol (5 eq), 80 °C, 24 h, carbon NMR



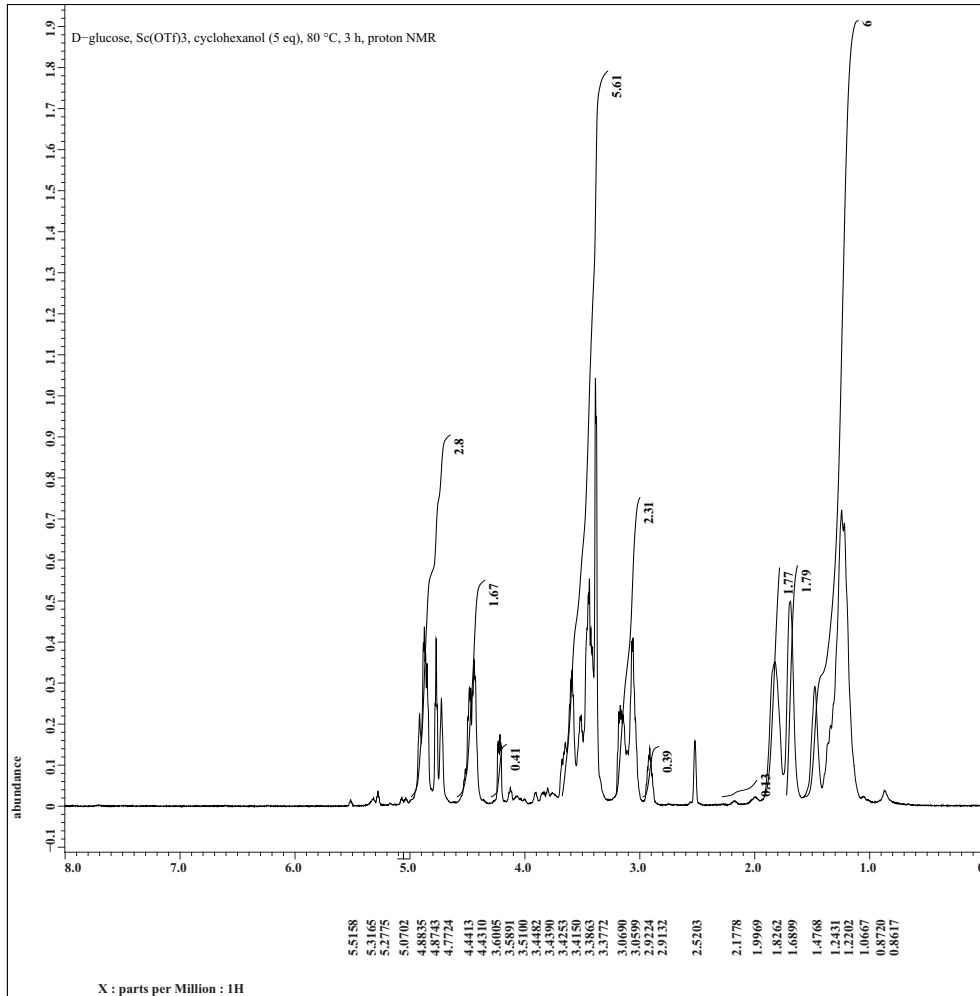
Filename = gszzr202f31a59etd2o_CA
Author = delta
Experiment = single pulse_dec
Sample id = gszzr202f31a59etd2o
Solvent = DMSO-D6
Creation time = 29-OCT-2008 11:18:45
Revision time = 23-FEB-2009 15:34:50
Current time = 23-FEB-2009 15:34:56

Comment = 45
Data format = 1D_COMPLEX
Dim size = 26214
Dim title = 13C
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2 NMR

Field strength = 9.389766 [T] (400 [MHz])
X_acq_duration = 1.04333312 [s]
X_domain = 13C
X_freq = 100.52530333 [MHz]
X_offset = 100 [ppm]
X_points = 32768
X_prescans = 4
X_resolution = 0.95846665 [Hz]
X_sweep = 31.40703518 [kHz]
Irr_domain = 1H
Irr_freq = 399.78219838 [MHz]
Irr_offset = 5 [ppm]
Clipped = FALSE
Mod_return = 1
Scans = 65
Total_scans = 65

X_90_width = 9.1 [us]
X_acq_time = 1.04333312 [s]
X_angle = 30 [deg]
X_atn = 7 [dB]
X_pulse = 3.03333333 [us]
Irr_atn_dec = 11 [dB]
Irr_atn_noe = 16 [dB]
Irr_noise = WALTZ
Decoupling = TRUE
Initial_wait = 1 [s]
Noe = TRUE
Noe_time = 2 [s]
Recvr_gain = 60
Relaxation_delay = 2 [s]
Repetition_time = 3.04333312 [s]
Temp_get = 21.8 [dC]

D-glucose, Sc(OTf)₃, cyclohexanol (5 eq), 80 °C, 3 h, proton NMR

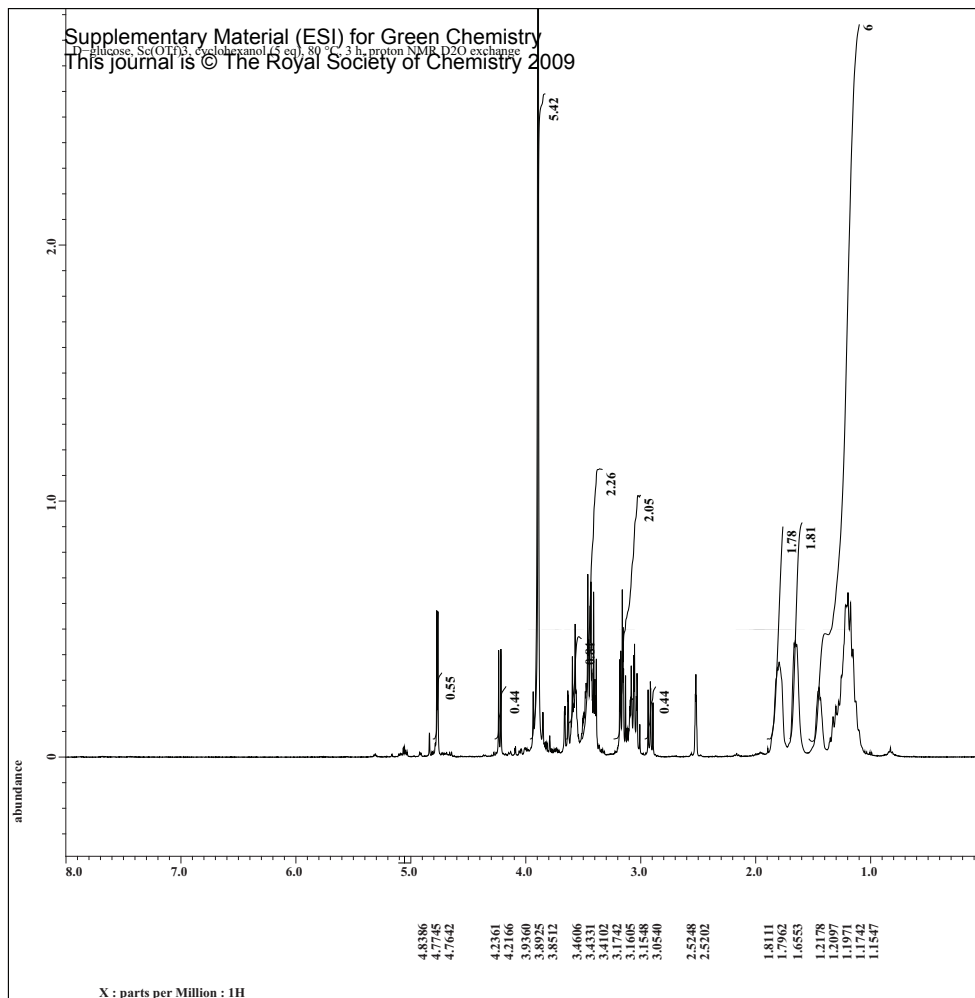


Filename = gszzr219f31a60_PROTON-
Author = delta
Experiment = single pulse.ex2
Sample id = gszzr219f31a60
Solvent = DMSO-D6
Creation time = 10-NOV-2008 09:16:42
Revision time = 23-FEB-2009 13:42:52
Current time = 23-FEB-2009 13:42:57

Comment = 45
Data format = 1D_COMPLEX
Dim size = 13107
Dim title = 1H
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2 NMR

Field strength = 9.389766 [T] (400 [MHz])
X_acq_duration = 2.18365952 [s]
X_domain = 1H
X_freq = 399.78219838 [MHz]
X_offset = 5 [ppm]
X_points = 16384
X_prescans = 1
X_resolution = 0.45794685 [Hz]
X_sweep = 7.5030012 [kHz]
Irr_domain = 1H
Irr_freq = 399.78219838 [MHz]
Irr_offset = 5 [ppm]
Tri_domain = 1H
Tri_freq = 399.78219838 [MHz]
Tri_offset = 5 [ppm]
Clipped = FALSE
Mod_return = 1
Scans = 16
Total_scans = 16

X_90_width = 15 [us]
X_acq_time = 2.18365952 [s]
X_angle = 45 [deg]
X_atn = 0 [dB]
X_pulse = 7.5 [us]
Irr_mode = Off
Tri_mode = Off
Dante_presat = FALSE
Initial_wait = 1 [s]
Recvr_gain = 32
Relaxation_delay = 1 [s]
Repetition_time = 3.18365952 [s]
Temp_get = 20.6 [dC]



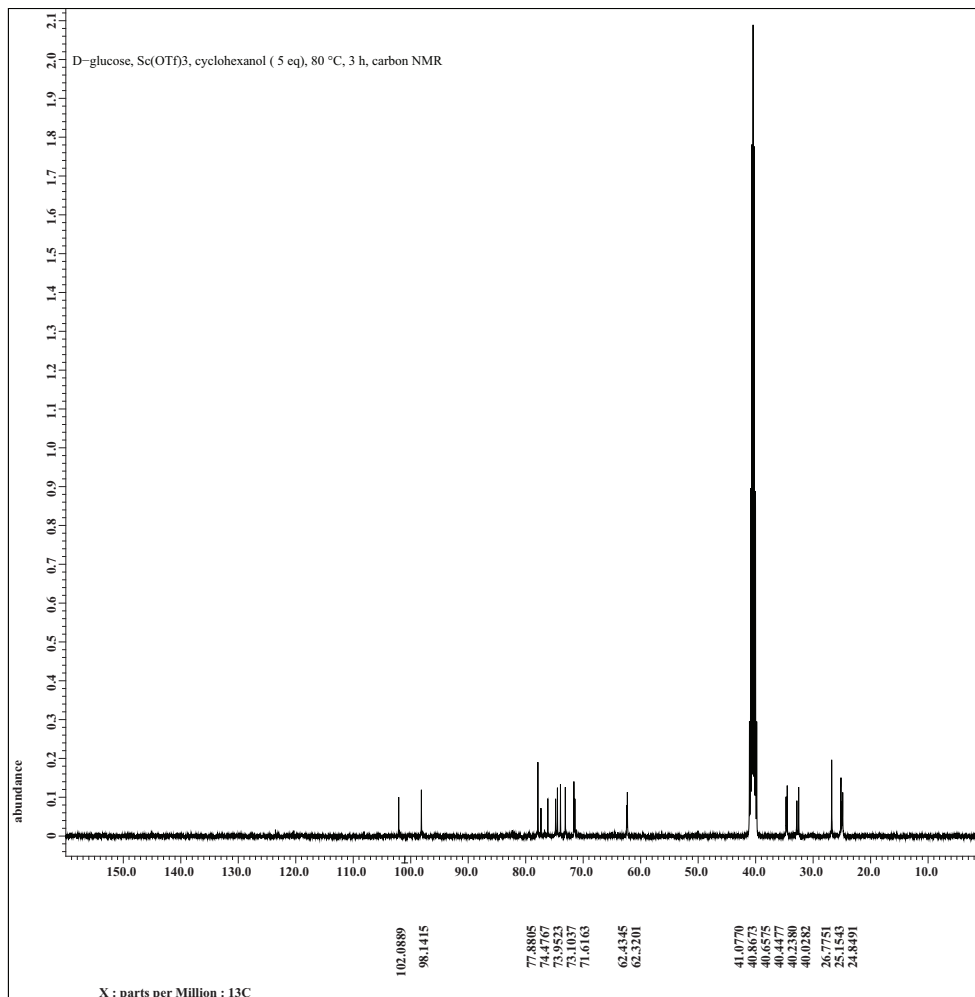
Filename = gsrr219f31a60etd2o_PR
Author = delta
Experiment = single pulse.ex2
Sample id = gsrr219f31a60etd2o
Solvent = DMSO-D6
Creation time = 10-NOV-2008 23:45:09
Revision time = 23-FEB-2009 11:47:52
Current time = 23-FEB-2009 11:48:14

Comment = 35
Data format = 1D_COMPLEX
Dim size = 13107
Dim title = 1H
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2 NMR

Field strength = 9.389766 [T] (400 [MHz])
X_acq_duration = 2.18365952 [s]
X_domain = 1H
X_freq = 399.78219838 [MHz]
X_offset = 5 [ppm]
X_points = 16384
X_prescans = 1
X_resolution = 0.45794685 [Hz]
X_sweep = 7.5030012 [kHz]
Irr_domain = 1H
Irr_freq = 399.78219838 [MHz]
Irr_offset = 5 [ppm]
Tri_domain = 1H
Tri_freq = 399.78219838 [MHz]
Tri_offset = 5 [ppm]
Clipped = FALSE
Mod_return = 1
Scans = 16
Total_scans = 16

X_90_width = 15 [us]
X_acq_time = 2.18365952 [s]
X_angle = 45 [deg]
X_atn = 0 [dB]
X_pulse = 7.5 [us]
Irr_mode = Off
Tri_mode = Off
Dante_preset = FALSE
Initial wait = 1 [s]
Recvr_gain = 32
Relaxation delay = 4 [s]
Repetition_time = 6.18365952 [s]
Temp_get = 20.3 [dC]

D-glucose, Sc(OTf)₃, cyclohexanol (5 eq), 80 °C, 3 h, carbon NMR

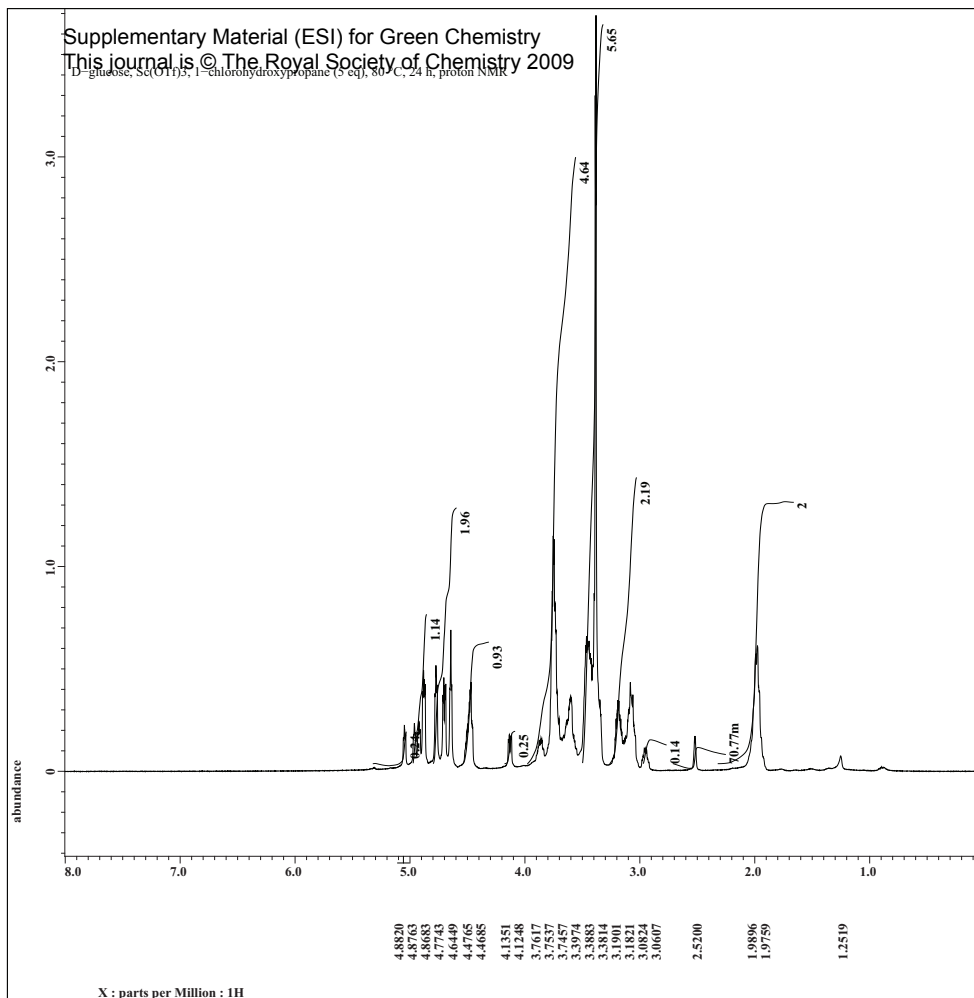


Filename = gsrr219f31a60etd2o_CA
Author = delta
Experiment = single pulse_dec
Sample id = gsrr219f31a60etd2o
Solvent = DMSO-D6
Creation time = 11-NOV-2008 00:37:41
Revision time = 23-FEB-2009 13:36:26
Current time = 23-FEB-2009 13:36:31

Comment = 35
Data format = 1D_COMPLEX
Dim size = 26214
Dim title = 13C
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2 NMR

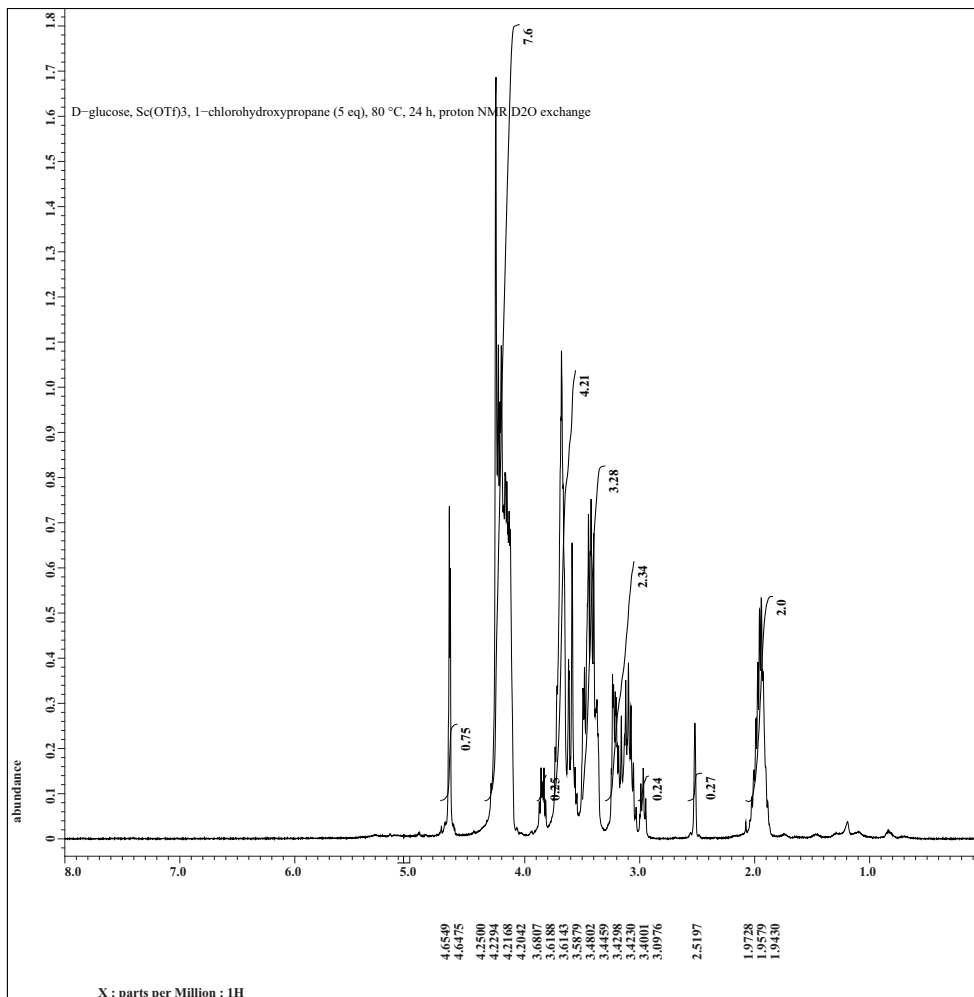
Field strength = 9.389766 [T] (400 [MHz])
X_acq_duration = 1.04333312 [s]
X_domain = 13C
X_freq = 100.52530333 [MHz]
X_offset = 100 [ppm]
X_points = 32768
X_prescans = 4
X_resolution = 0.95846665 [Hz]
X_sweep = 31.40703518 [kHz]
Irr_domain = 1H
Irr_freq = 399.78219838 [MHz]
Irr_offset = 5 [ppm]
Clipped = TRUE
Mod_return = 1
Scans = 1024
Total_scans = 1024

X_90_width = 9.1 [us]
X_acq_time = 1.04333312 [s]
X_angle = 30 [deg]
X_atn = 7 [dB]
X_pulse = 3.03333333 [us]
Irr_atn_dec = 11 [dB]
Irr_atn_noe = 16 [dB]
Irr_noise = WALTZ
Decoupling = TRUE
Initial wait = 1 [s]
Noe = TRUE
Noe time = 2 [s]
Recvr_gain = 60
Relaxation delay = 2 [s]
Repetition_time = 3.04333312 [s]
Temp_get = 21.4 [dC]



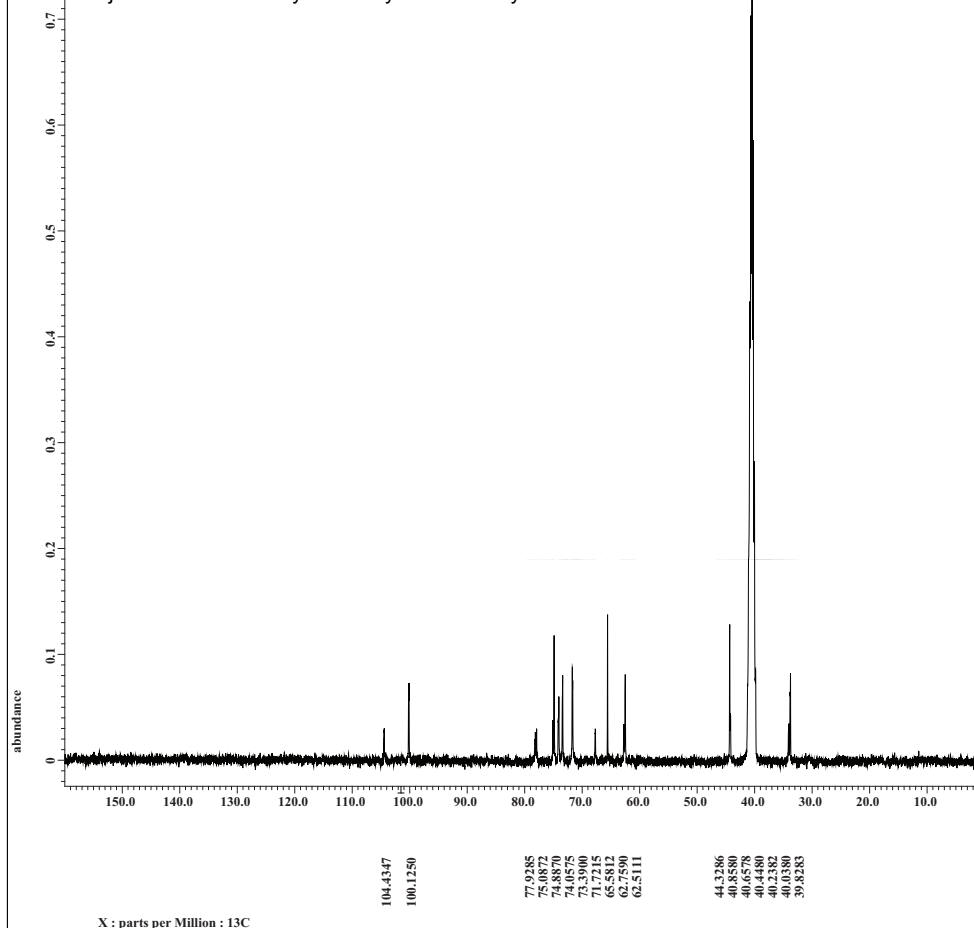
Filename = gsrr208f31a75_PROTON-
Author = delta
Experiment = single pulse.ex2
Sample id = gsrr208f31a75
Solvent = DMSO-D6
Creation time = 31-OCT-2008 07:00:55
Revision time = 19-FEB-2009 10:53:05
Current time = 19-FEB-2009 10:53:19
Comment = 15
Data format = 1D_COMPLEX
Dim size = 13107
Dim title = 1H
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2 NMR
Field strength = 9.389766 [T] (400 [MHz])
X acq duration = 2.18365952 [s]
X domain = 1H
X freq = 399.78219838 [MHz]
X offset = 5 [ppm]
X points = 16384
X prescans = 1
X resolution = 0.45794685 [Hz]
X sweep = 7.5030012 [kHz]
Irr domain = 1H
Irr freq = 399.78219838 [MHz]
Irr offset = 5 [ppm]
Tri domain = 1H
Tri freq = 399.78219838 [MHz]
Tri offset = 5 [ppm]
Clipped = FALSE
Mod return = 1
Scans = 16
Total scans = 16
X 90 width = 15 [us]
X acq time = 2.18365952 [s]
X angle = 45 [deg]
X attn = 0 [dB]
X pulse = 7.5 [us]
Irr mode = Off
Tri mode = Off
Dante presat = FALSE
Initial wait = 1 [s]
Recvr gain = 34
Relaxation delay = 1 [s]
Repetition time = 3.18365952 [s]
Temp get = 20.6 [dC]

D-glucose, Sc(OTf)₃, 1-chlorohydroxypropane (5 eq), 80 °C, 24 h, proton NMR D2O exchange



Filename = gsrr208f31a75etd2o_PR
Author = delta
Experiment = single pulse.ex2
Sample id = gsrr208f31a75etd2o
Solvent = DMSO-D6
Creation time = 3-NOV-2008 13:10:48
Revision time = 23-FEB-2009 09:02:22
Current time = 23-FEB-2009 09:02:40
Comment = 55
Data format = 1D_COMPLEX
Dim size = 13107
Dim title = 1H
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2 NMR
Field strength = 9.389766 [T] (400 [MHz])
X acq duration = 2.18365952 [s]
X domain = 1H
X freq = 399.78219838 [MHz]
X offset = 5 [ppm]
X points = 16384
X prescans = 1
X resolution = 0.45794685 [Hz]
X sweep = 7.5030012 [kHz]
Irr domain = 1H
Irr freq = 399.78219838 [MHz]
Irr offset = 5 [ppm]
Tri domain = 1H
Tri freq = 399.78219838 [MHz]
Tri offset = 5 [ppm]
Clipped = FALSE
Mod return = 1
Scans = 16
Total scans = 16
X 90 width = 15 [us]
X acq time = 2.18365952 [s]
X angle = 45 [deg]
X attn = 0 [dB]
X pulse = 7.5 [us]
Irr mode = Off
Tri mode = Off
Dante presat = FALSE
Initial wait = 1 [s]
Recvr gain = 34
Relaxation delay = 4 [s]
Repetition time = 6.18365952 [s]
Temp get = 18.5 [dC]

Supplementary Material (ESI) for Green Chemistry
D-glucose, Sc(OTf)₃, 1-chlorohydraxypropane (5 eq), 80 °C, 24 h, carbon NMR
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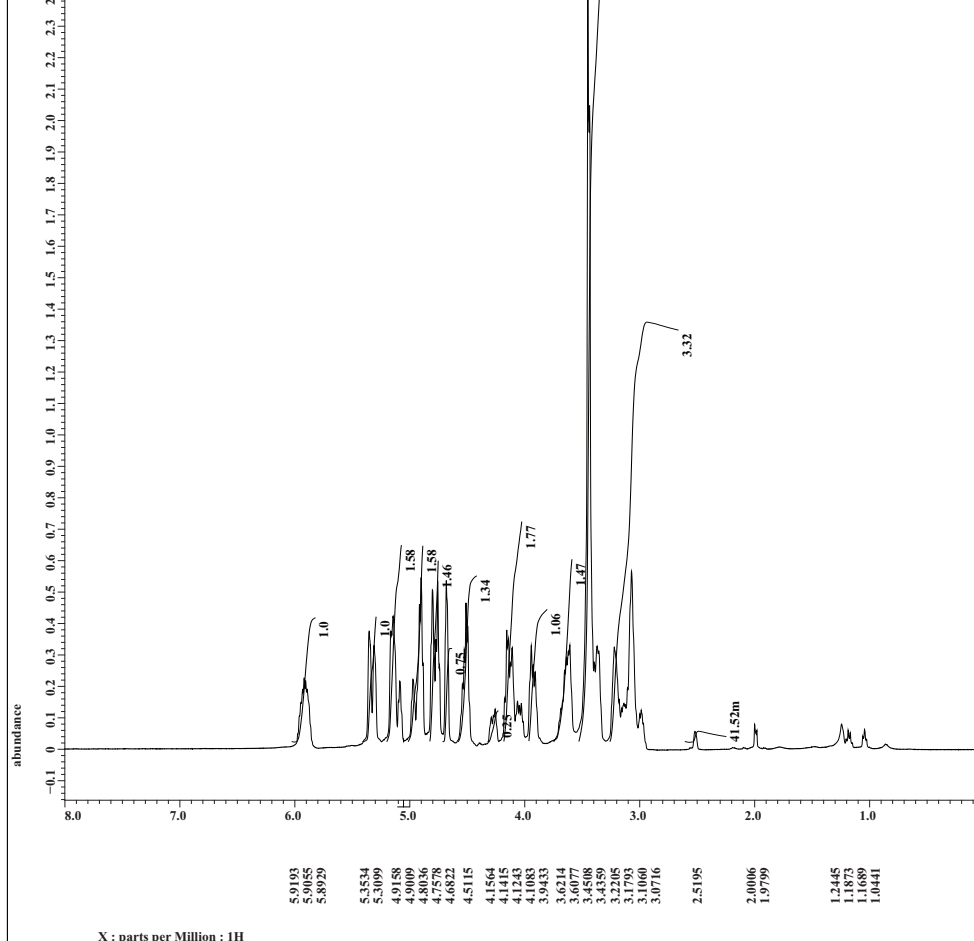
Filename = gszzr208f31a75etd2o_CA
Author = delta
Experiment = single pulse_dec
Sample id = gszzr208f31a75etd2o
Solvent = DMSO-D6
Creation time = 3-NOV-2008 14:03:19
Revision time = 23-FEB-2009 09:07:47
Current time = 23-FEB-2009 09:08:00

Comment = 55
Data format = 1D_COMPLEX
Dim size = 26214
Dim title = 13C
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2 NMR

Field strength = 9.389766 [T] (400 [MHz])
X_acq_duration = 1.04333312 [s]
X_domain = 13C
X_freq = 100.52530333 [MHz]
X_offset = 100 [ppm]
X_points = 32768
X_prescans = 4
X_resolution = 0.95846665 [Hz]
X_sweep = 31.40703518 [kHz]
Irr_domain = 1H
Irr_freq = 399.78219838 [MHz]
Irr_offset = 5 [ppm]
Clipped = TRUE
Mod_return = 1
Scans = 1024
Total_scans = 1024

X_90_width = 9.1 [us]
X_acq_time = 1.04333312 [s]
X_angle = 30 [deg]
X_atn = 7 [dB]
X_pulse = 3.03333333 [us]
Irr_atn_dec = 11 [dB]
Irr_atn_noe = 16 [dB]
Irr_noise = WALTZ
Decoupling = TRUE
Initial_wait = 1 [s]
Noe = TRUE
Noe_time = 2 [s]
Recvr_gain = 60
Relaxation_delay = 2 [s]
Repetition_time = 3.04333312 [s]
Temp_get = 19.5 [dC]

D-glucose, Sc(OTf)₃, allyl alcohol (5 eq), 80 °C, 24 h, proton NMR

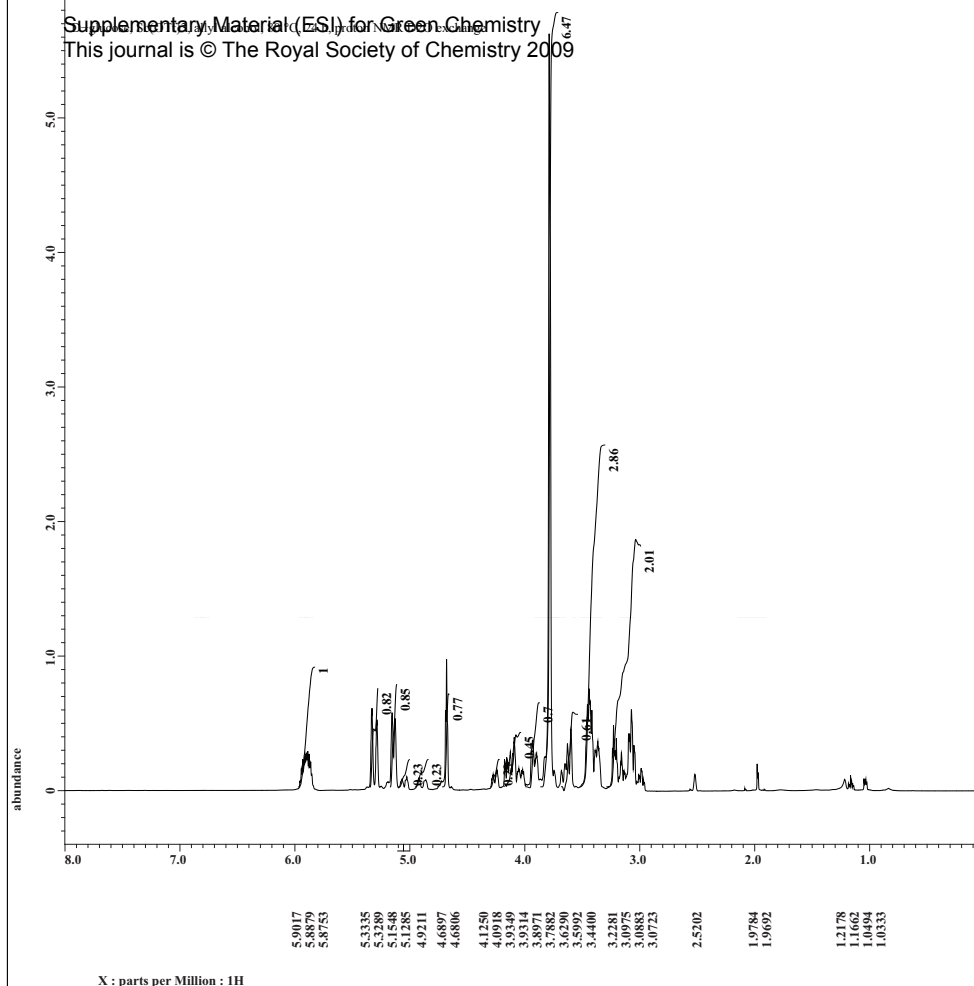


Filename = gszzr216f37a75_PROTON-
Author = delta
Experiment = single pulse.ex2
Sample id = gszzr216f37a75
Solvent = DMSO-D6
Creation time = 10-NOV-2008 09:02:55
Revision time = 23-FEB-2009 10:36:53
Current time = 23-FEB-2009 10:36:58

Comment = 35
Data format = 1D_COMPLEX
Dim size = 13107
Dim title = 1H
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2 NMR

Field strength = 9.389766 [T] (400 [MHz])
X_acq_duration = 2.18365952 [s]
X_domain = 1H
X_freq = 399.78219838 [MHz]
X_offset = 5 [ppm]
X_points = 16384
X_prescans = 1
X_resolution = 0.45794685 [Hz]
X_sweep = 7.5030012 [kHz]
Irr_domain = 1H
Irr_freq = 399.78219838 [MHz]
Irr_offset = 5 [ppm]
Tri_domain = 1H
Tri_freq = 399.78219838 [MHz]
Tri_offset = 5 [ppm]
Clipped = FALSE
Mod_return = 1
Scans = 16
Total_scans = 16

X_90_width = 15 [us]
X_acq_time = 2.18365952 [s]
X_angle = 45 [deg]
X_atn = 0 [dB]
X_pulse = 7.5 [us]
Irr_mode = Off
Tri_mode = Off
Dante_presat = FALSE
Initial_wait = 1 [s]
Recvr_gain = 26
Relaxation_delay = 1 [s]
Repetition_time = 3.18365952 [s]
Temp_get = 20.5 [dC]



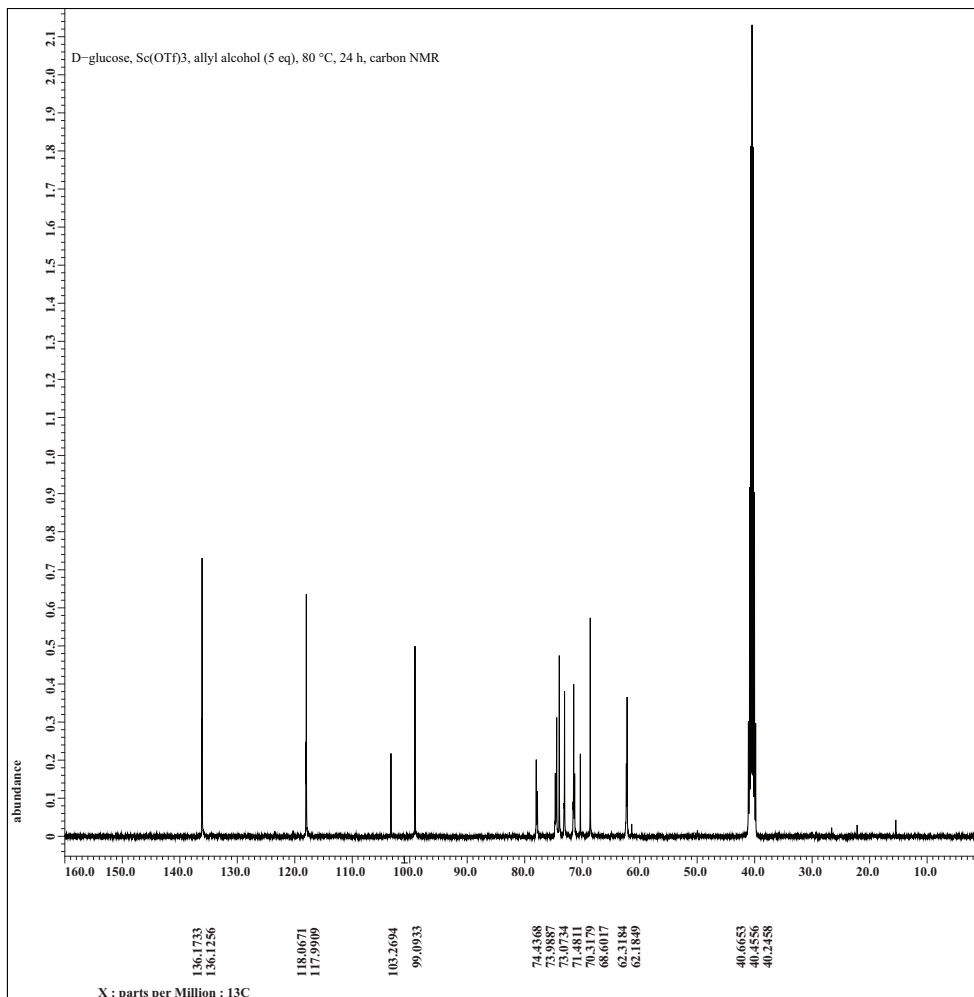
Filename = gsrr216f37a75etd2o_PR
Author = delta
Experiment = single pulse.ex2
Sample id = gsrr216f37a75etd2o
Solvent = DMSO-D6
Creation time = 10-NOV-2008 18:34:26
Revision time = 23-FEB-2009 10:48:36
Current time = 23-FEB-2009 10:49:01

Comment = 25
Data format = 1D_COMPLEX
Dim size = 13107
Dim title = 1H
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2 NMR

Field strength = 9.389766 [T] (400 [MHz])
X_acq_duration = 2.18365952 [s]
X_domain = 1H
X_freq = 399.78219838 [MHz]
X_offset = 5 [ppm]
X_points = 16384
X_prescans = 1
X_resolution = 0.45794685 [Hz]
X_sweep = 7.5030012 [kHz]
Irr_domain = 1H
Irr_freq = 399.78219838 [MHz]
Irr_offset = 5 [ppm]
Tri_domain = 1H
Tri_freq = 399.78219838 [MHz]
Tri_offset = 5 [ppm]
Clipped = FALSE
Mod_return = 1
Scans = 16
Total_scans = 16

X_90_width = 15 [us]
X_acq_time = 2.18365952 [s]
X_angle = 45 [deg]
X_atn = 0 [dB]
X_pulse = 7.5 [us]
Irr_mode = Off
Tri_mode = Off
Dante_preset = FALSE
Initial_wait = 1 [s]
Recvr_gain = 26
Relaxation_delay = 4 [s]
Repetition_time = 6.18365952 [s]
Temp_get = 20 [dc]

D-glucose, Sc(OTf)₃, allyl alcohol (5 eq), 80 °C, 24 h, carbon NMR

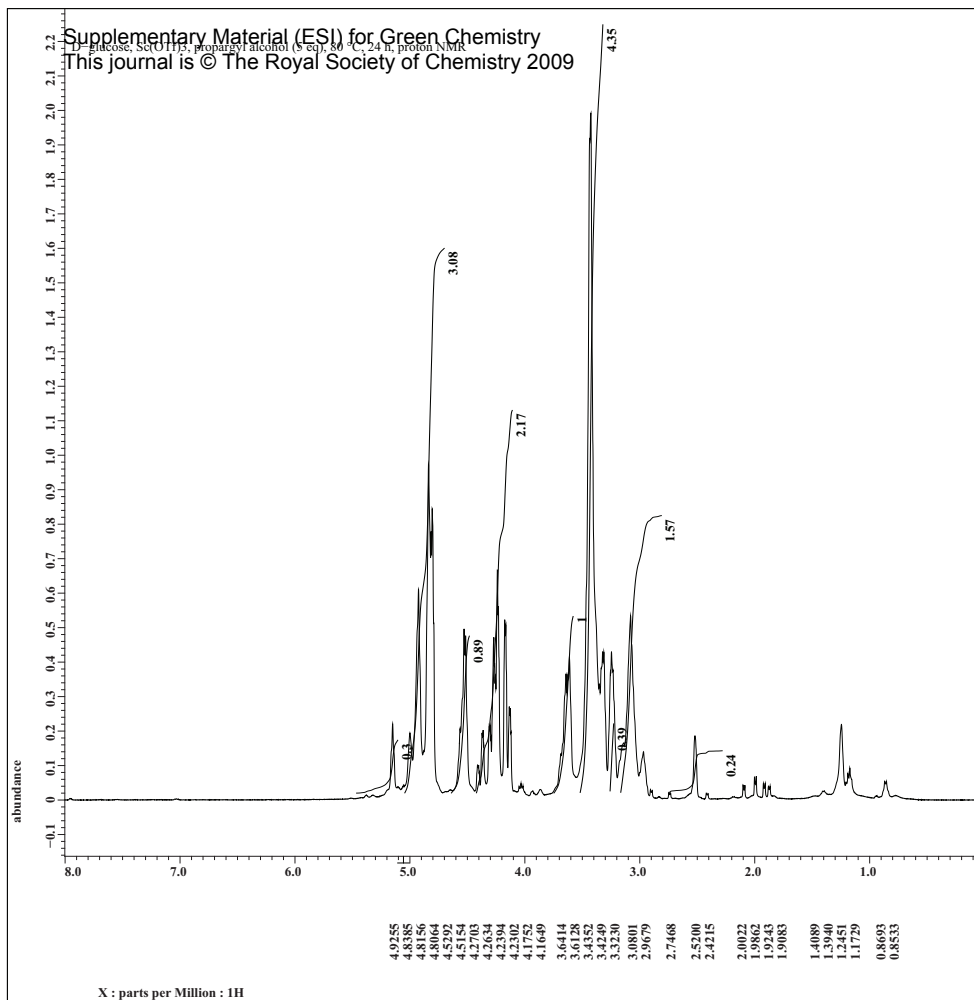


Filename = gsrr216f37a75etd2o_CA
Author = delta
Experiment = single pulse dec
Sample id = gsrr216f37a75etd2o
Solvent = DMSO-D6
Creation time = 10-NOV-2008 19:26:56
Revision time = 23-FEB-2009 10:53:35
Current time = 23-FEB-2009 10:53:42

Comment = 25
Data format = 1D_COMPLEX
Dim size = 26214
Dim title = 13C
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2 NMR

Field strength = 9.389766 [T] (400 [MHz])
X_acq_duration = 1.04333312 [s]
X_domain = 13C
X_freq = 100.52530333 [MHz]
X_offset = 100 [ppm]
X_points = 32768
X_prescans = 4
X_resolution = 0.95846665 [Hz]
X_sweep = 31.40703518 [kHz]
Irr_domain = 1H
Irr_freq = 399.78219838 [MHz]
Irr_offset = 5 [ppm]
Clipped = TRUE
Mod_return = 1
Scans = 1024
Total_scans = 1024

X_90_width = 9.1 [us]
X_acq_time = 1.04333312 [s]
X_angle = 30 [deg]
X_atn = 7 [dB]
X_pulse = 3.03333333 [us]
Irr_atn_dec = 11 [dB]
Irr_atn_noe = 16 [dB]
Irr_noise = WALTZ
Decoupling = TRUE
Initial_wait = 1 [s]
Noe = TRUE
Noe_time = 2 [s]
Recvr_gain = 60
Relaxation_delay = 2 [s]
Repetition_time = 3.04333312 [s]
Temp_get = 21.5 [dc]



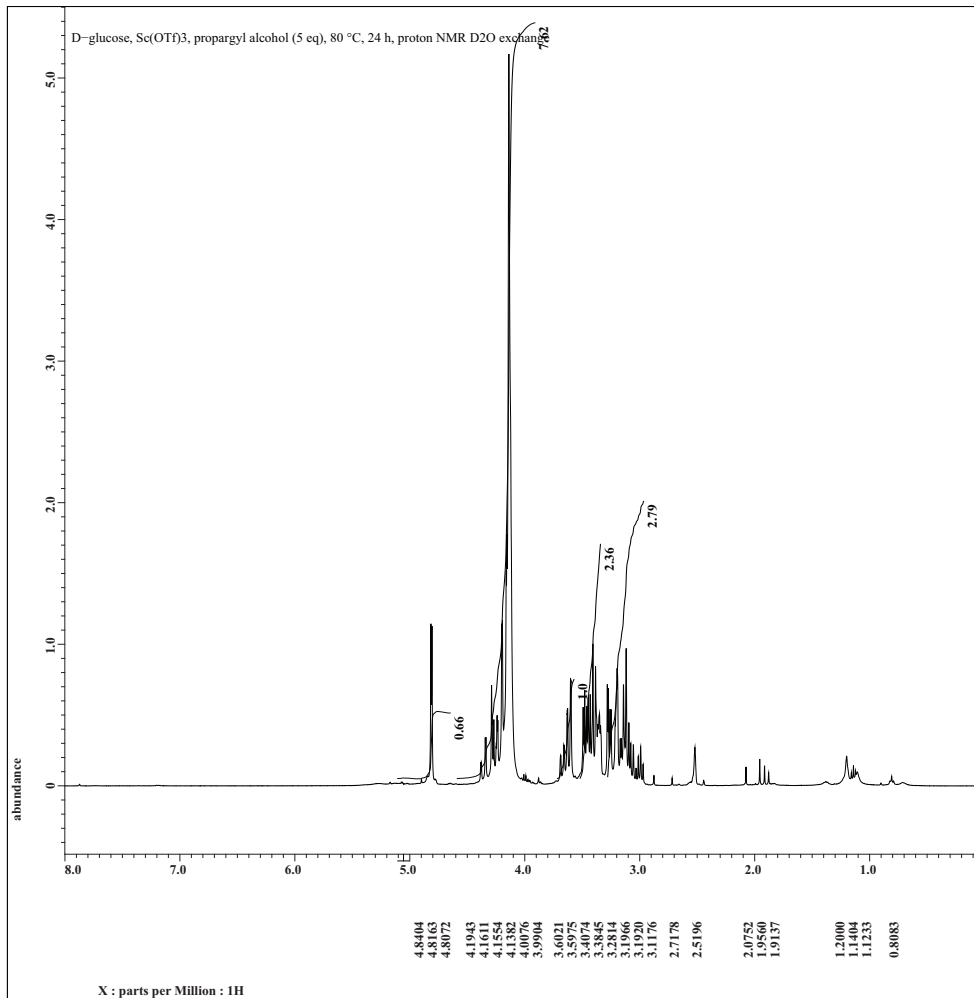
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 Author = delta
 Experiment = single pulse.ex2
 Sample id = gsrr237f27a61
 Solvent = DMSO-D6
 Creation time = 22-DEC-2008 10:17:49
 Revision time = 23-FEB-2009 14:22:38
 Current time = 23-FEB-2009 14:22:45

Comment = 55
 Data format = 1D COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR

Field strength = 9.389766 [T] (400 [MHz])
 X acq duration = 2.18365952 [s]
 X domain = 1H
 X freq = 399.78219838 [MHz]
 X offset = 5 [ppm]
 X points = 16384
 X prescans = 1
 X resolution = 0.45794685 [Hz]
 X sweep = 7.5030012 [kHz]
 Irr domain = 1H
 Irr freq = 399.78219838 [MHz]
 Irr offset = 5 [ppm]
 Tri domain = 1H
 Tri freq = 399.78219838 [MHz]
 Tri offset = 5 [ppm]
 Clipped = FALSE
 Mod return = 1
 Scans = 16
 Total scans = 16

X 90 width = 15 [us]
 X acq time = 2.18365952 [s]
 X angle = 45 [deg]
 X attn = 0 [dB]
 X pulse = 7.5 [us]
 Irr mode = Off
 Tri mode = Off
 Dante presat = FALSE
 Initial wait = 1 [s]
 Recvr gain = 28
 Relaxation delay = 1 [s]
 Repetition time = 3.18365952 [s]
 Temp get = 21.5 [dC]

D-glucose, Sc(OTf)₃, propargyl alcohol (5 eq), 80 °C, 24 h, proton NMR D2O exchange

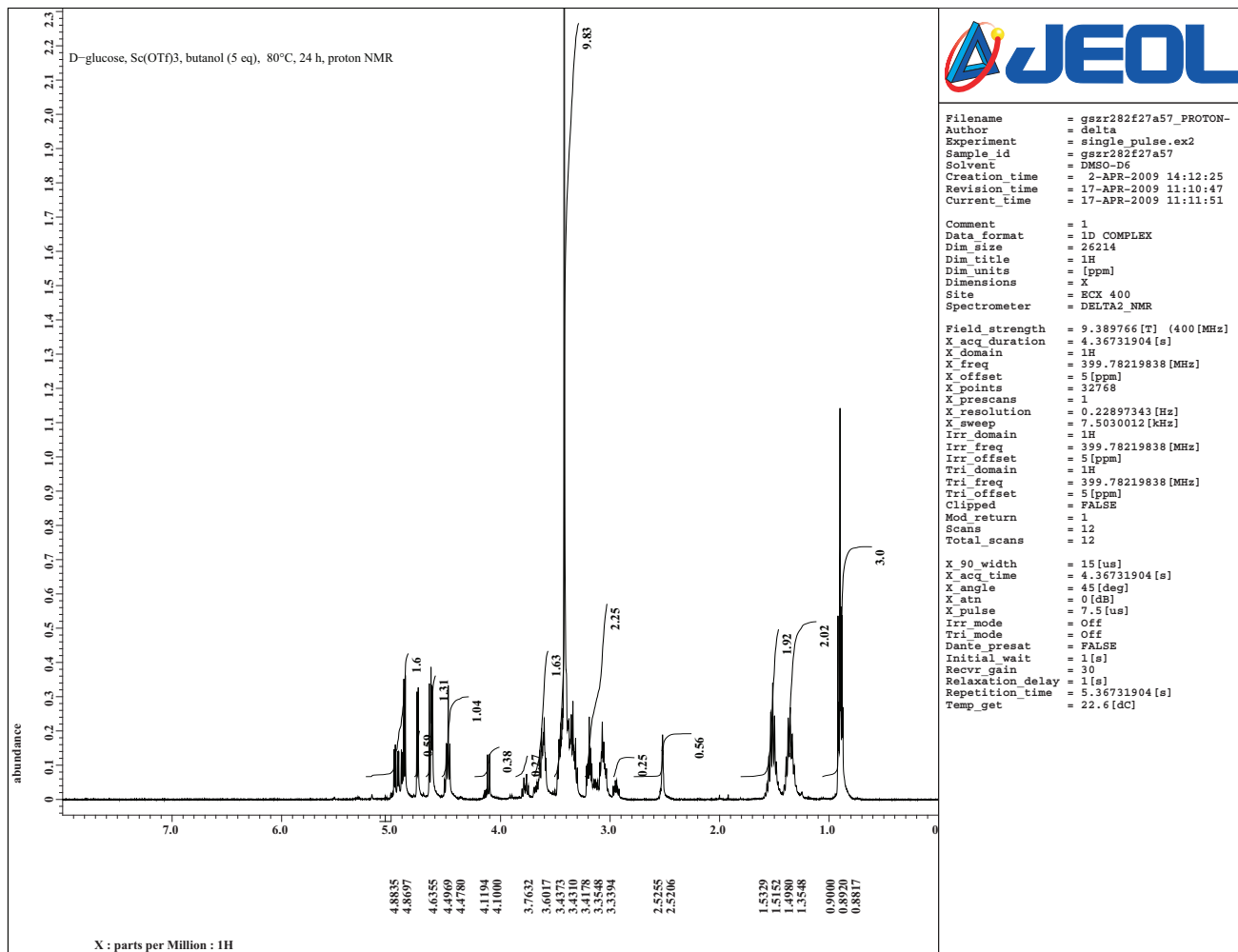
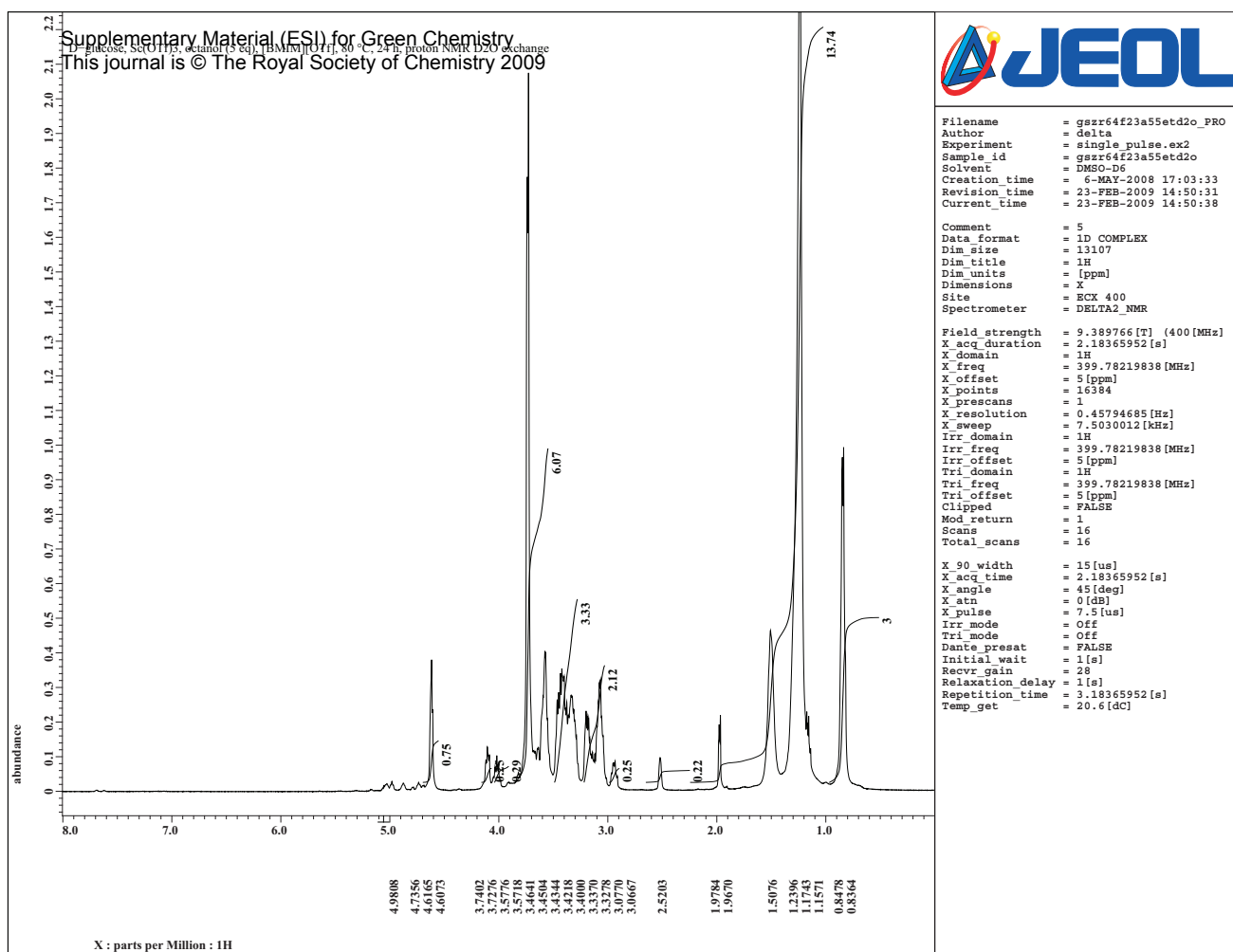


Filename = gsrr237f29a61etd2o_PR
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gsrr237f29a61etd2o
 Solvent = DMSO-D6
 Creation time = 22-DEC-2008 10:46:57
 Revision time = 23-FEB-2009 14:19:02
 Current time = 23-FEB-2009 14:19:10

Comment = 35
 Data format = 1D COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR

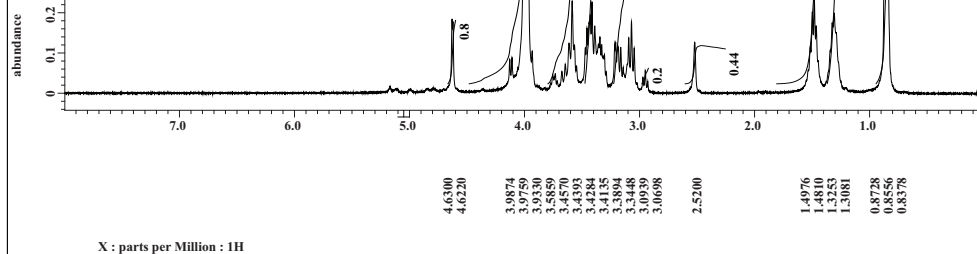
Field strength = 9.389766 [T] (400 [MHz])
 X acq duration = 2.18365952 [s]
 X domain = 1H
 X freq = 399.78219838 [MHz]
 X offset = 5 [ppm]
 X points = 16384
 X prescans = 1
 X resolution = 0.45794685 [Hz]
 X sweep = 7.5030012 [kHz]
 Irr domain = 1H
 Irr freq = 399.78219838 [MHz]
 Irr offset = 5 [ppm]
 Tri domain = 1H
 Tri freq = 399.78219838 [MHz]
 Tri offset = 5 [ppm]
 Clipped = FALSE
 Mod return = 1
 Scans = 16
 Total scans = 16

X 90 width = 15 [us]
 X acq time = 2.18365952 [s]
 X angle = 45 [deg]
 X attn = 0 [dB]
 X pulse = 7.5 [us]
 Irr mode = Off
 Tri mode = Off
 Dante presat = FALSE
 Initial wait = 1 [s]
 Recvr gain = 30
 Relaxation delay = 1 [s]
 Repetition time = 3.18365952 [s]
 Temp get = 21.3 [dC]





Filename = gsrr282f27a57etd2o_PR
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gsrr282f27a57etd2o
 Solvent = DMSO-D6
 Creation time = 2-APR-2009 16:45:54
 Revision time = 17-APR-2009 11:23:20
 Current time = 17-APR-2009 11:23:29
 Comment = 45
 Data format = 1D COMPLEX
 Dim size = 26214
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR
 Field strength = 9.389766 [T] (400 [MHz])
 X_acq_duration = 4.36731904 [s]
 X_domain = 1H
 X_freq = 399.78219838 [MHz]
 X_offset = 5 [ppm]
 X_points = 32768
 X_prescans = 1
 X_resolution = 0.22897343 [Hz]
 X_sweep = 7.5030012 [kHz]
 Irr_domain = 1H
 Irr_freq = 399.78219838 [MHz]
 Irr_offset = 5 [ppm]
 Tri_domain = 1H
 Tri_freq = 399.78219838 [MHz]
 Tri_offset = 5 [ppm]
 Clipped = FALSE
 Mod_return = 1
 Scans = 12
 Total_scans = 12
 X_90_width = 15 [us]
 X_acq_time = 4.36731904 [s]
 X_angle = 45 [deg]
 X_atn = 0 [dB]
 X_pulse = 7.5 [us]
 Irr_mode = Off
 Tri_mode = Off
 Dante_preset = FALSE
 Initial_wait = 1 [s]
 Recvr_gain = 32
 Relaxation_delay = 1 [s]
 Repetition_time = 5.36731904 [s]
 Temp_get = 22.7 [dC]

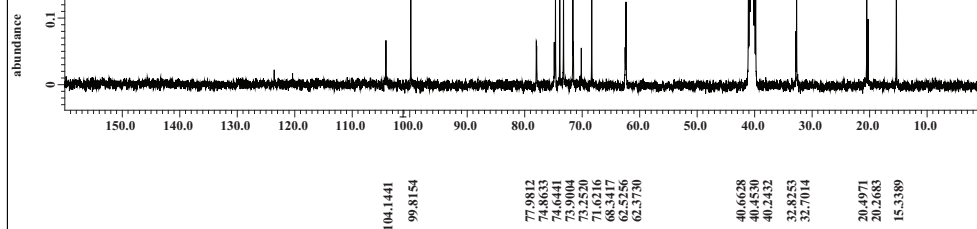


X : parts per Million : 1H

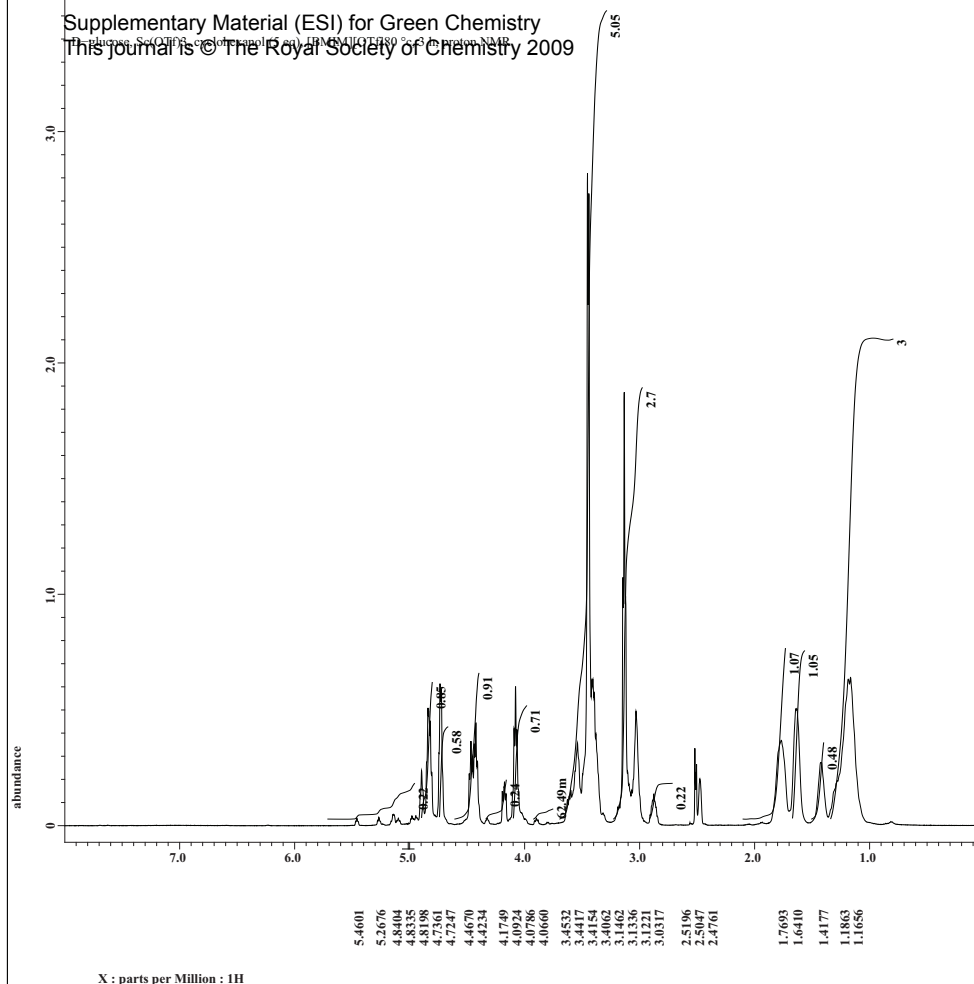
D-glucose, Sc(OTf)₃, butanol (5 eq), 80 °C, 24 h, carbon NMR



Filename = gsrr282f27a57etd2o_CA
 Author = delta
 Experiment = single pulse dec
 Sample id = gsrr282f27a57etd2o
 Solvent = DMSO-D6
 Creation time = 2-APR-2009 17:05:20
 Revision time = 17-APR-2009 11:30:08
 Current time = 17-APR-2009 11:30:47
 Comment = 45
 Data format = 1D COMPLEX
 Dim size = 26214
 Dim title = 13C
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR
 Field strength = 9.389766 [T] (400 [MHz])
 X_acq_duration = 1.04333312 [s]
 X_domain = 13C
 X_freq = 100.52530333 [MHz]
 X_offset = 100 [ppm]
 X_points = 32768
 X_prescans = 4
 X_resolution = 0.95846665 [Hz]
 X_sweep = 31.40703518 [kHz]
 Irr_domain = 1H
 Irr_freq = 399.78219838 [MHz]
 Irr_offset = 5 [ppm]
 Clipped = TRUE
 Mod_return = 1
 Scans = 512
 Total_scans = 512
 X_90_width = 9.1 [us]
 X_acq_time = 1.04333312 [s]
 X_angle = 30 [deg]
 X_atn = 7 [dB]
 X_pulse = 3.03333333 [us]
 Irr_atn_dec = 11 [dB]
 Irr_atn_noe = 16 [dB]
 Irr_noise = WALTZ
 Decoupling = TRUE
 Initial_wait = 1 [s]
 Noe = TRUE
 Noe_time = 1 [s]
 Recvr_gain = 60
 Relaxation_delay = 1 [s]
 Repetition_time = 2.04333312 [s]
 Temp_get = 24.4 [dC]



X : parts per Million : 13C



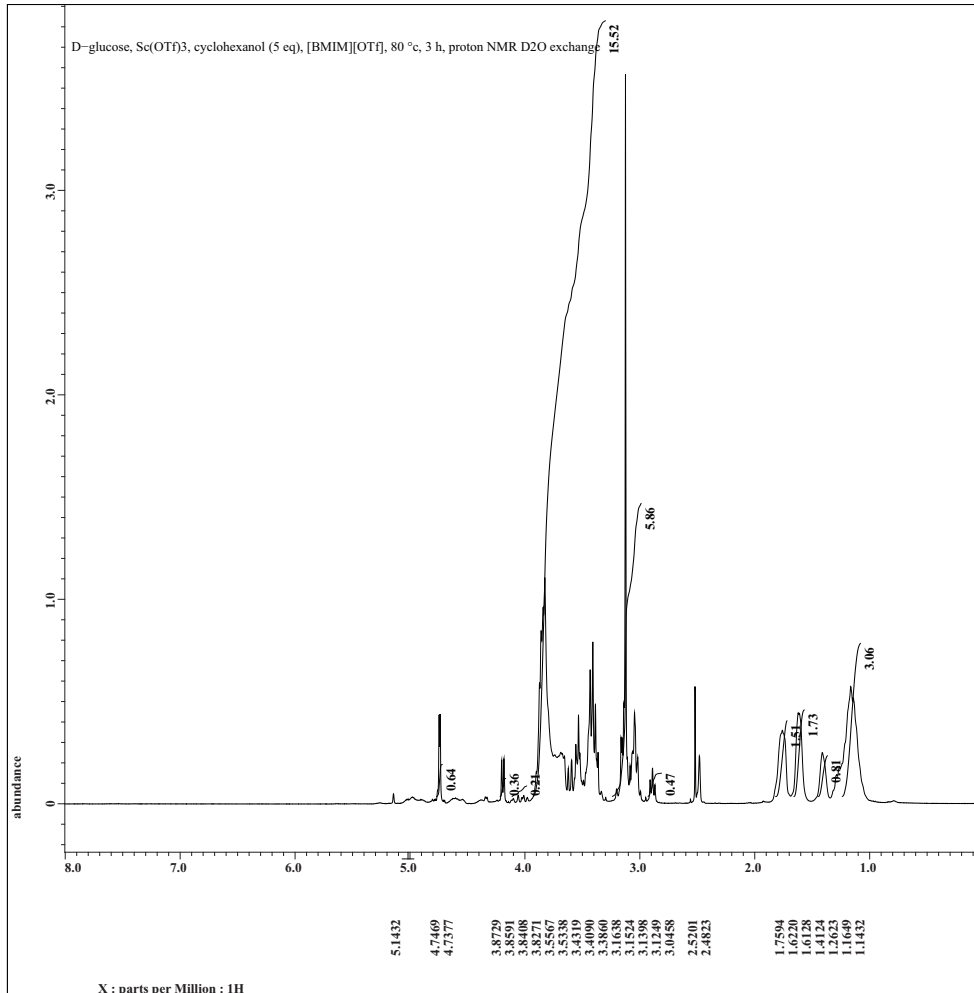
Filename = gszzr218f31a60_PROTON-
Author = delta
Experiment = single pulse.ex2
Sample id = gszzr218f31a60
Solvent = DMSO-D6
Creation time = 24-NOV-2008 05:51:55
Revision time = 23-FEB-2009 11:13:55
Current time = 23-FEB-2009 11:14:01

Comment = 45
Data format = 1D_COMPLEX
Dim size = 13107
Dim title = 1H
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2_NMR

Field strength = 9.389766 [T] (400 [MHz])
X_acq_duration = 2.18365952 [s]
X_domain = 1H
X_freq = 399.78219838 [MHz]
X_offset = 5 [ppm]
X_points = 16384
X_prescans = 1
X_resolution = 0.45794685 [Hz]
X_sweep = 7.5030012 [kHz]
Irr_domain = 1H
Irr_freq = 399.78219838 [MHz]
Irr_offset = 5 [ppm]
Tri_domain = 1H
Tri_freq = 399.78219838 [MHz]
Tri_offset = 5 [ppm]
Clipped = FALSE
Mod_return = 1
Scans = 16
Total_scans = 16

X_90_width = 15 [us]
X_acq_time = 2.18365952 [s]
X_angle = 45 [deg]
X_atn = 0 [dB]
X_pulse = 7.5 [us]
Irr_mode = Off
Tri_mode = Off
Dante_presat = FALSE
Initial_wait = 1 [s]
Recvr_gain = 28
Relaxation_delay = 1 [s]
Repetition_time = 3.18365952 [s]
Temp_get = 21 [dC]

D-glucose, Sc(OTf)₃, cyclohexanol (5 eq), [BMIM][OTf], 80 °C, 3 h, proton NMR D₂O exchange



Filename = gszzr218f31a60etd2o_PR
Author = delta
Experiment = single pulse.ex2
Sample id = gszzr218f31a60etd2o
Solvent = DMSO-D6
Creation time = 24-NOV-2008 07:34:12
Revision time = 23-FEB-2009 11:21:12
Current time = 23-FEB-2009 11:21:26

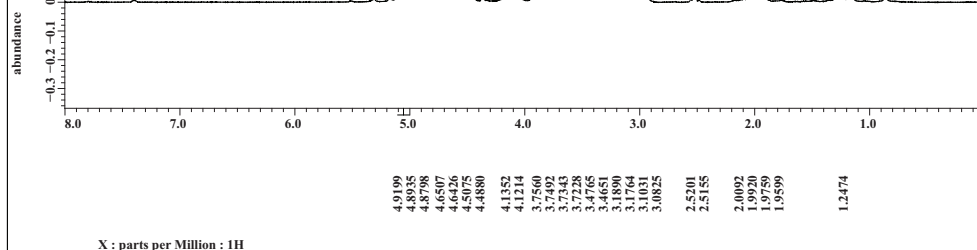
Comment = 25
Data format = 1D_COMPLEX
Dim size = 13107
Dim title = 1H
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2_NMR

Field strength = 9.389766 [T] (400 [MHz])
X_acq_duration = 2.18365952 [s]
X_domain = 1H
X_freq = 399.78219838 [MHz]
X_offset = 5 [ppm]
X_points = 16384
X_prescans = 1
X_resolution = 0.45794685 [Hz]
X_sweep = 7.5030012 [kHz]
Irr_domain = 1H
Irr_freq = 399.78219838 [MHz]
Irr_offset = 5 [ppm]
Tri_domain = 1H
Tri_freq = 399.78219838 [MHz]
Tri_offset = 5 [ppm]
Clipped = FALSE
Mod_return = 1
Scans = 16
Total_scans = 16

X_90_width = 15 [us]
X_acq_time = 2.18365952 [s]
X_angle = 45 [deg]
X_atn = 0 [dB]
X_pulse = 7.5 [us]
Irr_mode = Off
Tri_mode = Off
Dante_presat = FALSE
Initial_wait = 1 [s]
Recvr_gain = 28
Relaxation_delay = 1 [s]
Repetition_time = 3.18365952 [s]
Temp_get = 21.6 [dC]



Filename = gsrr209f35a69_PROTON-
 Author = delta
 Experiment = single_pulse.ex2
 Sample id = gsrr209f35a69
 Solvent = DMSO-D6
 Creation time = 4-NOV-2008 09:14:45
 Revision time = 23-FEB-2009 09:23:58
 Current time = 23-FEB-2009 09:24:25
 Comment = 45
 Data format = 1D_COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2_NMR
 Field strength = 9.389766 [T] (400 [MHz])
 X_acq_duration = 2.18365952 [s]
 X_domain = 1H
 X_freq = 399.78219838 [MHz]
 X_offset = 5 [ppm]
 X_points = 16384
 X_prescans = 1
 X_resolution = 0.45794685 [Hz]
 X_sweep = 7.5030012 [kHz]
 Irr_domain = 1H
 Irr_freq = 399.78219838 [MHz]
 Irr_offset = 5 [ppm]
 Tri_domain = 1H
 Tri_freq = 399.78219838 [MHz]
 Tri_offset = 5 [ppm]
 Clipped = FALSE
 Mod_return = 1
 Scans = 16
 Total_scans = 16
 X_90_width = 15 [us]
 X_acq_time = 2.18365952 [s]
 X_angle = 45 [deg]
 X_atn = 0 [dB]
 X_pulse = 7.5 [us]
 Irr_mode = Off
 Tri_mode = Off
 Dante_presat = FALSE
 Initial_wait = 1 [s]
 Recvr_gain = 32
 Relaxation_delay = 1 [s]
 Repetition_time = 3.18365952 [s]
 Temp_get = 19.3 [dC]

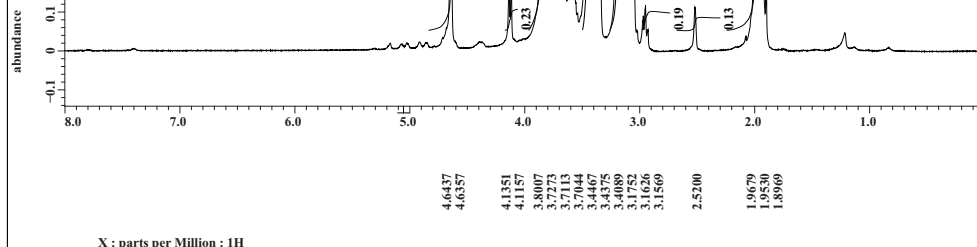


X : parts per Million : 1H

D-glucose, Sc(OTf)₃, 1-chlorohydroxypropane (5 eq), [BMIM][OTf], 80 °C, 24 h, proton NMR, D₂O exchange



Filename = gsrr209f35a69etd2o_PR
 Author = delta
 Experiment = single_pulse.ex2
 Sample id = gsrr209f35a69etd2o
 Solvent = DMSO-D6
 Creation time = 6-NOV-2008 02:26:57
 Revision time = 23-FEB-2009 10:04:46
 Current time = 23-FEB-2009 10:04:51
 Comment = 45
 Data format = 1D_COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2_NMR
 Field strength = 9.389766 [T] (400 [MHz])
 X_acq_duration = 2.18365952 [s]
 X_domain = 1H
 X_freq = 399.78219838 [MHz]
 X_offset = 5 [ppm]
 X_points = 16384
 X_prescans = 1
 X_resolution = 0.45794685 [Hz]
 X_sweep = 7.5030012 [kHz]
 Irr_domain = 1H
 Irr_freq = 399.78219838 [MHz]
 Irr_offset = 5 [ppm]
 Tri_domain = 1H
 Tri_freq = 399.78219838 [MHz]
 Tri_offset = 5 [ppm]
 Clipped = FALSE
 Mod_return = 1
 Scans = 16
 Total_scans = 16
 X_90_width = 15 [us]
 X_acq_time = 2.18365952 [s]
 X_angle = 45 [deg]
 X_atn = 0 [dB]
 X_pulse = 7.5 [us]
 Irr_mode = Off
 Tri_mode = Off
 Dante_presat = FALSE
 Initial_wait = 1 [s]
 Recvr_gain = 32
 Relaxation_delay = 1 [s]
 Repetition_time = 3.18365952 [s]
 Temp_get = 20.6 [dC]



X : parts per Million : 1H

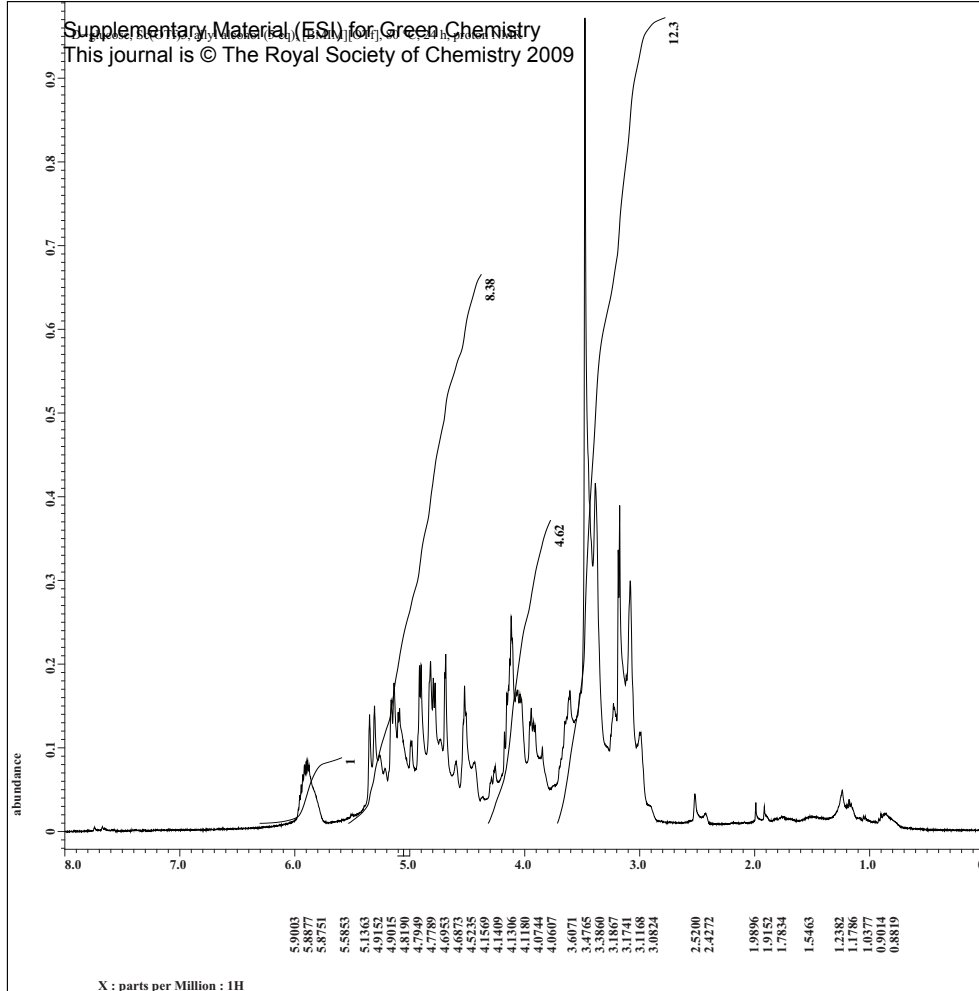


Filename = gsrr217f31a51_PROTON-
Author = delta
Experiment = single pulse.ex2
Sample id = gsrr217f31a51
Solvent = DMSO-D6
Creation time = 10-NOV-2008 09:09:43
Revision time = 23-FEB-2009 10:58:57
Current time = 23-FEB-2009 10:59:05

Comment = 40
Data format = 1D_COMPLEX
Dim size = 13107
Dim title = 1H
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2_NMR

Field strength = 9.389766 [T] (400 [MHz])
X_acq_duration = 2.18365952 [s]
X_domain = 1H
X_freq = 399.78219838 [MHz]
X_offset = 5 [ppm]
X_points = 16384
X_prescans = 1
X_resolution = 0.45794685 [Hz]
X_sweep = 7.5030012 [kHz]
Irr_domain = 1H
Irr_freq = 399.78219838 [MHz]
Irr_offset = 5 [ppm]
Tri_domain = 1H
Tri_freq = 399.78219838 [MHz]
Tri_offset = 5 [ppm]
Clipped = FALSE
Mod_return = 1
Scans = 16
Total_scans = 16

X_90_width = 15 [us]
X_acq_time = 2.18365952 [s]
X_angle = 45 [deg]
X_atn = 0 [dB]
X_pulse = 7.5 [us]
Irr_mode = Off
Tri_mode = Off
Dante_presat = FALSE
Initial_wait = 1 [s]
Recvr_gain = 30
Relaxation_delay = 1 [s]
Repetition_time = 3.18365952 [s]
Temp_get = 20.6 [dC]



D-glucose, Sc(OTf)₃, allyl alcohol (5 eq), [BMIM][OTf], 80 °C, 24 h, proton NMR D₂O exchange

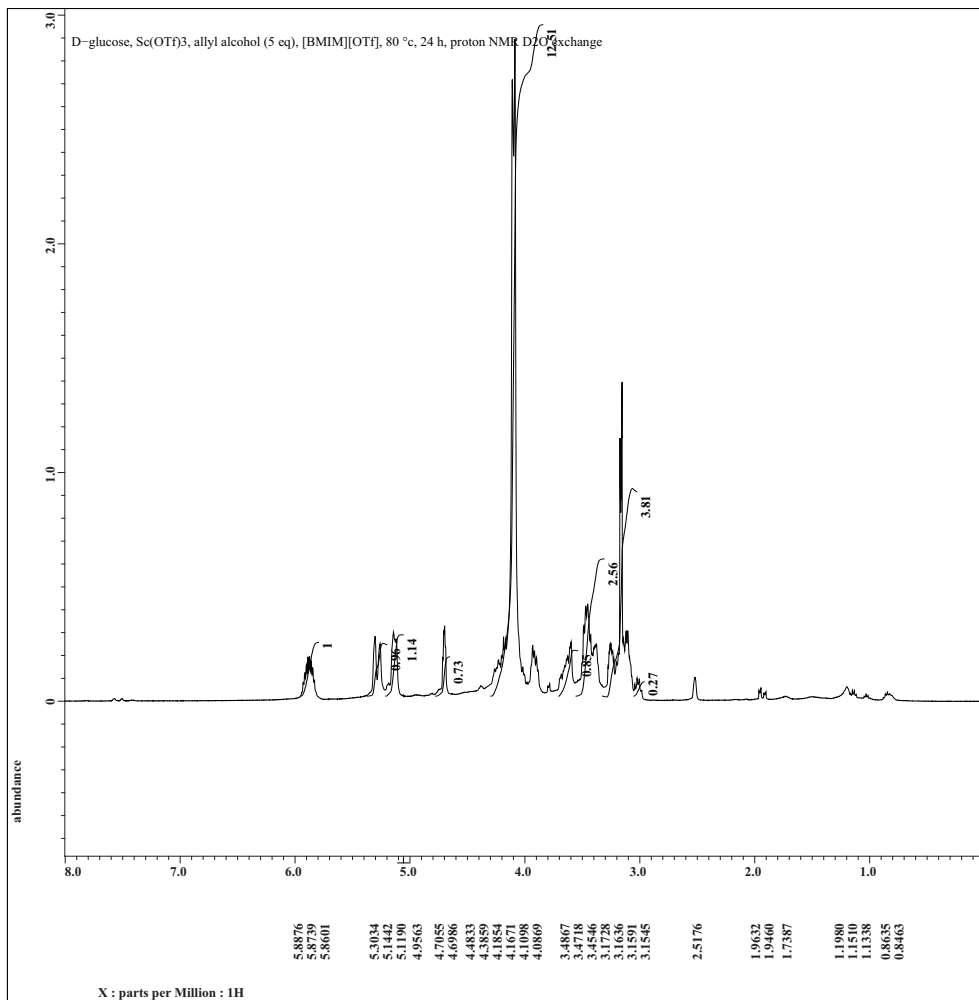


Filename = gsrr217f31a51etd2o_PR
Author = delta
Experiment = single pulse.ex2
Sample id = gsrr217f31a51etd2o
Solvent = DMSO-D6
Creation time = 10-NOV-2008 15:52:13
Revision time = 23-FEB-2009 11:05:15
Current time = 23-FEB-2009 11:05:24

Comment = 55
Data format = 1D_COMPLEX
Dim size = 13107
Dim title = 1H
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2_NMR

Field strength = 9.389766 [T] (400 [MHz])
X_acq_duration = 2.18365952 [s]
X_domain = 1H
X_freq = 399.78219838 [MHz]
X_offset = 5 [ppm]
X_points = 16384
X_prescans = 1
X_resolution = 0.45794685 [Hz]
X_sweep = 7.5030012 [kHz]
Irr_domain = 1H
Irr_freq = 399.78219838 [MHz]
Irr_offset = 5 [ppm]
Tri_domain = 1H
Tri_freq = 399.78219838 [MHz]
Tri_offset = 5 [ppm]
Clipped = FALSE
Mod_return = 1
Scans = 16
Total_scans = 16

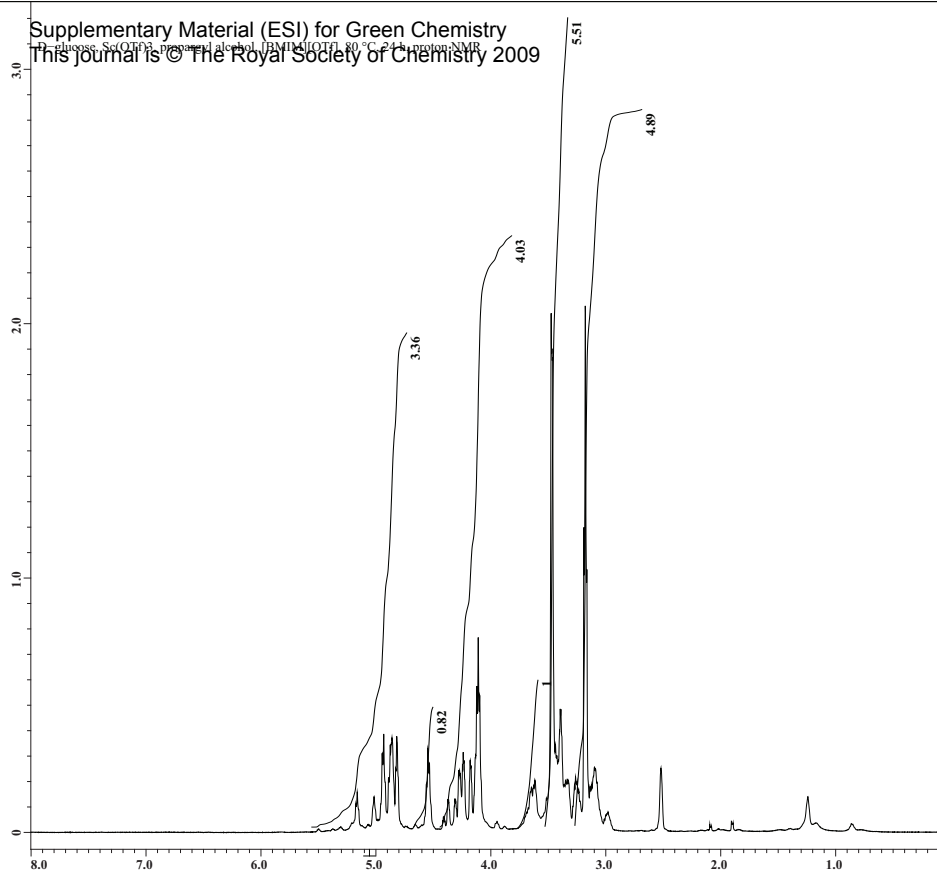
X_90_width = 15 [us]
X_acq_time = 2.18365952 [s]
X_angle = 45 [deg]
X_atn = 0 [dB]
X_pulse = 7.5 [us]
Irr_mode = Off
Tri_mode = Off
Dante_presat = FALSE
Initial_wait = 1 [s]
Recvr_gain = 30
Relaxation_delay = 4 [s]
Repetition_time = 6.18365952 [s]
Temp_get = 20.3 [dC]



Supplementary Material (ESI) for Green Chemistry
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D-glucose, Sc(OTf)₃, propargyl alcohol (5 eq), [BMIM][OTf], 80 °C, 24 h, proton NMR

abundance



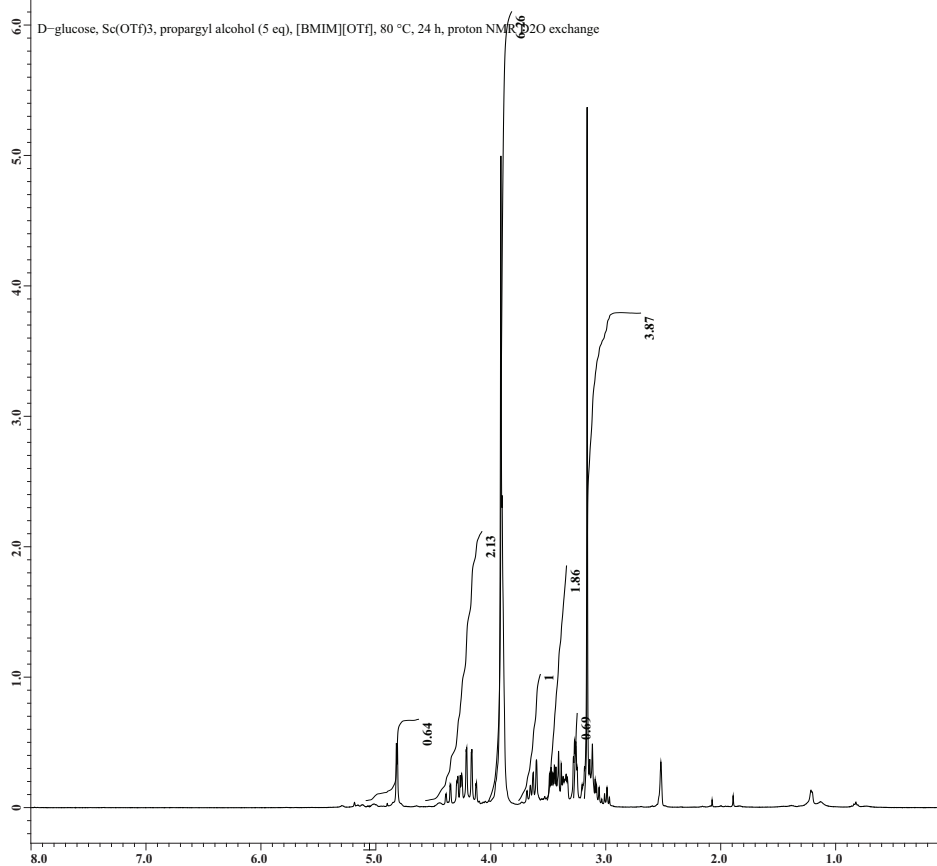
X : parts per Million : 1H



Filename = gsrr238f29a55_PROTON-
Author = delta
Experiment = single pulse.ex2
Sample id = gsrr238f29a55
Solvent = DMSO-D6
Creation time = 22-DEC-2008 10:25:00
Revision time = 23-FEB-2009 14:32:04
Current time = 23-FEB-2009 14:32:13
Comment = 5
Data format = 1D COMPLEX
Dim size = 13107
Dim title = 1H
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2 NMR
Field strength = 9.389766 [T] (400 [MHz])
X acq duration = 2.18365952 [s]
X domain = 1H
X freq = 399.78219838 [MHz]
X offset = 5 [ppm]
X points = 16384
X prescans = 1
X resolution = 0.45794685 [Hz]
X sweep = 7.5030012 [kHz]
Irr domain = 1H
Irr freq = 399.78219838 [MHz]
Irr offset = 5 [ppm]
Tri domain = 1H
Tri freq = 399.78219838 [MHz]
Tri offset = 5 [ppm]
Clipped = FALSE
Mod return = 1
Scans = 16
Total scans = 16
X 90 width = 15 [us]
X acq time = 2.18365952 [s]
X angle = 45 [deg]
X attn = 0 [dB]
X pulse = 7.5 [us]
Irr mode = Off
Tri mode = Off
Dante presat = FALSE
Initial wait = 1 [s]
Recvr gain = 30
Relaxation delay = 1 [s]
Repetition time = 3.18365952 [s]
Temp_get = 24.5 [dC]

D-glucose, Sc(OTf)₃, propargyl alcohol (5 eq), [BMIM][OTf], 80 °C, 24 h, proton NMR ²H₂O exchange

abundance



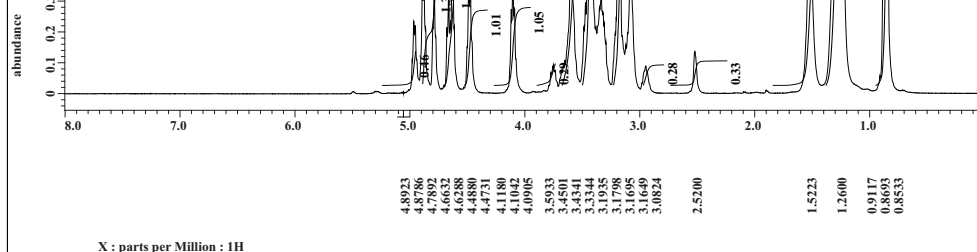
X : parts per Million : 1H



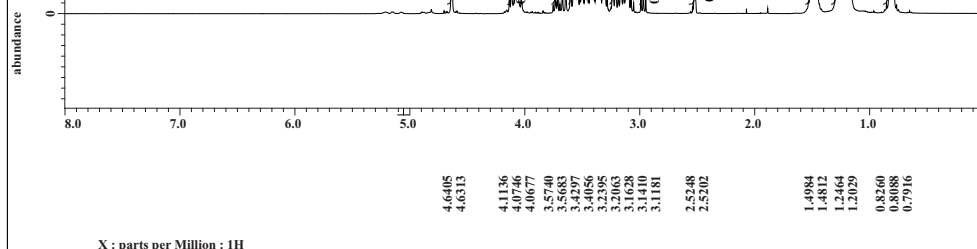
Filename = gsrr238f29a55etd2o_PR
Author = delta
Experiment = single pulse.ex2
Sample id = gsrr238f29a55etd2o
Solvent = DMSO-D6
Creation time = 22-DEC-2008 10:54:32
Revision time = 23-FEB-2009 14:28:59
Current time = 23-FEB-2009 14:29:06
Comment = 45
Data format = 1D COMPLEX
Dim size = 13107
Dim title = 1H
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2 NMR
Field strength = 9.389766 [T] (400 [MHz])
X acq duration = 2.18365952 [s]
X domain = 1H
X freq = 399.78219838 [MHz]
X offset = 5 [ppm]
X points = 16384
X prescans = 1
X resolution = 0.45794685 [Hz]
X sweep = 7.5030012 [kHz]
Irr domain = 1H
Irr freq = 399.78219838 [MHz]
Irr offset = 5 [ppm]
Tri domain = 1H
Tri freq = 399.78219838 [MHz]
Tri offset = 5 [ppm]
Clipped = FALSE
Mod return = 1
Scans = 16
Total scans = 16
X 90 width = 15 [us]
X acq time = 2.18365952 [s]
X angle = 45 [deg]
X attn = 0 [dB]
X pulse = 7.5 [us]
Irr mode = Off
Tri mode = Off
Dante presat = FALSE
Initial wait = 1 [s]
Recvr gain = 32
Relaxation delay = 1 [s]
Repetition time = 3.18365952 [s]
Temp_get = 22.1 [dC]



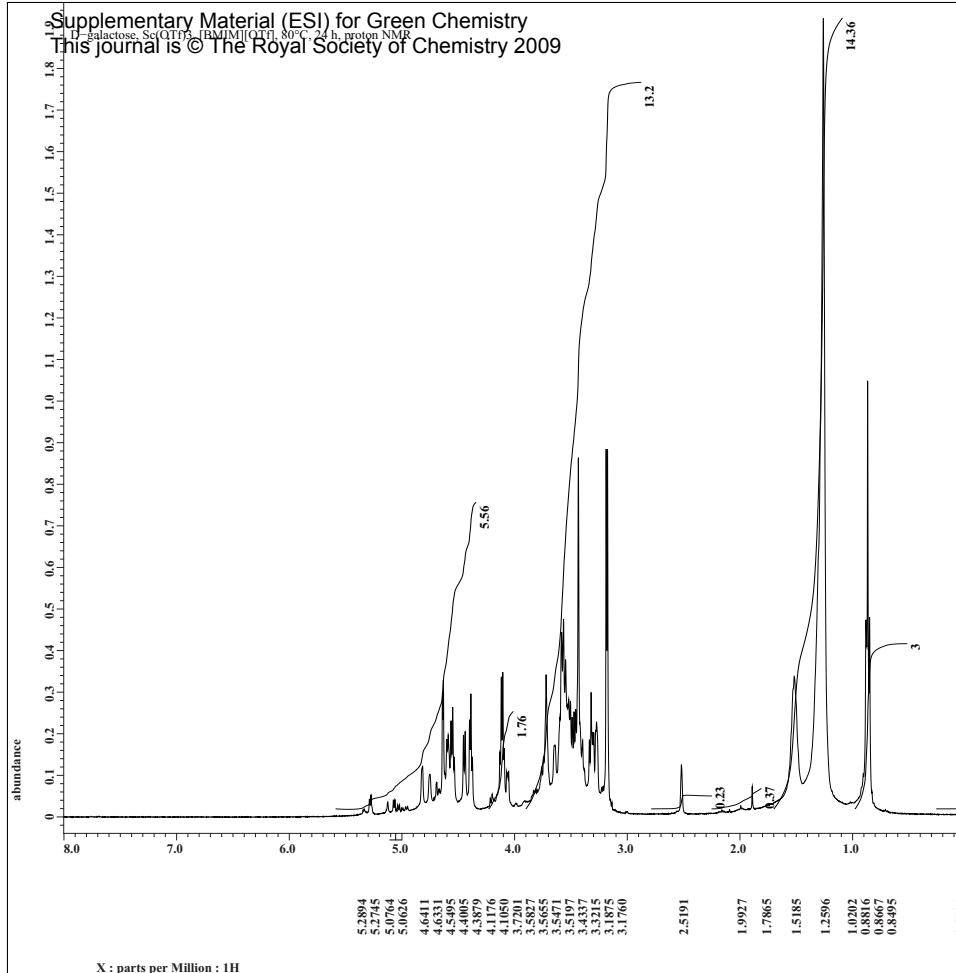
Filename = gszzr221f31a67_PROTON-
Author = delta
Experiment = single pulse.ex2
Sample id = gszzr221f31a67
Solvent = DMSO-D6
Creation time = 24-NOV-2008 06:00:54
Revision time = 23-FEB-2009 13:50:22
Current time = 23-FEB-2009 13:50:32
Comment = 50
Data format = 1D COMPLEX
Dim size = 13107
Dim title = 1H
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2 NMR
Field strength = 9.389766 [T] (400 [MHz])
X acq duration = 2.18365952 [s]
X domain = 1H
X freq = 399.78219838 [MHz]
X offset = 5 [ppm]
X points = 16384
X prescans = 1
X resolution = 0.45794685 [Hz]
X sweep = 7.5030012 [kHz]
Irr domain = 1H
Irr freq = 399.78219838 [MHz]
Irr offset = 5 [ppm]
Tri domain = 1H
Tri freq = 399.78219838 [MHz]
Tri offset = 5 [ppm]
Clipped = FALSE
Mod return = 1
Scans = 16
Total scans = 16
X 90 width = 15 [us]
X acq time = 2.18365952 [s]
X angle = 45 [deg]
X attn = 0 [dB]
X pulse = 7.5 [us]
Irr mode = Off
Tri mode = Off
Dante presat = FALSE
Initial wait = 1 [s]
Recvr gain = 26
Relaxation delay = 1 [s]
Repetition time = 3.18365952 [s]
Temp get = 21.2 [dC]



Filename = gszzr221f31a67etd2ob_P
Author = delta
Experiment = single pulse.ex2
Sample id = gszzr221f31a67etd2ob
Solvent = DMSO-D6
Creation time = 29-NOV-2008 07:16:18
Revision time = 23-FEB-2009 13:53:35
Current time = 23-FEB-2009 14:00:04
Comment = 10
Data format = 1D COMPLEX
Dim size = 13107
Dim title = 1H
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2 NMR
Field strength = 9.389766 [T] (400 [MHz])
X acq duration = 2.18365952 [s]
X domain = 1H
X freq = 399.78219838 [MHz]
X offset = 5 [ppm]
X points = 16384
X prescans = 1
X resolution = 0.45794685 [Hz]
X sweep = 7.5030012 [kHz]
Irr domain = 1H
Irr freq = 399.78219838 [MHz]
Irr offset = 5 [ppm]
Tri domain = 1H
Tri freq = 399.78219838 [MHz]
Tri offset = 5 [ppm]
Clipped = FALSE
Mod return = 1
Scans = 16
Total scans = 16
X 90 width = 15 [us]
X acq time = 2.18365952 [s]
X angle = 45 [deg]
X attn = 0 [dB]
X pulse = 7.5 [us]
Irr mode = Off
Tri mode = Off
Dante presat = FALSE
Initial wait = 1 [s]
Recvr gain = 28
Relaxation delay = 4 [s]
Repetition time = 6.18365952 [s]
Temp get = 21.2 [dC]



Supplementary Material (ESI) for Green Chemistry
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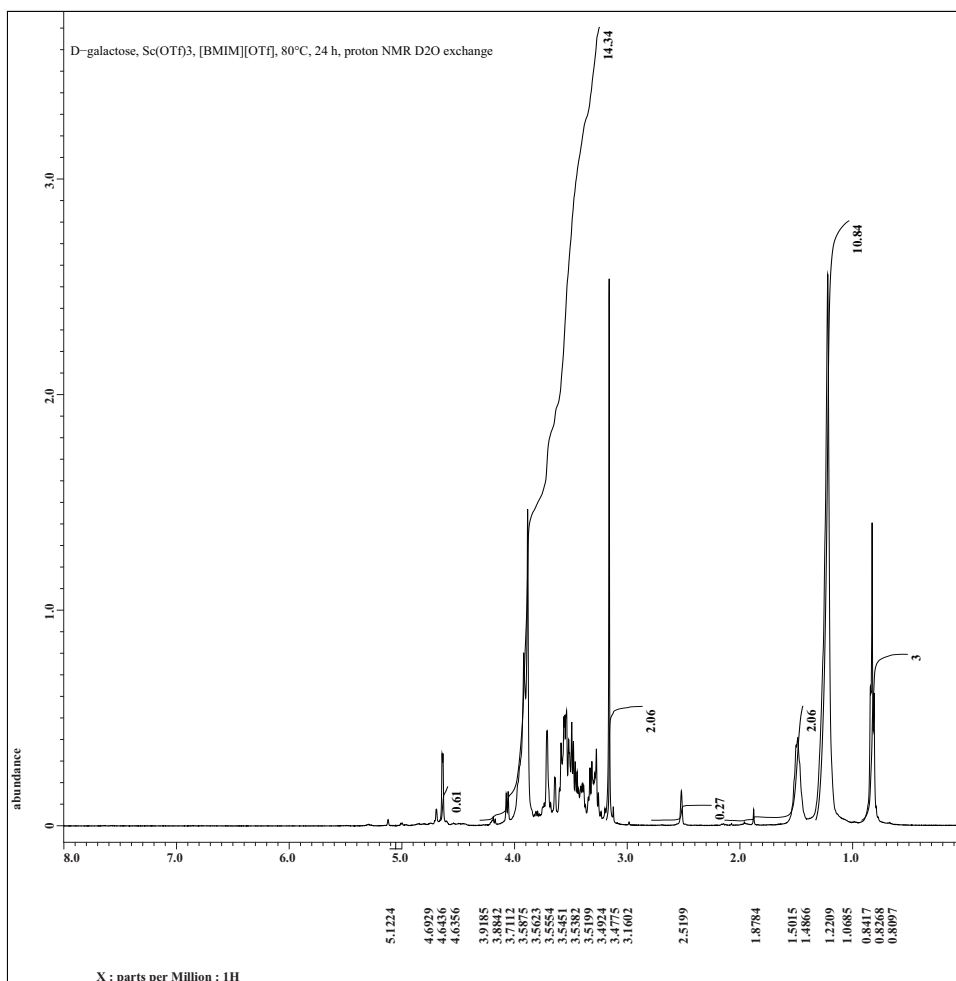


Filename = gszzr200f43a73_PROTON-
Author = delta
Experiment = single_pulse.ex2
Sample_id = gszzr200f43a73
Solvent = DMSO-D6
Creation_time = 23-OCT-2008 16:02:14
Revision_time = 20-APR-2009 11:45:45
Current_time = 20-APR-2009 11:47:15

Comment = 45
Data format = 1D COMPLEX
Dim_size = 13107
Dim_title = 1H
Dim_units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2_NMR

Field_strength = 9.389766[T] (400 [MHz])
X_acq_duration = 2.18365952[s]
X_domain = 1H
X_freq = 399.78219838 [MHz]
X_offset = 5 [ppm]
X_points = 16384
X_prescans = 1
X_resolution = 0.45794685 [Hz]
X_sweep = 7.5030012 [kHz]
Irr_domain = 1H
Irr_freq = 399.78219838 [MHz]
Irr_offset = 5 [ppm]
Tri_domain = 1H
Tri_freq = 399.78219838 [MHz]
Tri_offset = 5 [ppm]
Clipped = FALSE
Mod_return = 1
Scans = 16
Total_scans = 16

X_90_width = 15 [us]
X_acq_time = 2.18365952[s]
X_angle = 45 [deg]
X_atn = 0 [dB]
X_pulse = 7.5 [us]
Irr_mode = Off
Tri_mode = Off
Dante_presat = FALSE
Initial_wait = 1 [s]
Recvr_gain = 30
Relaxation_delay = 1 [s]
Repetition_time = 3.18365952[s]
Temp_get = 20.8 [dC]

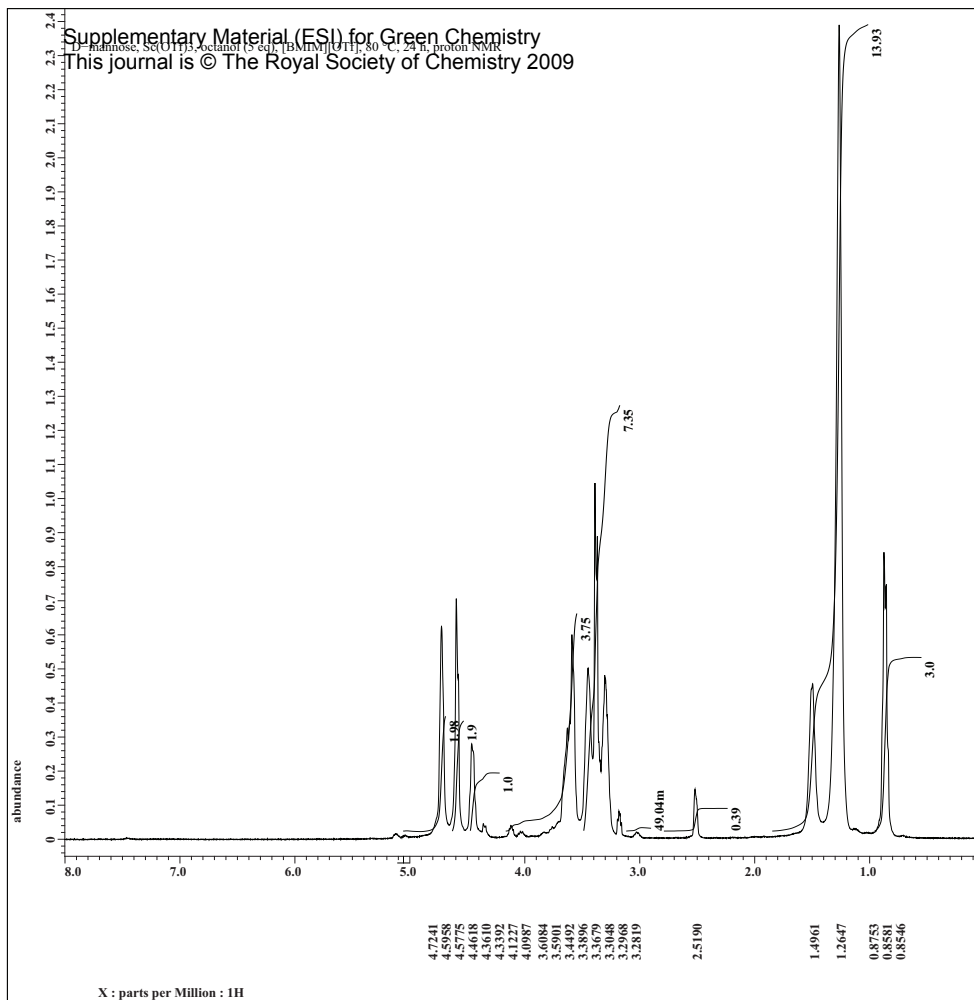


Filename = gszzr200f43a73etd2o_PR
Author = delta
Experiment = single_pulse.ex2
Sample_id = gszzr200f43a73etd2o
Solvent = DMSO-D6
Creation_time = 23-OCT-2008 17:17:19
Revision_time = 20-APR-2009 11:52:36
Current_time = 20-APR-2009 11:52:39

Comment = 40
Data format = 1D COMPLEX
Dim_size = 13107
Dim_title = 1H
Dim_units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2_NMR

Field_strength = 9.389766[T] (400 [MHz])
X_acq_duration = 2.18365952[s]
X_domain = 1H
X_freq = 399.78219838 [MHz]
X_offset = 5 [ppm]
X_points = 16384
X_prescans = 1
X_resolution = 0.45794685 [Hz]
X_sweep = 7.5030012 [kHz]
Irr_domain = 1H
Irr_freq = 399.78219838 [MHz]
Irr_offset = 5 [ppm]
Tri_domain = 1H
Tri_freq = 399.78219838 [MHz]
Tri_offset = 5 [ppm]
Clipped = FALSE
Mod_return = 1
Scans = 16
Total_scans = 16

X_90_width = 15 [us]
X_acq_time = 2.18365952[s]
X_angle = 45 [deg]
X_atn = 0 [dB]
X_pulse = 7.5 [us]
Irr_mode = Off
Tri_mode = Off
Dante_presat = FALSE
Initial_wait = 1 [s]
Recvr_gain = 32
Relaxation_delay = 1 [s]
Repetition_time = 3.18365952[s]
Temp_get = 20.5 [dC]

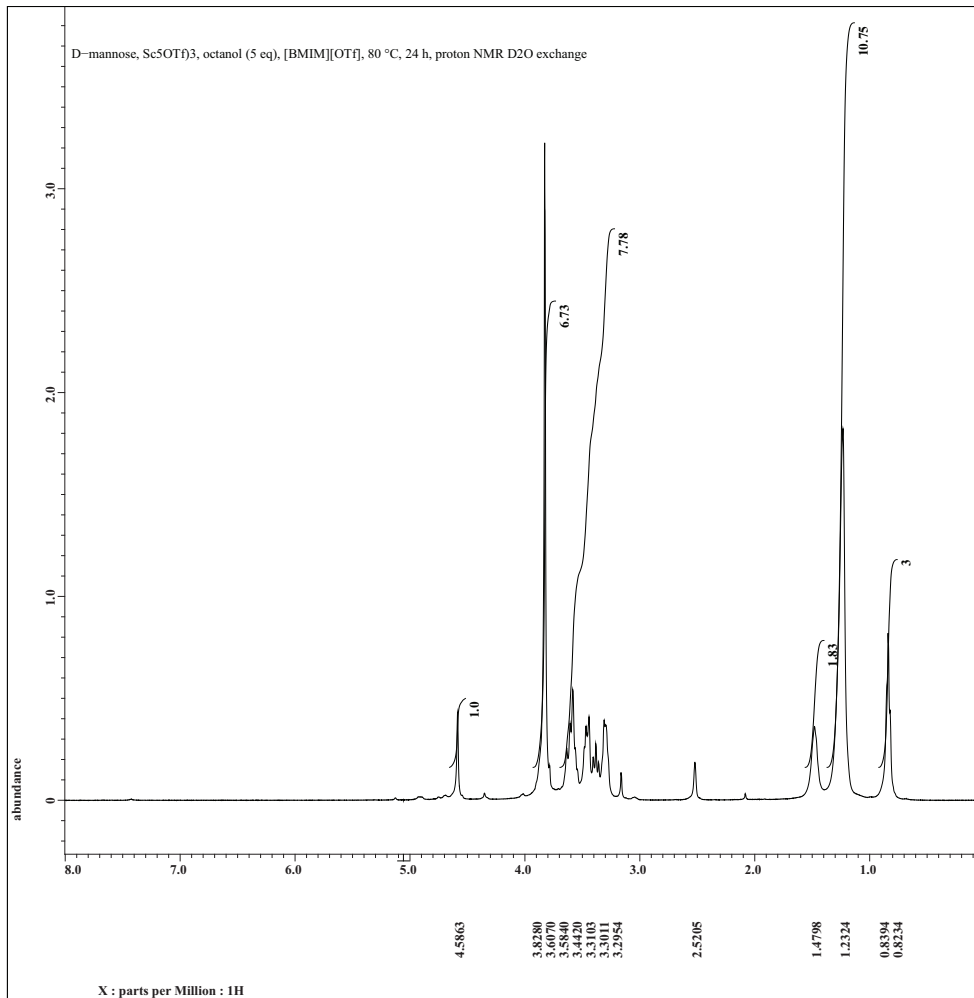


Filename = gsrr201f27a47_PROTON-
Author = delta
Experiment = single pulse.ex2
Sample id = gsrr201f27a47
Solvent = DMSO-D6
Creation time = 24-OCT-2008 09:56:58
Revision time = 23-FEB-2009 15:15:33
Current time = 23-FEB-2009 15:15:46

Comment = 25
Data format = 1D_COMPLEX
Dim size = 13107
Dim title = 1H
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2 NMR

Field strength = 9.389766 [T] (400 [MHz])
X_acq_duration = 2.18365952 [s]
X_domain = 1H
X_freq = 399.78219838 [MHz]
X_offset = 5 [ppm]
X_points = 16384
X_prescans = 1
X_resolution = 0.45794685 [Hz]
X_sweep = 7.5030012 [kHz]
Irr_domain = 1H
Irr_freq = 399.78219838 [MHz]
Irr_offset = 5 [ppm]
Tri_domain = 1H
Tri_freq = 399.78219838 [MHz]
Tri_offset = 5 [ppm]
Clipped = FALSE
Mod_return = 1
Scans = 16
Total_scans = 16

X_90_width = 15 [us]
X_acq_time = 2.18365952 [s]
X_angle = 45 [deg]
X_atn = 0 [dB]
X_pulse = 7.5 [us]
Irr_mode = Off
Tri_mode = Off
Dante_presat = FALSE
Initial_wait = 1 [s]
Recvr_gain = 34
Relaxation_delay = 1 [s]
Repetition_time = 3.18365952 [s]
Temp_get = 20.5 [dC]

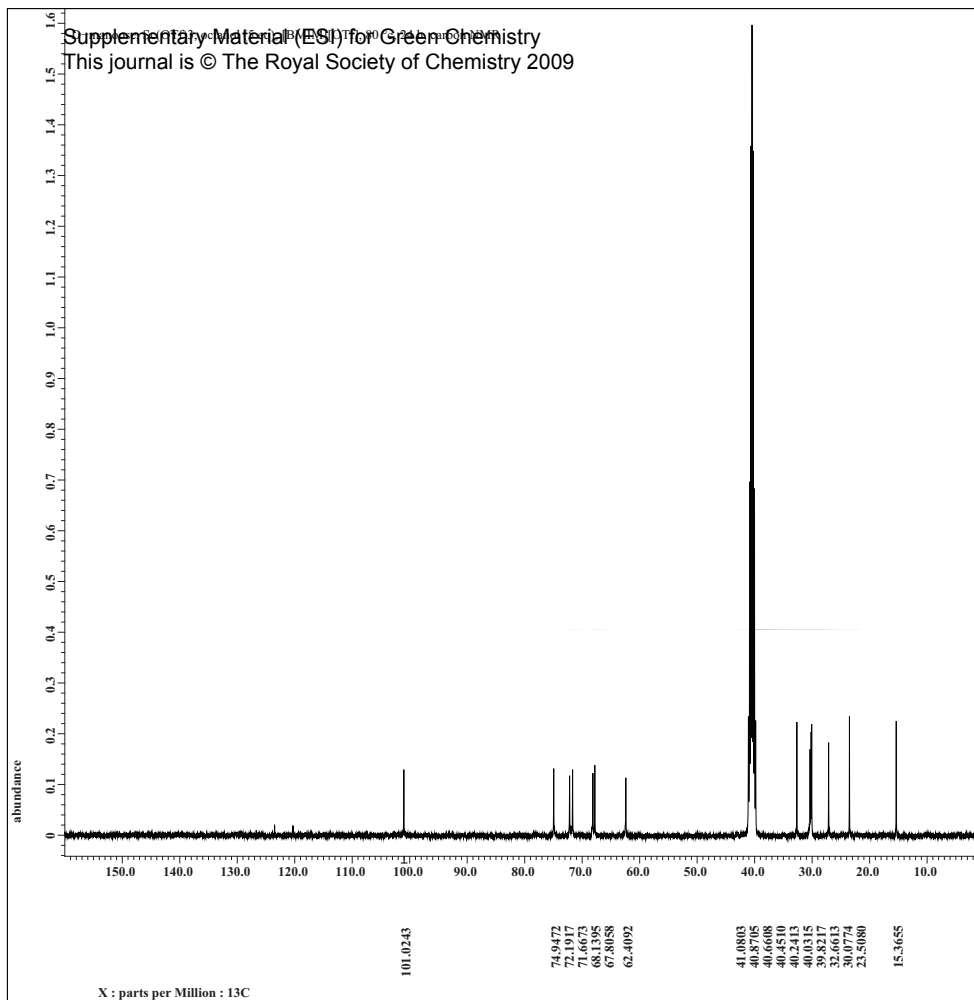


Filename = gsrr201f27a47etd2o_PR
Author = delta
Experiment = single pulse.ex2
Sample id = gsrr201f27a47etd2o
Solvent = DMSO-D6
Creation time = 30-OCT-2008 16:42:24
Revision time = 23-FEB-2009 15:20:43
Current time = 23-FEB-2009 15:20:49

Comment = 15
Data format = 1D_COMPLEX
Dim size = 13107
Dim title = 1H
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2 NMR

Field strength = 9.389766 [T] (400 [MHz])
X_acq_duration = 2.18365952 [s]
X_domain = 1H
X_freq = 399.78219838 [MHz]
X_offset = 5 [ppm]
X_points = 16384
X_prescans = 1
X_resolution = 0.45794685 [Hz]
X_sweep = 7.5030012 [kHz]
Irr_domain = 1H
Irr_freq = 399.78219838 [MHz]
Irr_offset = 5 [ppm]
Tri_domain = 1H
Tri_freq = 399.78219838 [MHz]
Tri_offset = 5 [ppm]
Clipped = FALSE
Mod_return = 1
Scans = 16
Total_scans = 16

X_90_width = 15 [us]
X_acq_time = 2.18365952 [s]
X_angle = 45 [deg]
X_atn = 0 [dB]
X_pulse = 7.5 [us]
Irr_mode = Off
Tri_mode = Off
Dante_presat = FALSE
Initial_wait = 1 [s]
Recvr_gain = 32
Relaxation_delay = 4 [s]
Repetition_time = 6.18365952 [s]
Temp_get = 20.7 [dC]



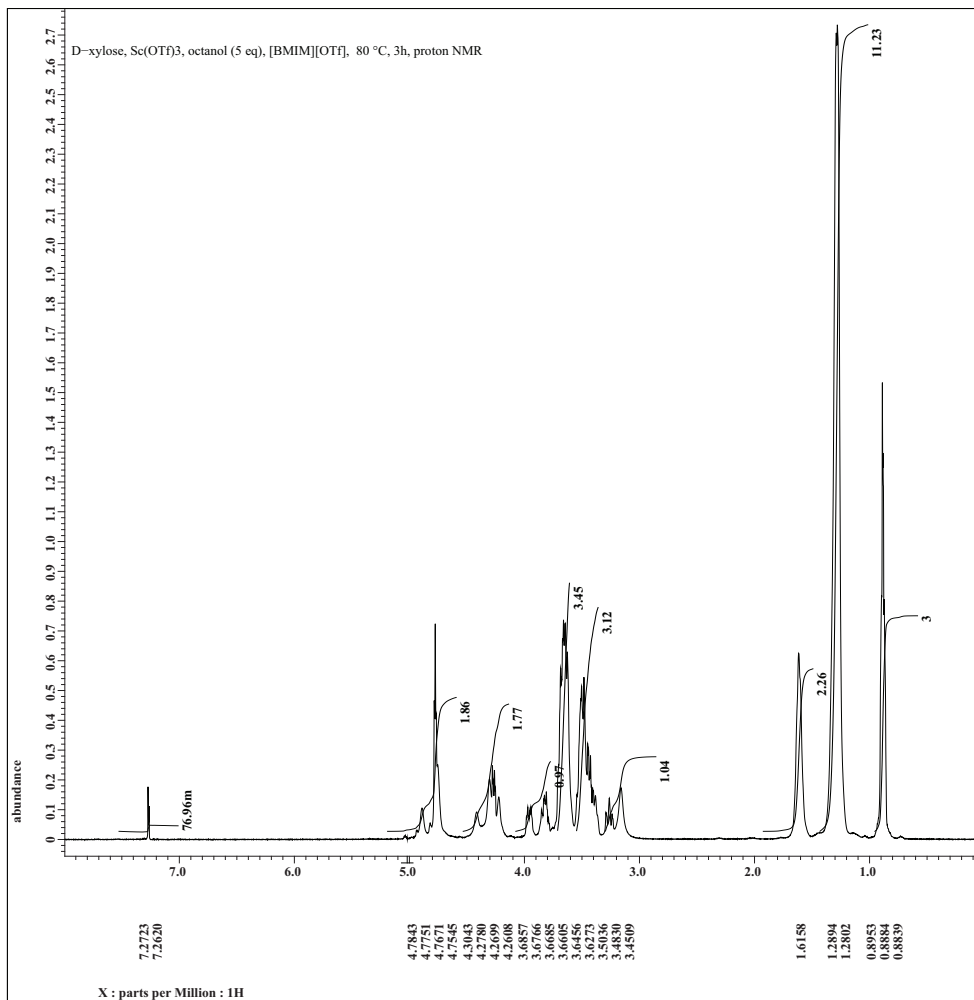
Filename = gsrr201f27a47etd2o_CA
 Author = delta
 Experiment = single pulse_dec
 Sample id = gsrr201f27a47etd2o
 Solvent = DMSO-D6
 Creation time = 30-OCT-2008 17:34:55
 Revision time = 23-FEB-2009 15:23:28
 Current time = 23-FEB-2009 15:23:42

Comment = 15
 Data format = 1D_COMPLEX
 Dim size = 26214
 Dim title = 13C
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR

Field strength = 9.389766 [T] (400 [MHz])
 X_acq_duration = 1.04333312 [s]
 X_domain = 13C
 X_freq = 100.52530333 [MHz]
 X_offset = 100 [ppm]
 X_points = 32768
 X_prescans = 4
 X_resolution = 0.95846665 [Hz]
 X_sweep = 31.40703518 [kHz]
 Irr_domain = 1H
 Irr_freq = 399.78219838 [MHz]
 Irr_offset = 5 [ppm]
 Clipped = TRUE
 Mod_return = 1
 Scans = 1024
 Total_scans = 1024

X_90_width = 9.1 [us]
 X_acq_time = 1.04333312 [s]
 X_angle = 30 [deg]
 X_atn = 7 [dB]
 X_pulse = 3.03333333 [us]
 Irr_atn_dec = 11 [dB]
 Irr_atn_noe = 16 [dB]
 Irr_noise = WALTZ
 Decoupling = TRUE
 Initial_wait = 1 [s]
 Noe = TRUE
 Noe_time = 2 [s]
 Recvr_gain = 60
 Relaxation_delay = 2 [s]
 Repetition_time = 3.04933312 [s]
 Temp_get = 21.7 [dC]

D-xylitol, Sc(OTf)₃, octanol (5 eq), [BMIM][OTf], 80 °C, 3h, proton NMR

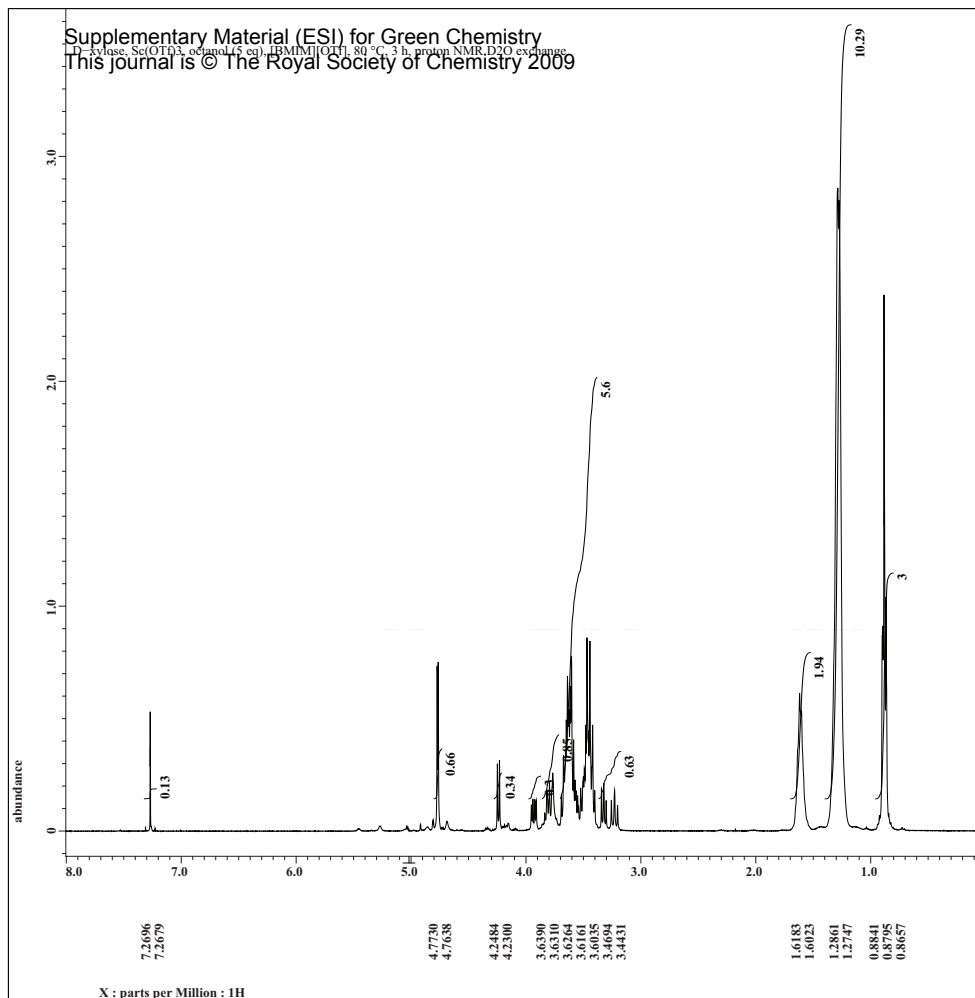


Filename = gsrr155bf14a25bis_PRO
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gsrr155bf14a25bis
 Solvent = CHLOROFORM-D
 Creation time = 3-SEP-2008 13:56:16
 Revision time = 23-FEB-2009 15:00:26
 Current time = 23-FEB-2009 15:00:38

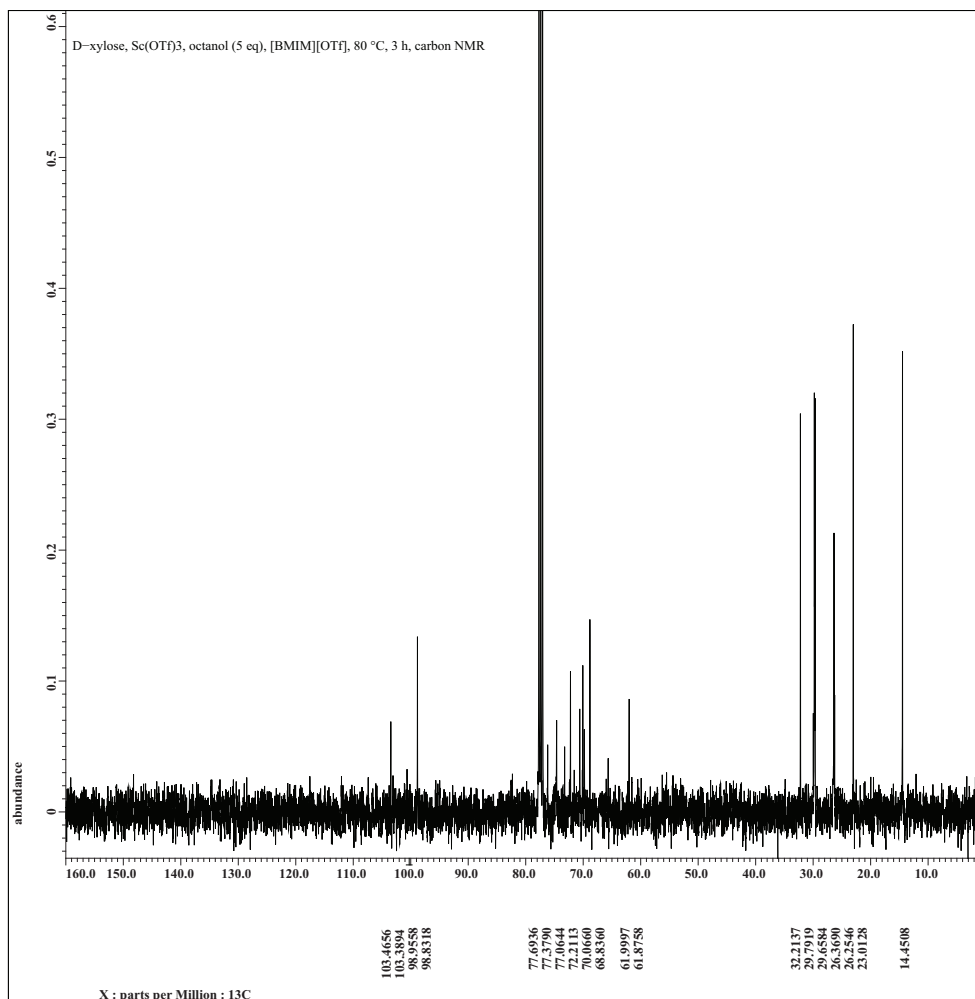
Comment = 25
 Data format = 1D_COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR

Field strength = 9.389766 [T] (400 [MHz])
 X_acq_duration = 2.18365952 [s]
 X_domain = 1H
 X_freq = 399.78219838 [MHz]
 X_offset = 5 [ppm]
 X_points = 16384
 X_prescans = 1
 X_resolution = 0.45794685 [Hz]
 X_sweep = 7.5030012 [kHz]
 Irr_domain = 1H
 Irr_freq = 399.78219838 [MHz]
 Irr_offset = 5 [ppm]
 Tri_domain = 1H
 Tri_freq = 399.78219838 [MHz]
 Tri_offset = 5 [ppm]
 Clipped = FALSE
 Mod_return = 1
 Scans = 16
 Total_scans = 16

X_90_width = 15 [us]
 X_acq_time = 2.18365952 [s]
 X_angle = 45 [deg]
 X_atn = 0 [dB]
 X_pulse = 7.5 [us]
 Irr_mode = Off
 Tri_mode = Off
 Dante_presat = FALSE
 Initial_wait = 1 [s]
 Recvr_gain = 34
 Relaxation_delay = 1 [s]
 Repetition_time = 3.18365952 [s]
 Temp_get = 18.8 [dC]



Filename	= gszr155bf14a25bisetd2
Author	= delta
Experiment	= single pulse.ex2
Sample id	= gszr155bf14a25bisetd2
Solvent	= CHLOROFORM-D
Creation time	= 3-SEP-2008 20:47:38
Revision time	= 23-FEB-2009 15:06:32
Current time	= 23-FEB-2009 15:06:44
Comment	= 25
Data format	= 1D_COMPLEX
Dim size	= 13107
Dim title	= 1H
Dim units	= [ppm]
Dimensions	= X
Site	= ECX 400
Spectrometer	= DELTA2 NMR
Field strength	= 9.389766 [T] (400 [MHz])
X_acq_duration	= 2.18365952 [s]
X_domain	= 1H
X_freq	= 399.78219838 [MHz]
X_offset	= 5 [ppm]
X_points	= 16384
X_prescans	= 1
X_resolution	= 0.45794685 [Hz]
X_sweep	= 7.5030012 [kHz]
Irr_domain	= 1H
Irr_freq	= 399.78219838 [MHz]
Irr_offset	= 5 [ppm]
Tri_domain	= 1H
Tri_freq	= 399.78219838 [MHz]
Tri_offset	= 5 [ppm]
Clipped	= FALSE
Mod_return	= 1
Scans	= 16
Total_scans	= 16
X_90_width	= 15 [us]
X_acq_time	= 2.18365952 [s]
X_angle	= 45 [deg]
X_atn	= 0 [dB]
X_pulse	= 7.5 [us]
Irr_mode	= Off
Tri_mode	= Off
Dante_preset	= FALSE
Initial wait	= 1 [s]
Recvr_gain	= 34
Relaxation delay	= 4 [s]
Repetition_time	= 6.18365952 [s]
Temp_get	= 19.4 [dC]



Filename	= gszr155bf14a25bisetd2
Author	= delta
Experiment	= single pulse_dec
Sample id	= gszr155bf14a25bisetd2
Solvent	= CHLOROFORM-D
Creation time	= 3-SEP-2008 20:50:57
Revision time	= 23-FEB-2009 15:10:09
Current time	= 23-FEB-2009 15:10:14
Comment	= 25
Data format	= 1D_COMPLEX
Dim size	= 26214
Dim title	= 13C
Dim units	= [ppm]
Dimensions	= X
Site	= ECX 400
Spectrometer	= DELTA2 NMR
Field strength	= 9.389766 [T] (400 [MHz])
X_acq_duration	= 1.04333312 [s]
X_domain	= 13C
X_freq	= 100.52530333 [MHz]
X_offset	= 100 [ppm]
X_points	= 32768
X_prescans	= 4
X_resolution	= 0.95846665 [Hz]
X_sweep	= 31.40703518 [kHz]
Irr_domain	= 1H
Irr_freq	= 399.78219838 [MHz]
Irr_offset	= 5 [ppm]
Clipped	= FALSE
Mod_return	= 1
Scans	= 54
Total_scans	= 54
X_90_width	= 9.1 [us]
X_acq_time	= 1.04333312 [s]
X_angle	= 30 [deg]
X_atn	= 7 [dB]
X_pulse	= 3.03333333 [us]
Irr_atn_dec	= 11 [dB]
Irr_atn_noe	= 16 [dB]
Irr_noise	= WALTZ
Decoupling	= TRUE
Initial wait	= 1 [s]
Noe	= TRUE
Noe time	= 2 [s]
Recvr_gain	= 60
Relaxation delay	= 2 [s]
Repetition_time	= 3.04333312 [s]
Temp_get	= 20.2 [dC]

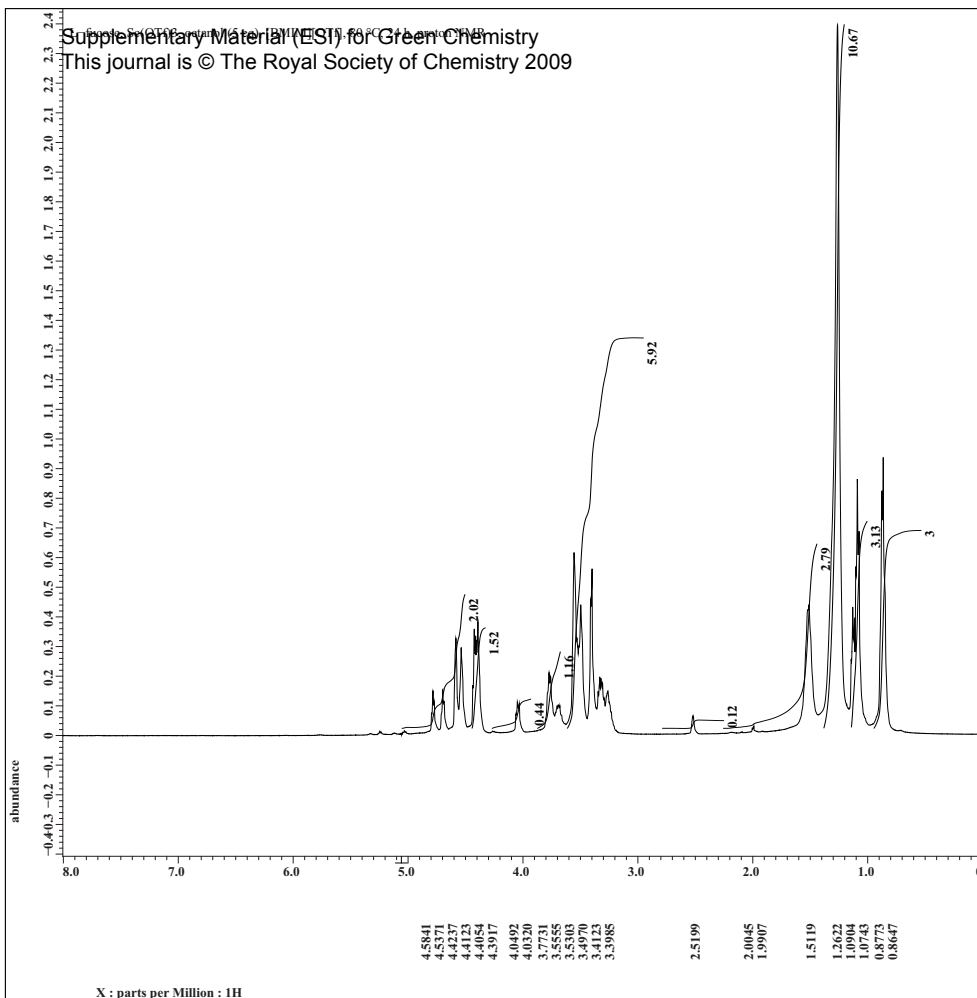


Filename = gsrr196f21a47_PROTON-
Author = delta
Experiment = single pulse.ex2
Sample id = gsrr196f21a47
Solvent = DMSO-D6
Creation time = 22-OCT-2008 16:07:01
Revision time = 23-FEB-2009 16:05:32
Current time = 23-FEB-2009 16:05:44

Comment = 50
Data format = 1D COMPLEX
Dim size = 13107
Dim title = 1H
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2 NMR

Field strength = 9.389766 [T] (400 [MHz])
X acq duration = 2.18365952 [s]
X domain = 1H
X freq = 399.78219838 [MHz]
X offset = 5 [ppm]
X points = 16384
X prescans = 1
X resolution = 0.45794685 [Hz]
X sweep = 7.5030012 [kHz]
Irr domain = 1H
Irr freq = 399.78219838 [MHz]
Irr offset = 5 [ppm]
Tri domain = 1H
Tri freq = 399.78219838 [MHz]
Tri offset = 5 [ppm]
Clipped = FALSE
Mod return = 1
Scans = 16
Total scans = 16

X 90 width = 15 [us]
X acq time = 2.18365952 [s]
X angle = 45 [deg]
X attn = 0 [dB]
X pulse = 7.5 [us]
Irr mode = Off
Tri mode = Off
Dante presat = FALSE
Initial wait = 1 [s]
Recvr gain = 26
Relaxation delay = 1 [s]
Repetition time = 3.18365952 [s]
Temp get = 20.9 [dC]

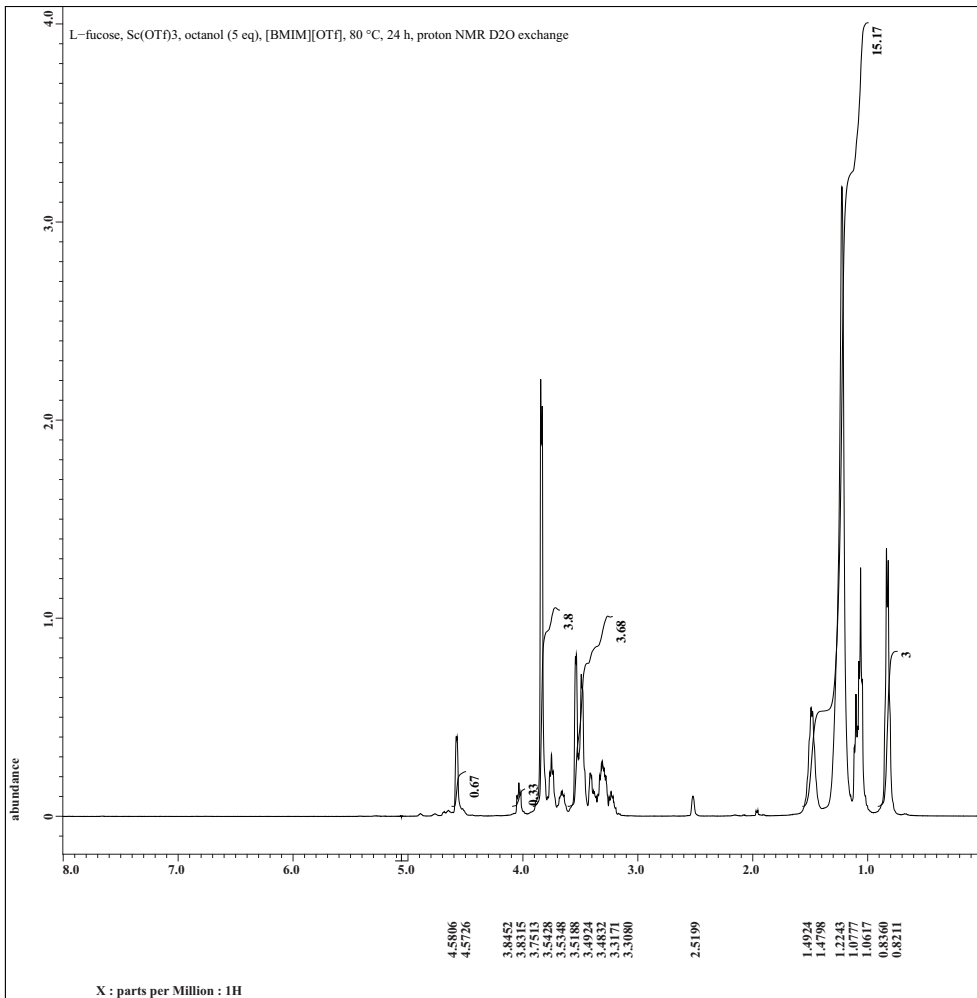


Filename = gsrr196f21a47etd2o_PR
Author = delta
Experiment = single pulse.ex2
Sample id = gsrr196f21a47etd2o
Solvent = DMSO-D6
Creation time = 23-OCT-2008 20:04:32
Revision time = 23-FEB-2009 16:42:46
Current time = 23-FEB-2009 16:42:52

Comment = 45
Data format = 1D COMPLEX
Dim size = 13107
Dim title = 1H
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2 NMR

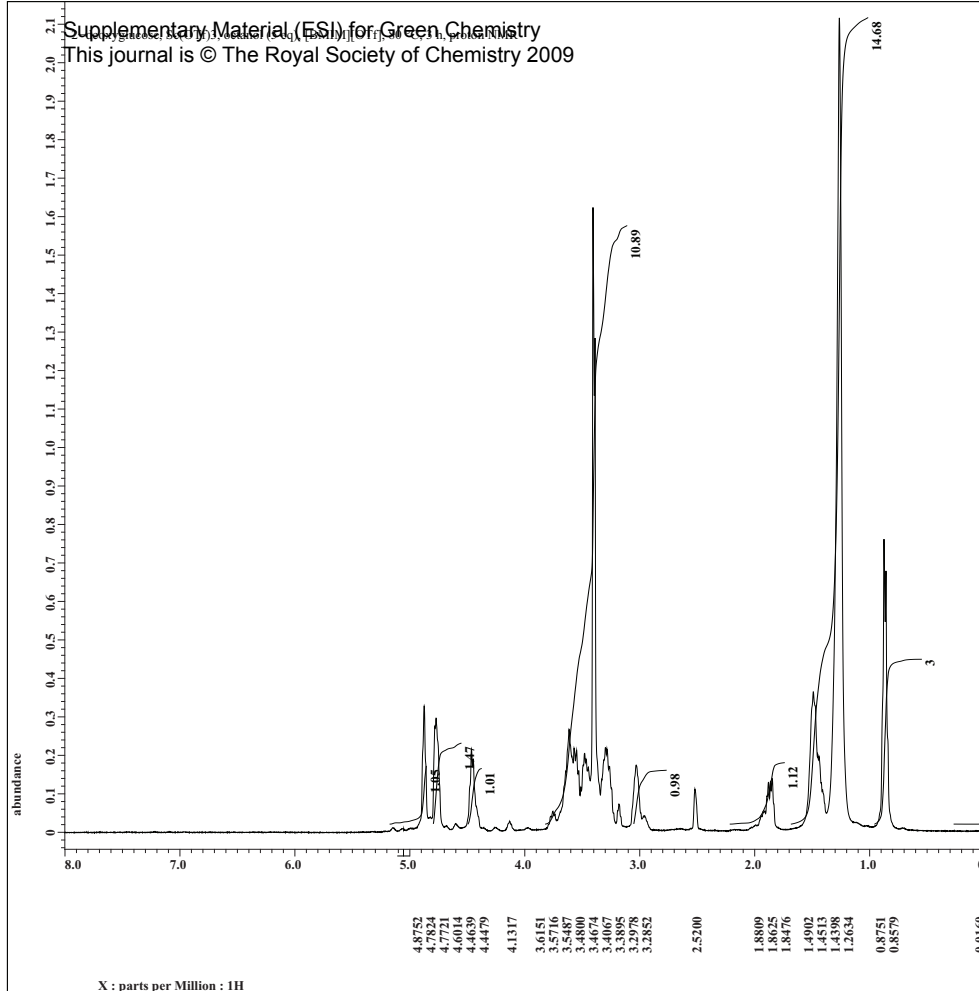
Field strength = 9.389766 [T] (400 [MHz])
X acq duration = 2.18365952 [s]
X domain = 1H
X freq = 399.78219838 [MHz]
X offset = 5 [ppm]
X points = 16384
X prescans = 1
X resolution = 0.45794685 [Hz]
X sweep = 7.5030012 [kHz]
Irr domain = 1H
Irr freq = 399.78219838 [MHz]
Irr offset = 5 [ppm]
Tri domain = 1H
Tri freq = 399.78219838 [MHz]
Tri offset = 5 [ppm]
Clipped = FALSE
Mod return = 1
Scans = 16
Total scans = 16

X 90 width = 15 [us]
X acq time = 2.18365952 [s]
X angle = 45 [deg]
X attn = 0 [dB]
X pulse = 7.5 [us]
Irr mode = Off
Tri mode = Off
Dante presat = FALSE
Initial wait = 1 [s]
Recvr gain = 28
Relaxation delay = 4 [s]
Repetition time = 6.18365952 [s]
Temp get = 20.5 [dC]

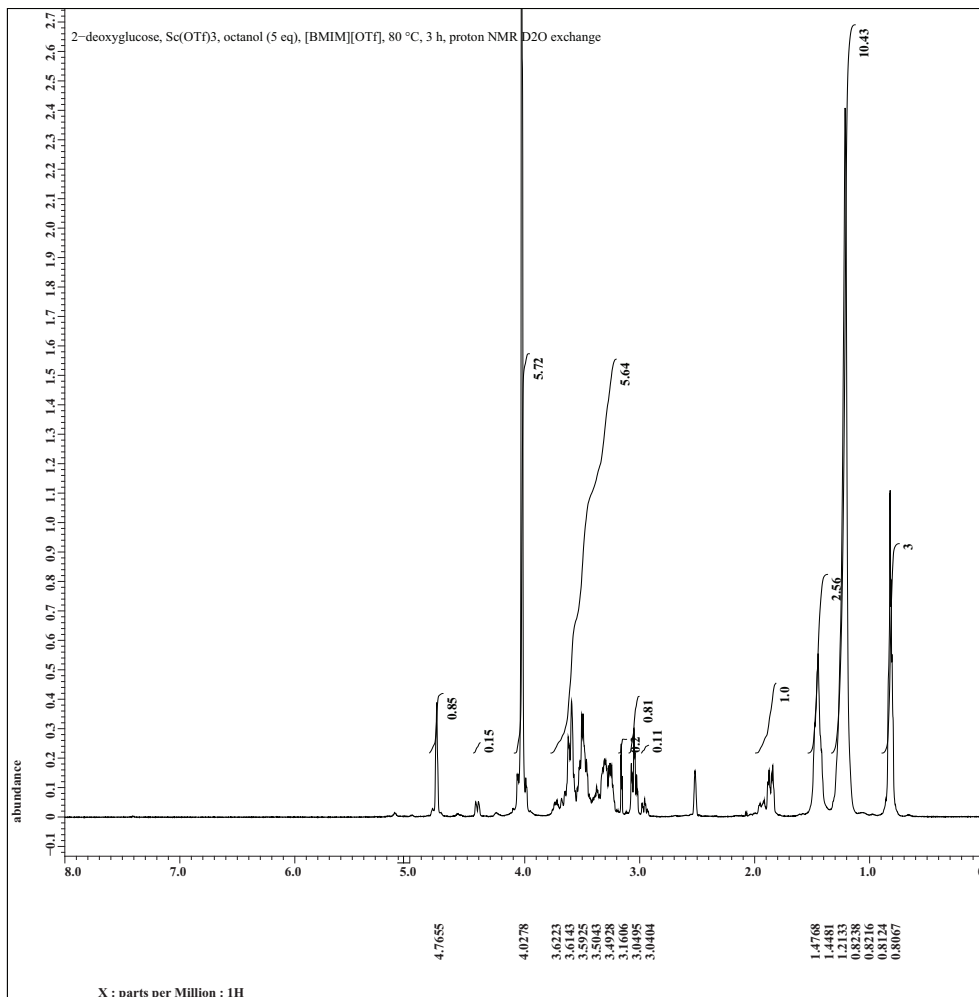


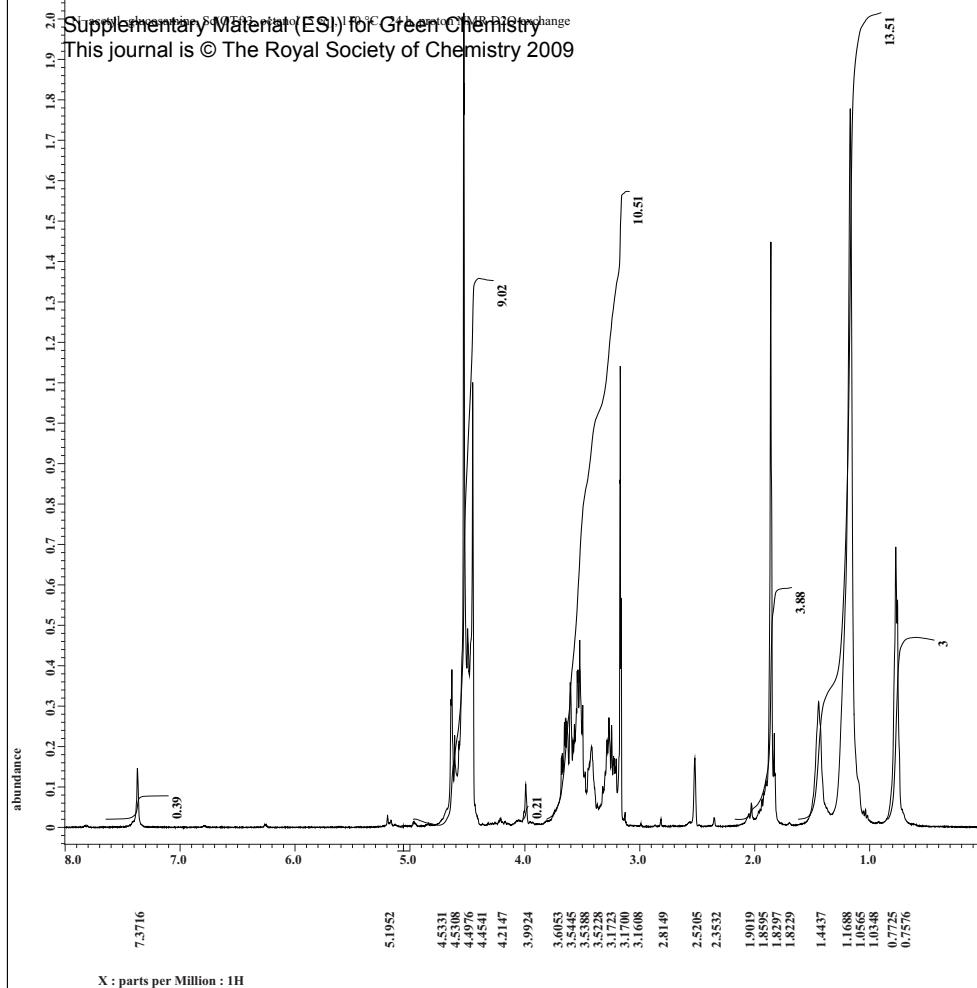


Filename = gsrr204f15a33_PROTON-
Author = delta
Experiment = single pulse.ex2
Sample id = gsrr204f15a33
Solvent = DMSO-D6
Creation time = 27-OCT-2008 11:00:17
Revision time = 23-FEB-2009 15:40:44
Current time = 23-FEB-2009 15:40:58
Comment = 50
Data format = 1D COMPLEX
Dim size = 13107
Dim title = 1H
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2 NMR
Field strength = 9.389766 [T] (400 [MHz])
X acq duration = 2.18365952 [s]
X domain = 1H
X freq = 399.78219838 [MHz]
X offset = 5 [ppm]
X points = 16384
X prescans = 1
X resolution = 0.45794685 [Hz]
X sweep = 7.5030012 [kHz]
Irr domain = 1H
Irr freq = 399.78219838 [MHz]
Irr offset = 5 [ppm]
Tri domain = 1H
Tri freq = 399.78219838 [MHz]
Tri offset = 5 [ppm]
Clipped = FALSE
Mod return = 1
Scans = 16
Total scans = 16
X 90 width = 15 [us]
X acq time = 2.18365952 [s]
X angle = 45 [deg]
X attn = 0 [dB]
X pulse = 7.5 [us]
Irr mode = Off
Tri mode = Off
Dante presat = FALSE
Initial wait = 1 [s]
Recvr gain = 32
Relaxation delay = 1 [s]
Repetition time = 3.18365952 [s]
Temp_get = 19 [°C]



Filename = gsrr204f15a33etd2o_PR
Author = delta
Experiment = single pulse.ex2
Sample id = gsrr204f15a33etd2o
Solvent = DMSO-D6
Creation time = 30-OCT-2008 19:27:15
Revision time = 23-FEB-2009 15:48:12
Current time = 23-FEB-2009 15:49:09
Comment = 20
Data format = 1D COMPLEX
Dim size = 13107
Dim title = 1H
Dim units = [ppm]
Dimensions = X
Site = ECX 400
Spectrometer = DELTA2 NMR
Field strength = 9.389766 [T] (400 [MHz])
X acq duration = 2.18365952 [s]
X domain = 1H
X freq = 399.78219838 [MHz]
X offset = 5 [ppm]
X points = 16384
X prescans = 1
X resolution = 0.45794685 [Hz]
X sweep = 7.5030012 [kHz]
Irr domain = 1H
Irr freq = 399.78219838 [MHz]
Irr offset = 5 [ppm]
Tri domain = 1H
Tri freq = 399.78219838 [MHz]
Tri offset = 5 [ppm]
Clipped = FALSE
Mod return = 1
Scans = 16
Total scans = 16
X 90 width = 15 [us]
X acq time = 2.18365952 [s]
X angle = 45 [deg]
X attn = 0 [dB]
X pulse = 7.5 [us]
Irr mode = Off
Tri mode = Off
Dante presat = FALSE
Initial wait = 1 [s]
Recvr gain = 32
Relaxation delay = 4 [s]
Repetition time = 6.18365952 [s]
Temp_get = 20.2 [°C]





Filename = gsrr199f59a73etd2o_PR
 Author = delta
 Experiment = single pulse.ex2
 Sample id = gsrr199f59a73etd2o
 Solvent = DMSO-D6
 Creation time = 24-OCT-2008 10:32:15
 Revision time = 24-FEB-2009 15:17:04
 Current time = 24-FEB-2009 15:17:26

Comment = 50
 Data format = 1D COMPLEX
 Dim size = 13107
 Dim title = 1H
 Dim units = [ppm]
 Dimensions = X
 Site = ECX 400
 Spectrometer = DELTA2 NMR

Field strength = 9.389766 [T] (400 [MHz])
 X acq duration = 2.18365952 [s]
 X domain = 1H
 X freq = 399.78219838 [MHz]
 X offset = 5 [ppm]
 X points = 16384
 X prescans = 1
 X resolution = 0.45794685 [Hz]
 X sweep = 7.5030012 [kHz]
 Irr domain = 1H
 Irr freq = 399.78219838 [MHz]
 Irr offset = 5 [ppm]
 Tri domain = 1H
 Tri freq = 399.78219838 [MHz]
 Tri offset = 5 [ppm]
 Clipped = FALSE
 Mod return = 1
 Scans = 16
 Total scans = 16

X 90 width = 15 [us]
 X acq time = 2.18365952 [s]
 X angle = 45 [deg]
 X attn = 0 [dB]
 X pulse = 7.5 [us]
 Irr mode = Off
 Tri mode = Off
 Dante presat = FALSE
 Initial wait = 1 [s]
 Recvr gain = 34
 Relaxation delay = 1 [s]
 Repetition time = 3.18365952 [s]
 Temp get = 20.4 [dC]