Supporting Information

Bio-based Synthesis of Cyclopentane-1,3-diamine and its Application in Bifunctional Monomers for Poly-condensation

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Contents:

S1. Materials and Methods

S1.1 Chemicals:

NOTE: All chemicals were used as received from the supplier without purification, unless stated otherwise (see section S1.2).

Ruthenium on carbon (5wt%, Strem Chemicals), Rhodium on carbon (5wt%, Sigma Aldrich), Palladium on carbon (10wt%, Sigma Aldrich), Platinum on carbon (5wt%, Sigma Aldrich), Ruthenium on alumina (5wt%, Sigma Aldrich), Heterogeneous Palladium Catalysts Kit I (Sigma Aldrich), Iridium on carbon (1wt% Sigma Aldrich), Shvo catalyst (98%, Strem Chemicals), Ru-BINAP-$(OAc)_2$ (98% Sigma Aldrich), Ru-BINAP-(Cl)-cymene (98% Sigma Aldrich), (Ir-COD-Cl)$_2$ (97% Sigma Aldrich), triphenylphosphine (99% Sigma Aldrich), 1,3-bis(diphenylphosphaneyl)propane (97%, Sigma Aldrich), Josiphos SL-J002-1 (>97%, Sigma Aldrich), Zinc powder (60 – 200 μm mesh, 99+%, Sigma Aldrich), Furfuryl alcohol (97%, Acros), Cyclopentane-1,3-dione (95%, Matrix Chemicals Inc.), benzylamine (99%, Sigma Aldrich), Ammonia in dry methanol (7M, Sigma Aldrich), Hydroxylamine hydrochloride (98%), Hydrazine (50 – 60% in water, Sigma Aldrich), Acetic acid (>99.0%, VWR), *cis*-cyclopentane-1,3-diamine (98.5%, Matrix Chemicals Inc.), *trans*-cyclopentane-1,3-diamine (98.5%, Matrix Chemicals Inc.), γ-butyrolactone (99.5%, Fischer Scientific), γ-valerolactone (99%, Sigma Aldrich), γ-decalactone (98%, Sigma Aldrich), 5-Hydroxymethylfurfural (>98.5%, Matrix Chemicals Inc.), Diethyl adipate (>99%, Sigma Aldrich), Dimethyl isophthalate (99%, Sigma Aldrich), toluene-2,4-diisocyanate (95%, Sigma Aldrich), hexamethylene-1,6-diisocyanate (>99%, Sigma Aldrich), Methanol (HPLC grade, Biosolve) Ethanol (96%, VWR), isopropanol (HPLC grade, Biosolve), *s*-butanol (99%, Acros), *t*-butanol (≥99.0%, Sigma Aldrich), Ethyl acetate (HPLC grade, Biosolve), Cyclopentyl methyl ether (99%, Sigma Aldrich), Methyl *tert*-butyl ether (99%, Sigma Aldrich) 1,4-Dioxane (99.8%, Acros), Tetrahydrofuran (HPLC grade, Biosolve), 2-Methyltetrahydrofuran (>99%, dry, Sigma Aldrich), Toluene (HPLC grade, Biosolve), Heptane (99.5%, Sigma Aldrich), (Chloroform (HPLC grade, Biosolve), DMSO (>99%, dry, Sigma Aldrich). Naphthalene (≥99%, Alfa Aesar), Acetonitrile (LCMS grade, Biosolve), Celite® R566 (Acros), Silica (60 – 200 μm mesh, Acros), Hexane (HPLC grade, Biosolve), deuterium oxide (99.96%, Cambridge Isotope Laboratories), deuterated chloroform (99.96% Cambridge Isotope Laboratories), deuterated dimethyl sulfoxide (>99.7%, Fisher Scientific).

S1.2 Decomposition study of CPDX:

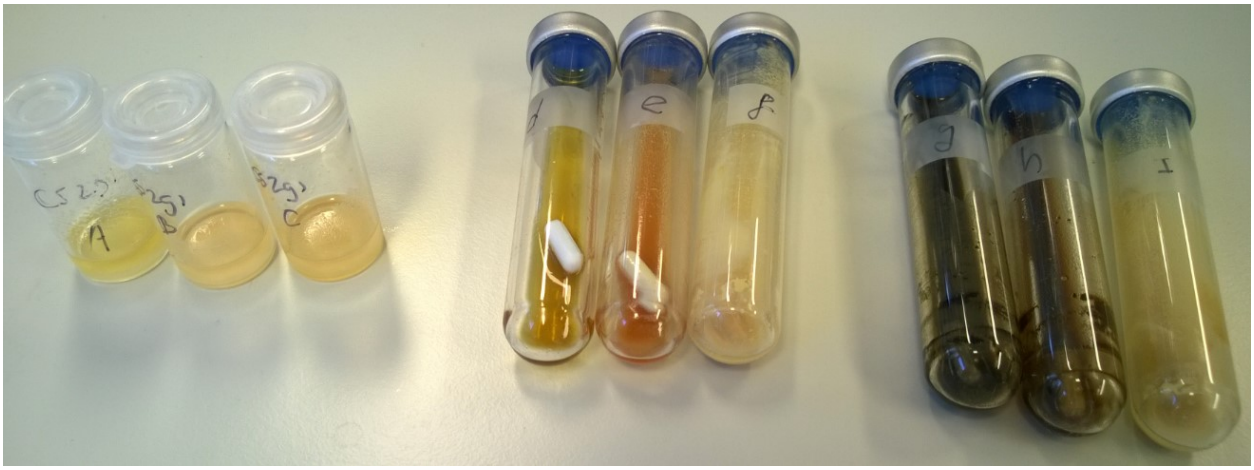


Figure S1.3.1: Photograph of decomposition studies for CPDX. Left triplet: 20°C; Middle triplet: 40°C; Right triplet: 60°C. Each triplet contains the solvents MeOH, THF, and toluene from left to right.

S1.3 Overview of attempted hydrogenation reactions to yield CPDA:

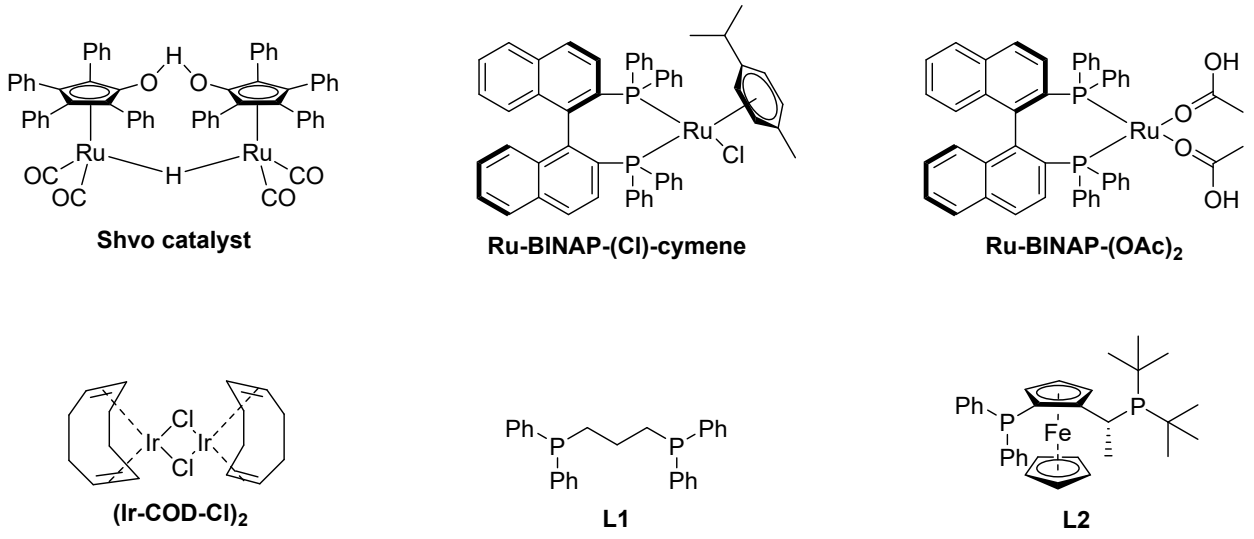


Figure S1.3.1: Tested homogeneous catalysts and ligands for the hydrogenation towards CPDA.

Table S1.3.1: List of attempted hydrogenation reactions of CPDI to afford CPDA:

Catalyst (Cat. / Sub.)	Additive	Solvent	P_{H2} (bar)	T (°C)	t (h)	Stirring (rpm)	Result
Shvo cat. (1%)	-	iPrOH	60	100	20	300	partial hydrog.
Shvo cat. (1%)	-	iPrOH	55	80	20	300	no reaction
Ru/C (10 wt%)	-	MeOH	50	80	20	300	no reaction
Rh/C (10 wt%)	-	MeOH	50	80	20	300	no reaction
Pd/C (10 wt%)	-	MeOH	50	80	20	300	no reaction
Pt/C (10 wt%)	-	MeOH	50	80	20	300	no reaction
Ru/C (10 wt%)	-	iPrOH	50	100	18	300	partial hydrog. + side products
Rh/C (10 wt%)	-	iPrOH	50	100	18	300	side products
Pd/C (10 wt%)	-	iPrOH	50	100	18	300	partial hydrog. + side products
Pt/C (10 wt%)	-	iPrOH	50	100	18	300	side products
Pd/C (10 wt%)	-	water	50	100	18	300	partial hydrog. + side products
Pd/C (10 wt%)	-	EtOAc	50	100	18	300	partial hydrog. + side products
Pd/C (10 wt%)	-	THF	50	100	18	300	partial hydrog. + side products
Pd/C (10 wt%)	-	toluene	50	100	18	300	partial hydrog. + side products
Ru-BINAP-$(OAc)_2$	-	THF	50	50	22	300	no reaction
Ru-BINAP-(Cl)-cymene	-	THF	50	50	22	300	no reaction
$\{Ir(COD)Cl\}_2$	-	EtOAc	50	50	3	300	no reaction
$\{Ir(COD)Cl\}_2$	PPh_3 (4 eq)	EtOAc	50	50	3	300	no reaction
$\{Ir(COD)Cl\}_2$	**L1** (2 eq)	EtOAc	50	50	3	300	no reaction
$\{Ir(COD)Cl\}_2$	**L2** (2 eq)	EtOAc	50	50	3	300	no reaction
$\{Ir(COD)Cl\}_2$	-	MeOH	50	50	20	300	no reaction
$\{Ir(COD)Cl\}_2$	PPh_3 (4 eq)	MeOH	50	50	20	300	no reaction
$\{Ir(COD)Cl\}_2$	**L1** (2 eq)	MeOH	50	50	20	300	no reaction
$\{Ir(COD)Cl\}_2$	**L2** (2 eq)	MeOH	50	50	20	300	no reaction
$\{Ir(COD)Cl\}_2$	I_2 (8 eq)	MeOH	50	50	20	300	no reaction
$\{Ir(COD)Cl\}_2$	PPh_3 (4 eq) + I_2 (8 eq)	MeOH	50	50	20	300	no reaction
$\{Ir(COD)Cl\}_2$	**L1** (2 eq) + I_2 (8 eq)	MeOH	50	50	20	300	no reaction
$\{Ir(COD)Cl\}_2$	**L2** (2 eq) + I_2 (8 eq)	MeOH	50	50	20	300	no reaction

Table S1.3.2: List of attempted hydrogenation reactions of CPDX to afford CPDA:

Catalyst (Cat. / Sub.)	Additive	Solvent	P_{H2} (bar)	T (°C)	t (h)	Stirring (rpm)	Result
Zn	HCl	water	N/A	20	24	500	no reaction
Zn	AcOH	water	N/A	20	24	500	no reaction
Shvo cat. (5%)	-	MeOH	55	80	20	300	no reaction
Ru/C (10 wt%)	-	MeOH	30	80	20	300	decomposition
Rh/C (10 wt%)	-	MeOH	30	80	20	300	decomposition + trace product
Pd/C (10 wt%)	-	MeOH	30	80	20	300	decomposition
Pt/C (10 wt%)	-	MeOH	30	80	20	300	decomposition
Ru/C (10 wt%)	-	THF	50	20	20	300	no reaction
Rh/C (10 wt%)	-	THF	50	20	20	300	no reaction
Pd/C (10 wt%)	-	THF	50	20	20	300	decomposition
Pt/C (10 wt%)	-	THF	50	20	20	300	decomposition
Ru/C (10 wt%)	-	THF	50	40	20	300	decomposition
Rh/C (10 wt%)	-	THF	50	40	20	300	product
Pd/C (10 wt%)	-	THF	50	40	20	300	decomposition
Pt/C (10 wt%)	-	THF	50	40	20	300	decomposition
Ru/C (10 wt%)	-	THF	50	40	20	300	decomposition
Rh/C (10 wt%)	-	THF	50	40	20	300	product
Pd/C (10 wt%)	-	THF	50	40	20	300	decomposition
Pt/C (10 wt%)	-	THF	50	40	20	300	decomposition
Ru/Al_2O_3 (10 wt%)	-	THF	50	40	20	300	no reaction
Pt/Al_2O_3 (10 wt%)	-	THF	50	40	20	300	decomposition
Pd/Al_2O_3 (10 wt%)	-	THF	50	40	20	300	decomposition
$Pd/CaCO_3$ (10 wt%)	-	THF	50	40	20	300	decomposition
$Pd/BaSO_4$ (10 wt%)	-	THF	50	40	20	300	decomposition
$Pd(OH)_2/C$ (10 wt%)	-	THF	50	40	20	300	decomposition
Ir/C (20 wt%)	-	THF	50	40	20	300	no reaction
Rh/C (10 wt%)	-	2-MeTHF	50	40	20	300	product
Rh/C (10 wt%)	-	MTBE	50	40	20	300	product
Rh/C (10 wt%)	-	CPME	50	40	20	300	product
Rh/C (10 wt%)	-	water	50	40	20	300	product
Rh/C (10 wt%)	-	MeOH	50	40	20	300	product
Rh/C (10 wt%)	-	EtOH	50	40	20	300	product
Rh/C (10 wt%)	-	iPrOH	50	40	20	300	product
Rh/C (10 wt%)	-	tBuOH	50	40	20	300	product
Rh/C (10 wt%)	-	EtOAc	50	40	20	300	product
Rh/C (10 wt%)	-	toluene	50	40	20	300	product
Rh/C (10 wt%)	-	dioxane	50	40	20	300	product
Rh/C (10 wt%)	-	dioxolane	50	40	20	300	decomposition
Rh/C (10 wt%)	-	DMSO	50	40	20	300	decomposition
Rh/C (10 wt%)	-	DMF	50	40	20	300	trace product
Rh/C (10 wt%)	-	$CHCl_3$	50	40	20	300	trace product
Rh/C (10 wt%)	7M NH_3	water	50	40	20	300	no reaction
Rh/C (10 wt%)	3.5M NH_3	water/MeOH	50	40	20	300	trace product
Rh/C (10 wt%)	-	water/MeOH	50	40	20	300	product

S2. Substrate analysis:

S2.1 NMR spectroscopy:

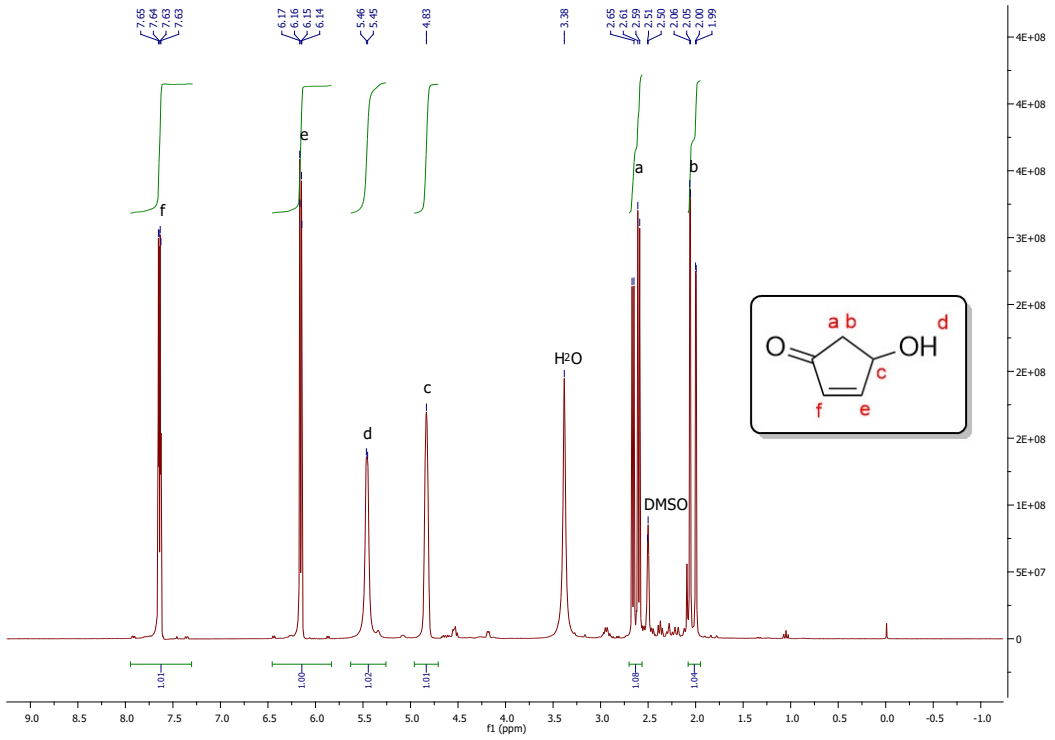


*Figure S2.1.1: [1]H-NMR spectrum of **4-HCP** in DMSO-d_6.*

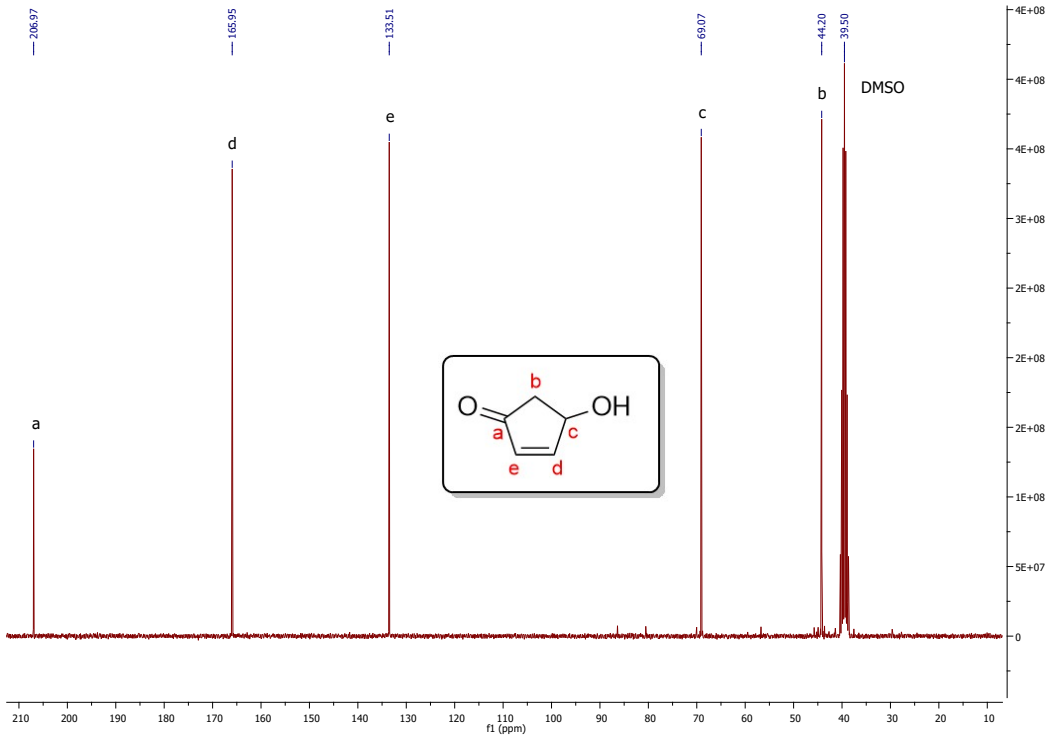


*Figure S2.1.2: [13]C-NMR spectrum of **4-HCP** in DMSO-d_6.*

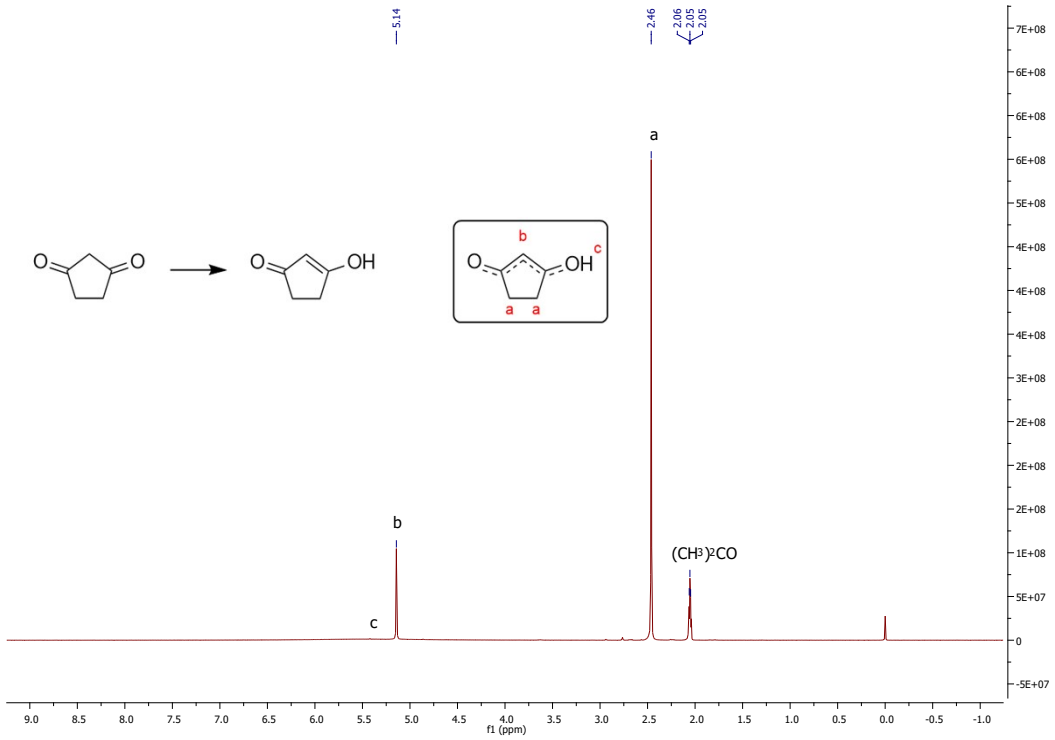


Figure S2.1.3: *^{1}H-NMR spectrum of **CPDO** in acetone-d_6.*

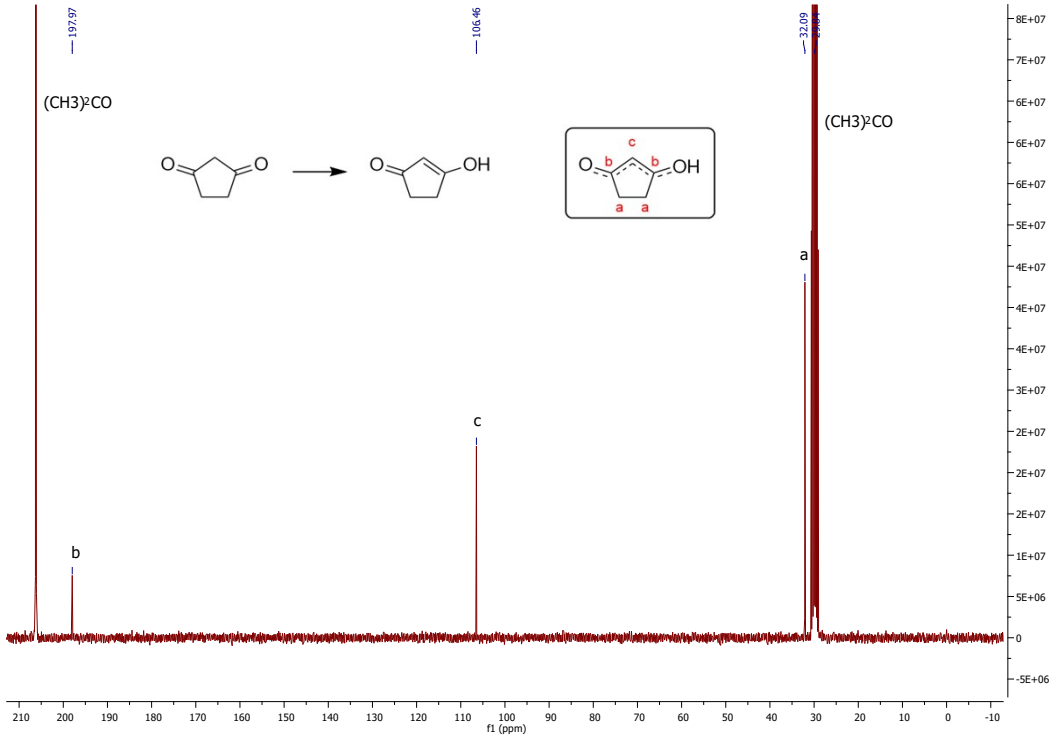


Figure S2.1.4: *^{13}C-NMR spectrum of **CPDO** in acetone-d_6.*

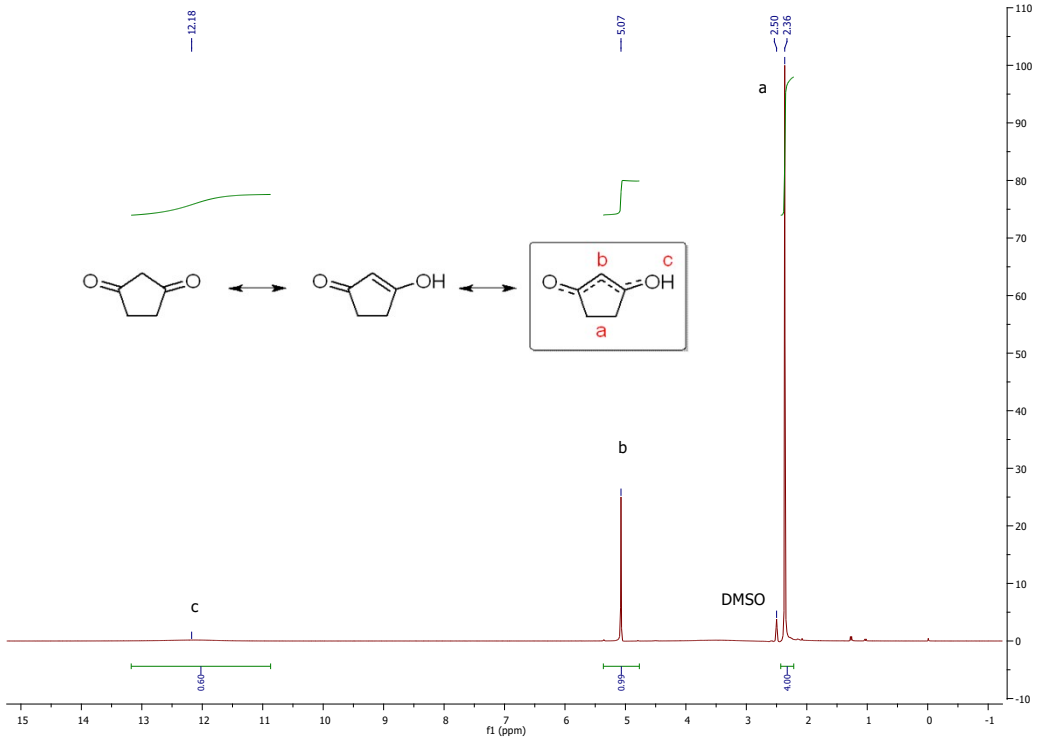


Figure S2.1.5: *^{1}H-NMR spectrum of **CPDO** in DMSO-d_6.*

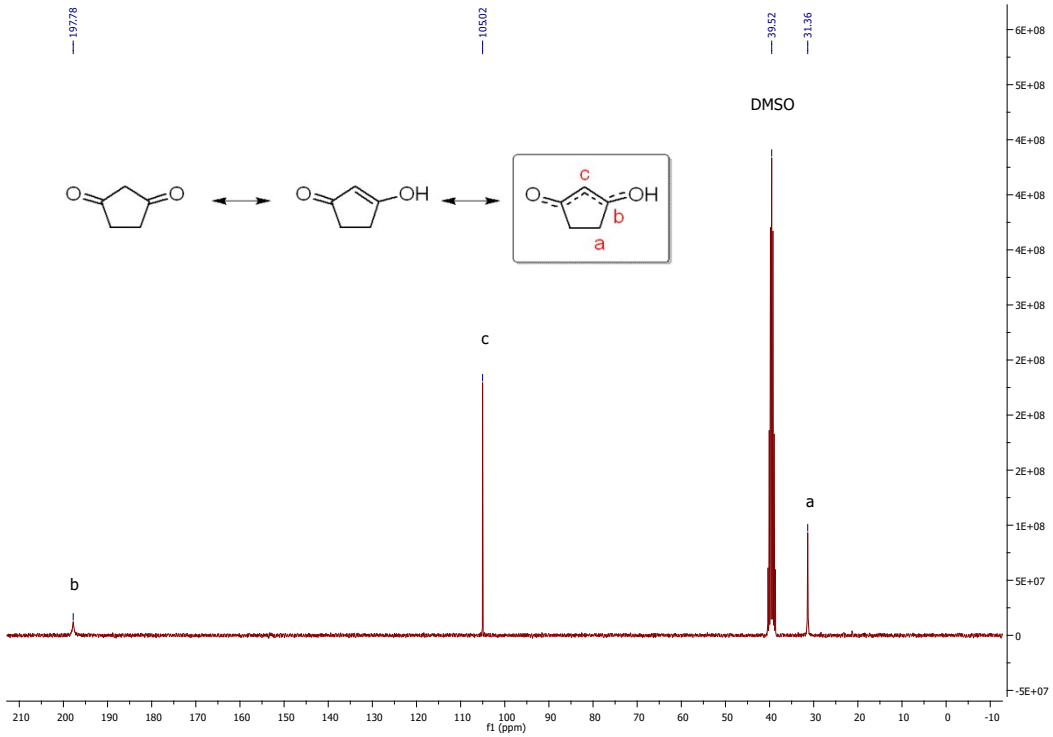


Figure S2.1.6: *^{13}C-NMR spectrum of **CPDO** in DMSO-d_6.*

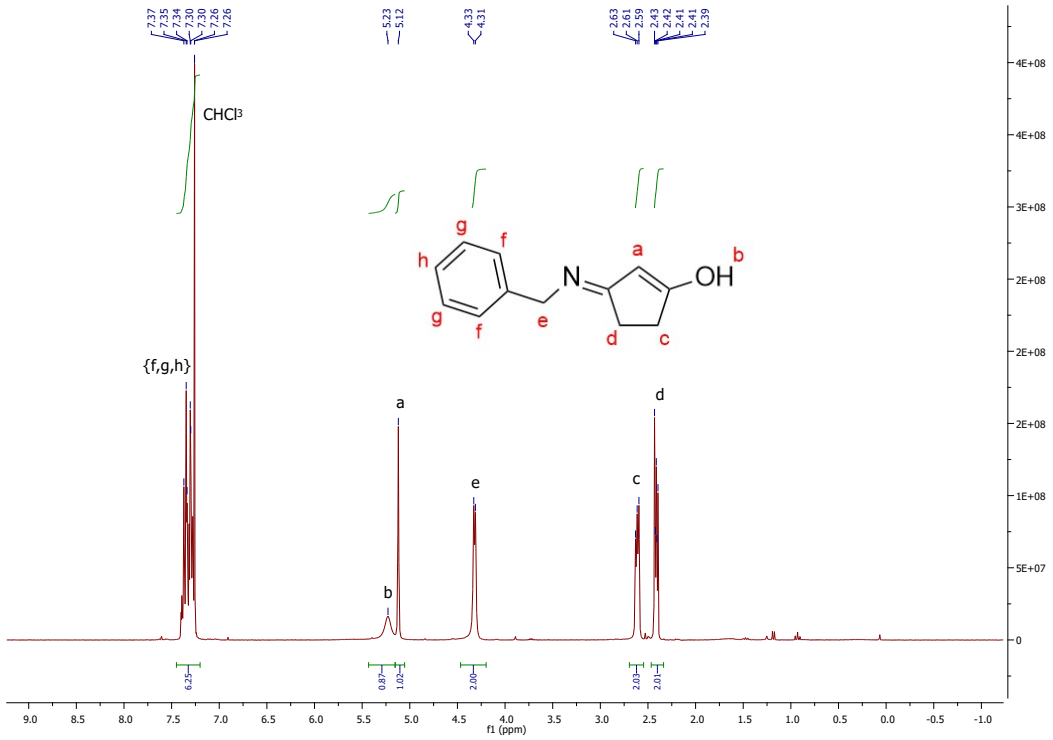


Figure 2.1.7: *^{1}H-NMR spectrum of compound **1** in $CDCl_3$.*

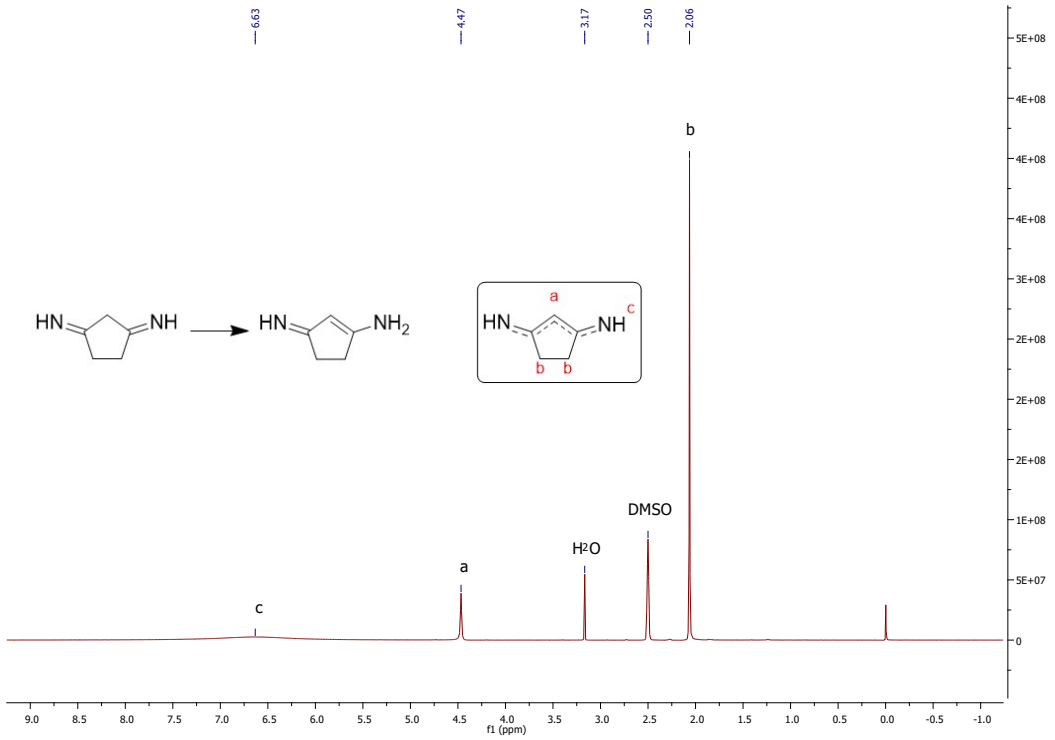


Figure S2.1.8: *[1]H-NMR spectrum of **CPDI** in DMSO-d_6.*

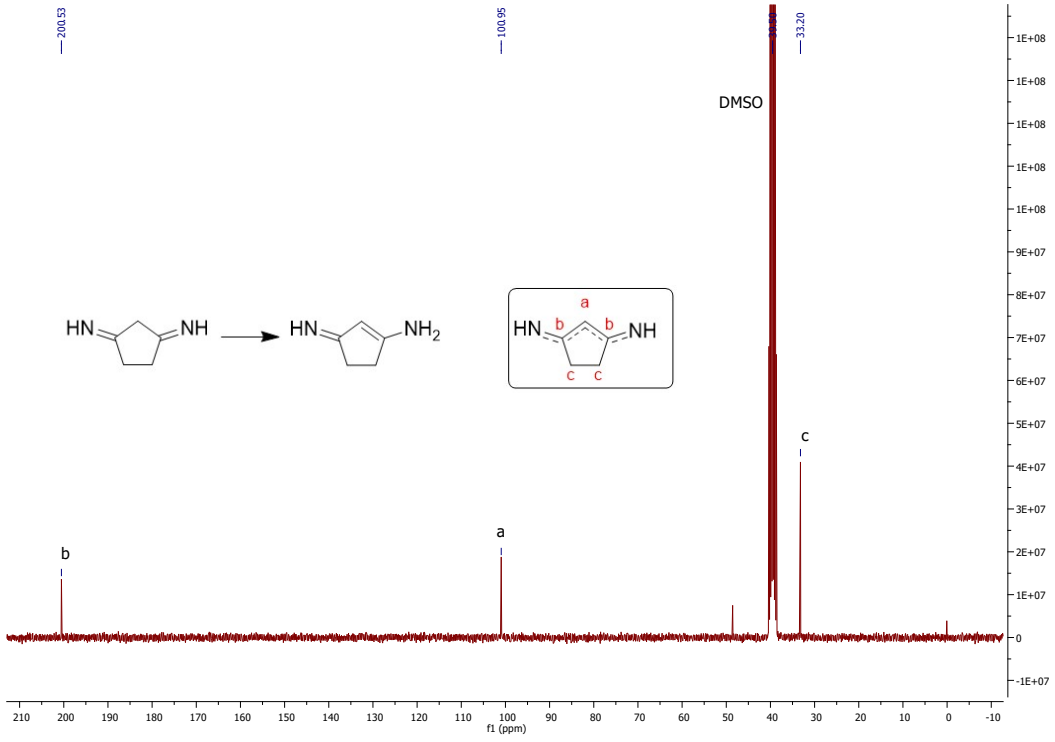


Figure S2.1.9: *[13]C-NMR spectrum of **CPDI** in DMSO-d_6.*

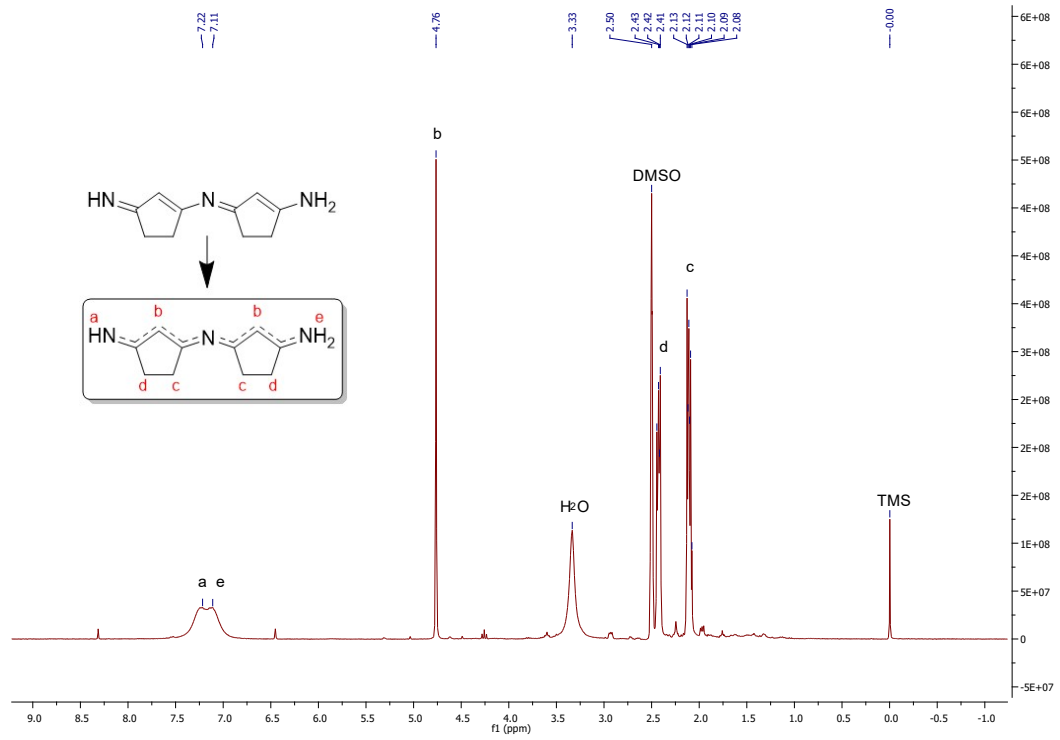


Figure 2.1.10: *^{1}H-NMR spectrum of compound **2** in DMSO-d_6.*

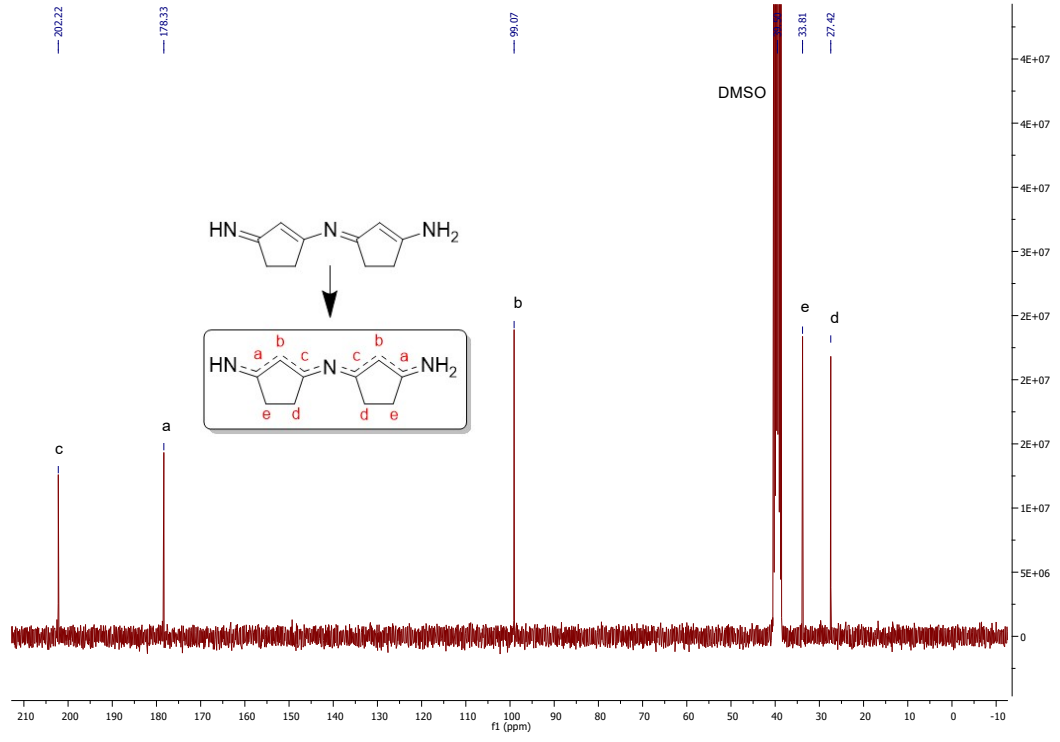


Figure 2.1.11: *^{13}C-NMR spectrum of compound **2** in DMSO-d_6.*

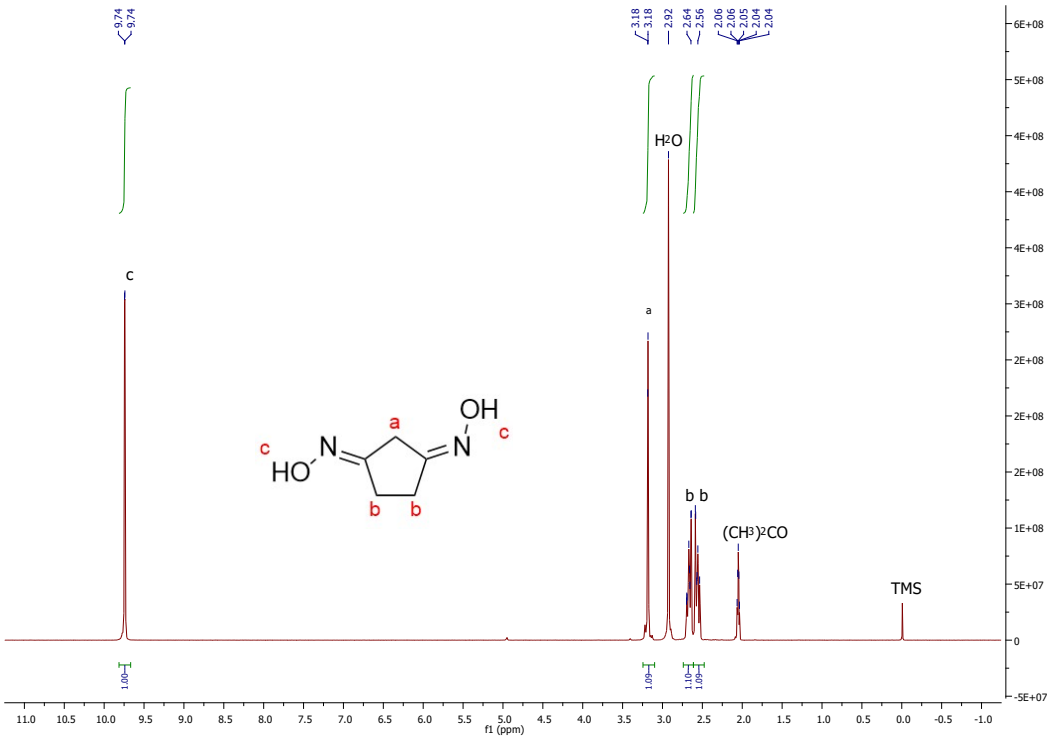


Figure S2.1.12: ^{1}*H-NMR spectrum of* ***CPDX*** *in acetone-*d_6.

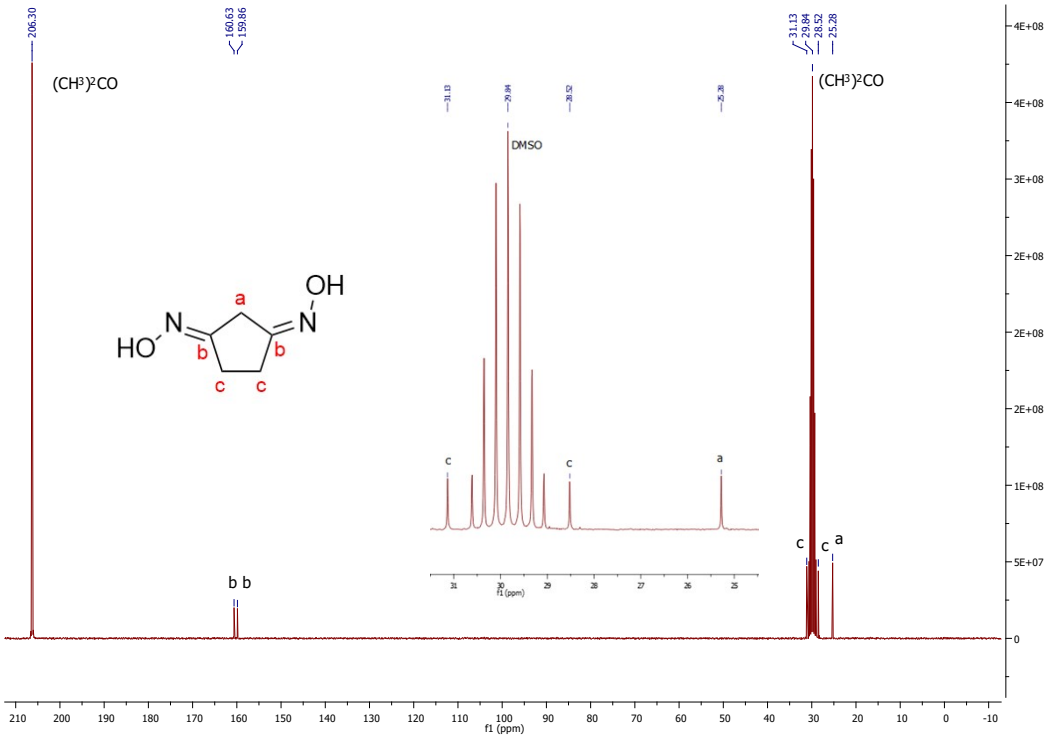


Figure S2.1.13: ^{13}*C-NMR spectrum of* ***CPDX*** *in acetone-*d_6.

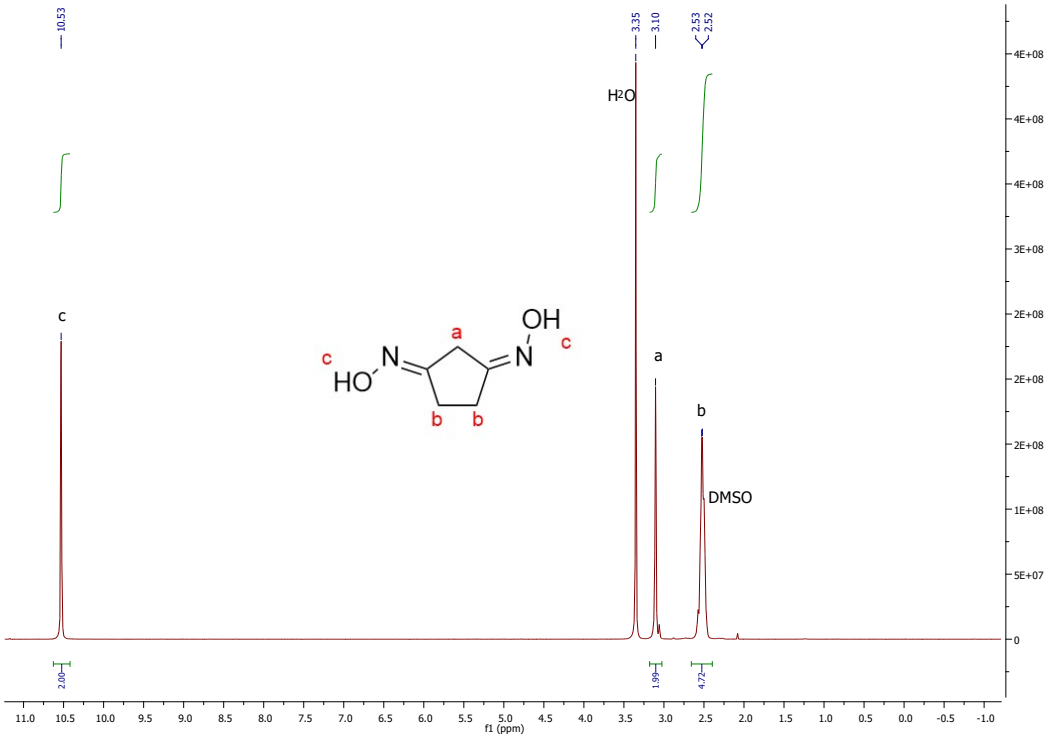


Figure S2.1.14: ^{1}*H-NMR spectrum of* ***CPDX*** *in DMSO-d*$_6$.

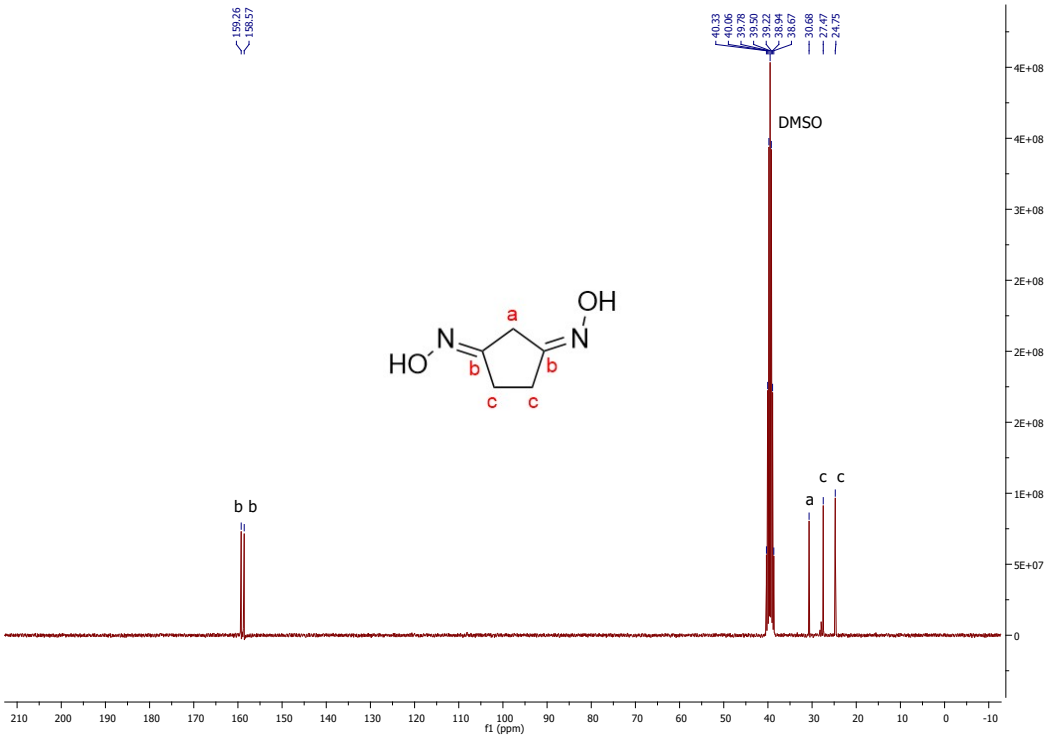


Figure S2.1.15: ^{13}*C-NMR spectrum of* ***CPDX*** *in DMSO-d*$_6$.

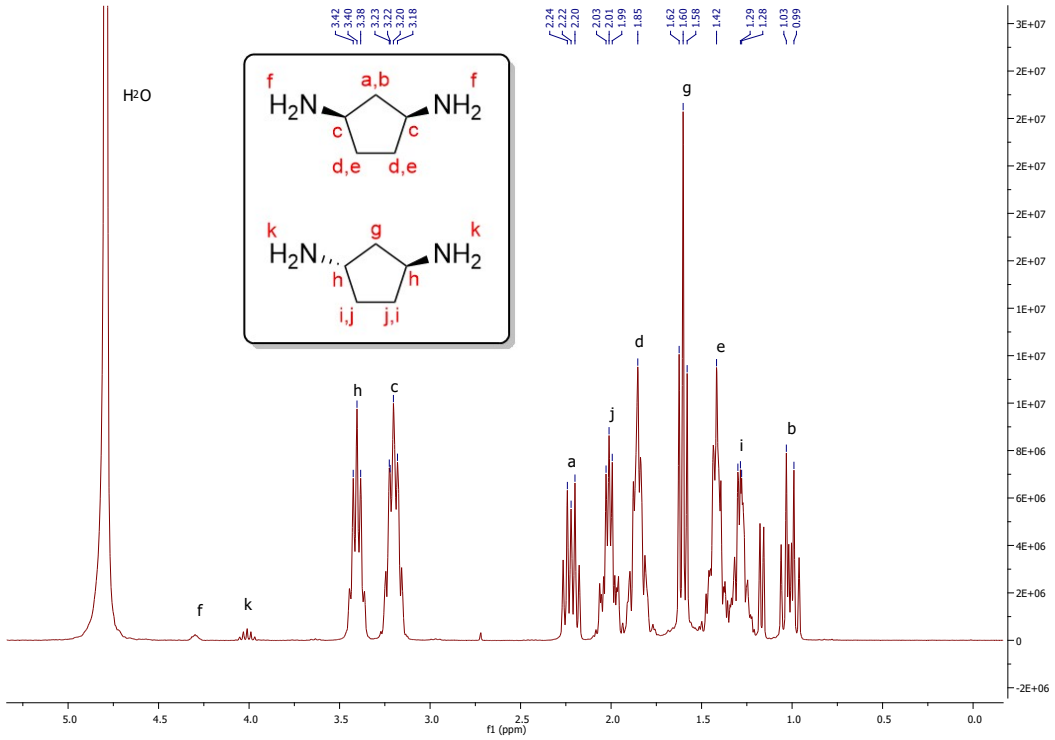


Figure S2.1.16: *^{1}H-NMR spectrum of **CPDA** (obtained from preparative hydrogenation) in D_2O.*

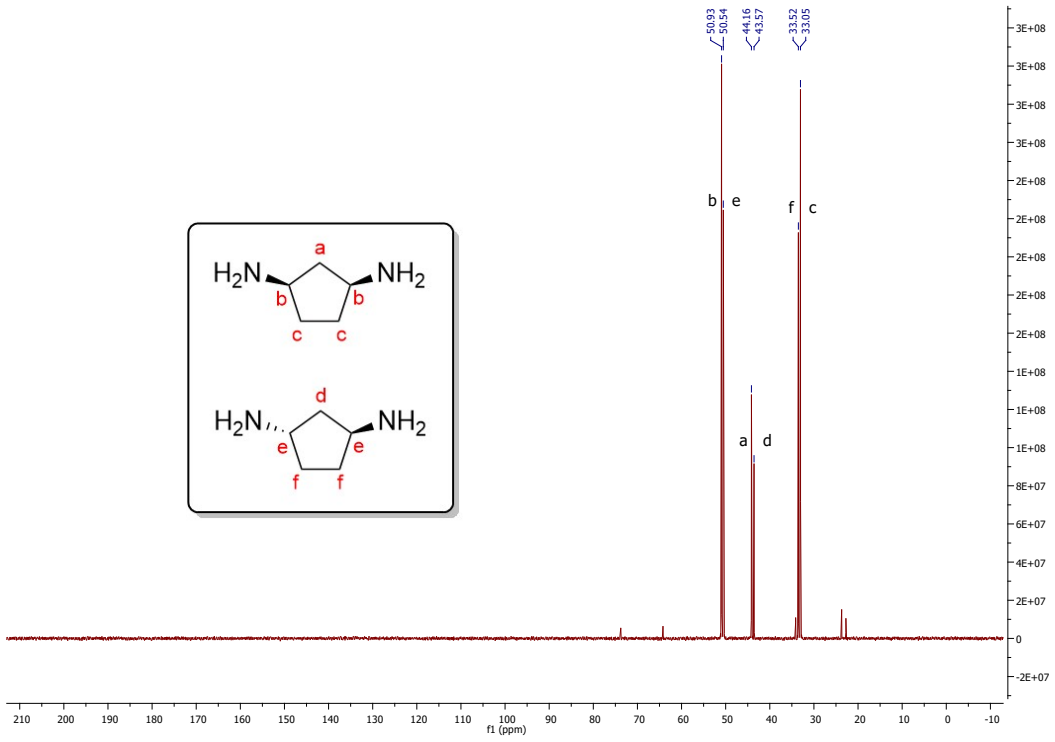


Figure S2.1.17: *^{13}C-NMR spectrum of **CPDA** (obtained from preparative hydrogenation) in D_2O.*

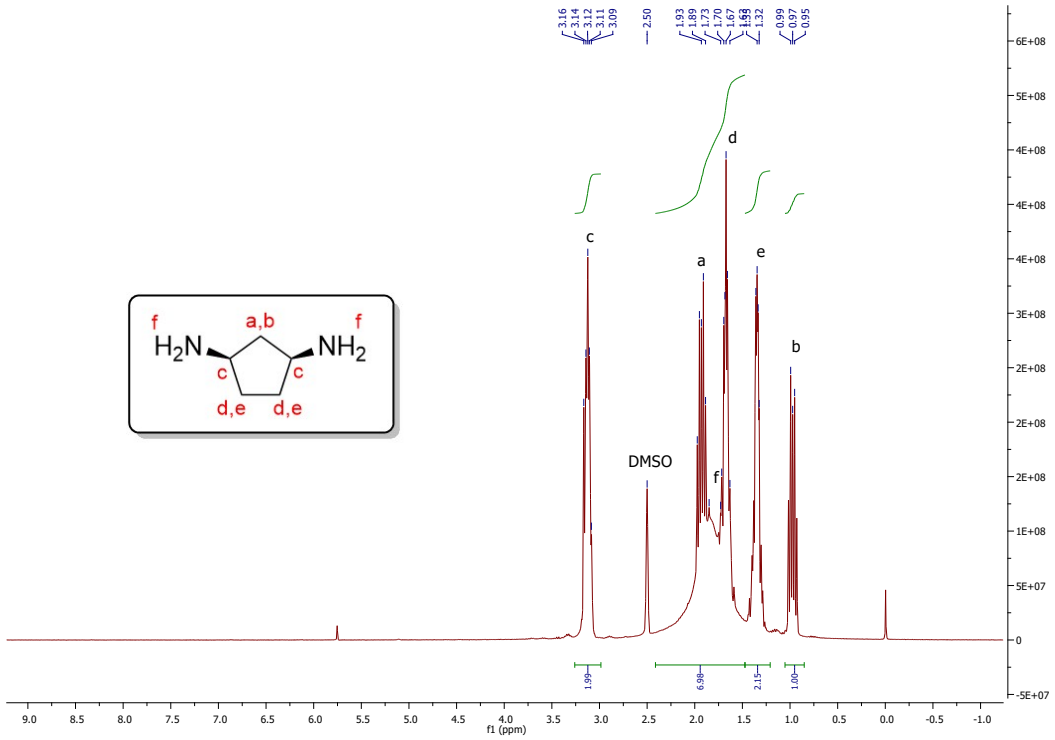


Figure S2.1.18: [1]*H-NMR spectrum of* ***cis-CPDA*** *(obtained from Matrix Chemicals) in DMSO-d6.*

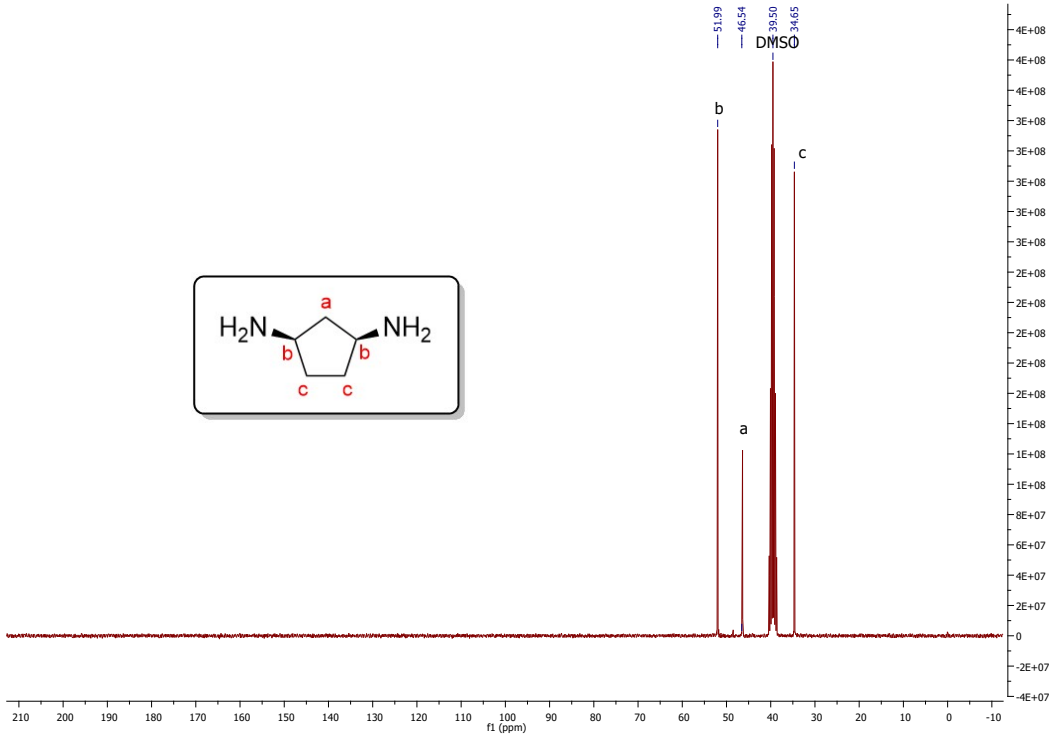


Figure S2.1.19: [13]*C-NMR spectrum of* ***cis-CPDA*** *(obtained from Matrix Chemicals) in DMSO-d6.*

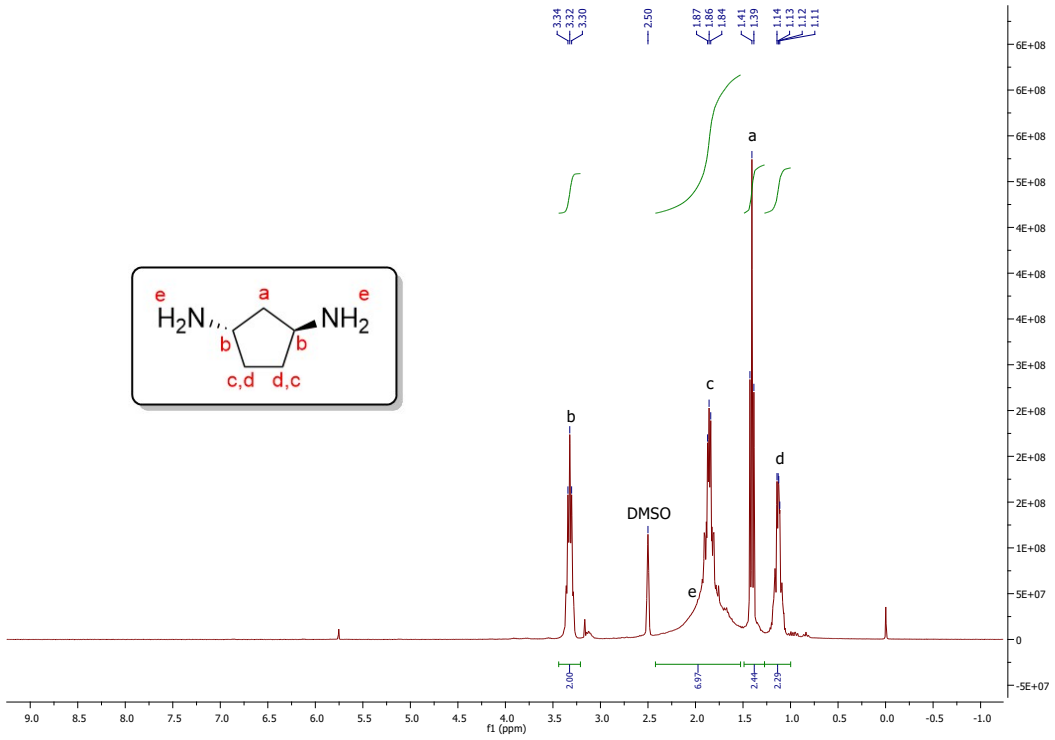


Figure S2.1.20: ^{1}*H-NMR spectrum of* ***trans-CPDA*** *(obtained from Matrix Chemicals) in DMSO-d6.*

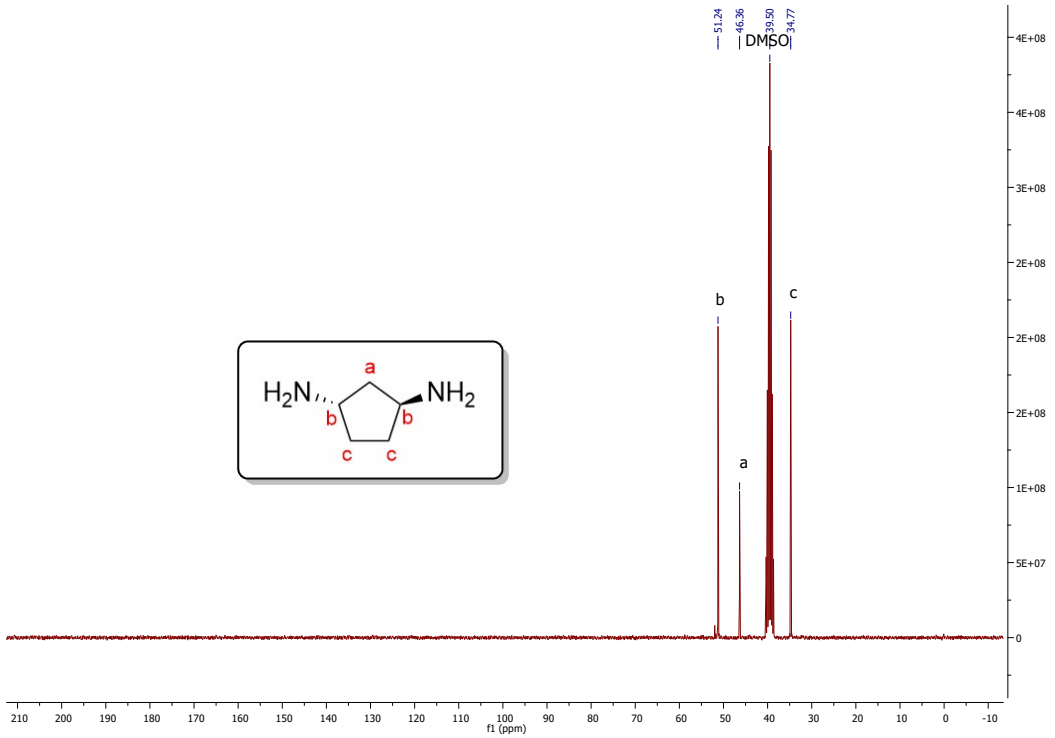


Figure S2.1.21: ^{1}*H-NMR spectrum of* ***trans-CPDA*** *(obtained from Matrix Chemicals) in DMSO-d6.*

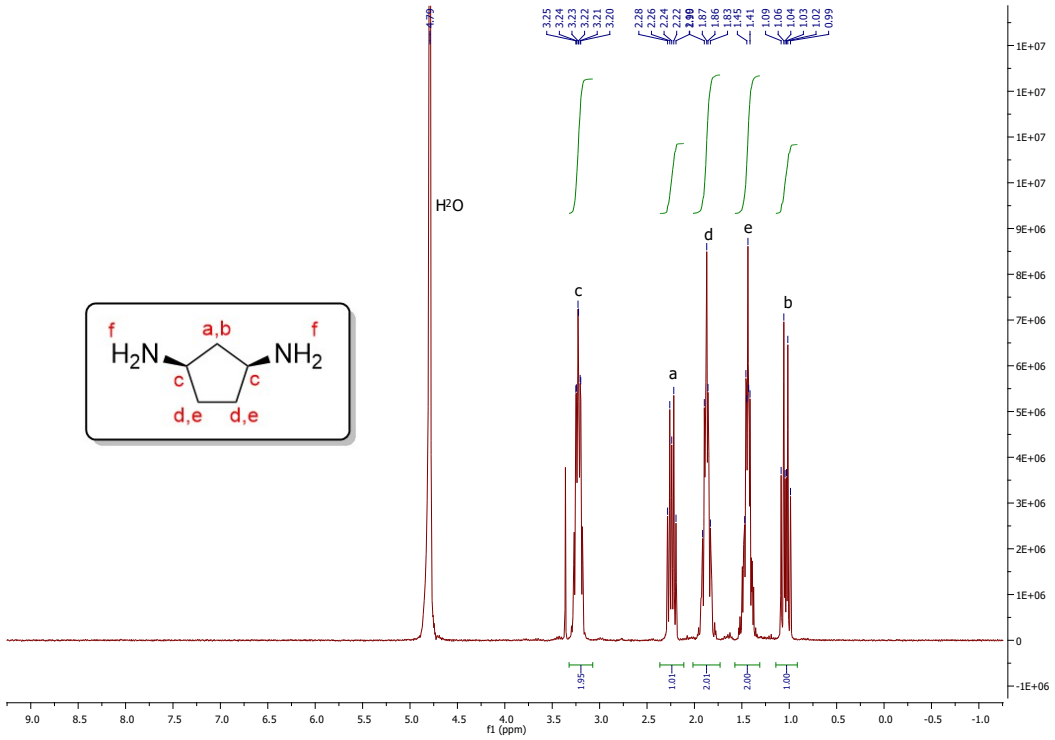


Figure S2.1.22: ^{1}*H-NMR spectrum of* ***cis-CPDA*** *(obtained from Matrix Chemicals) in* D_2O.

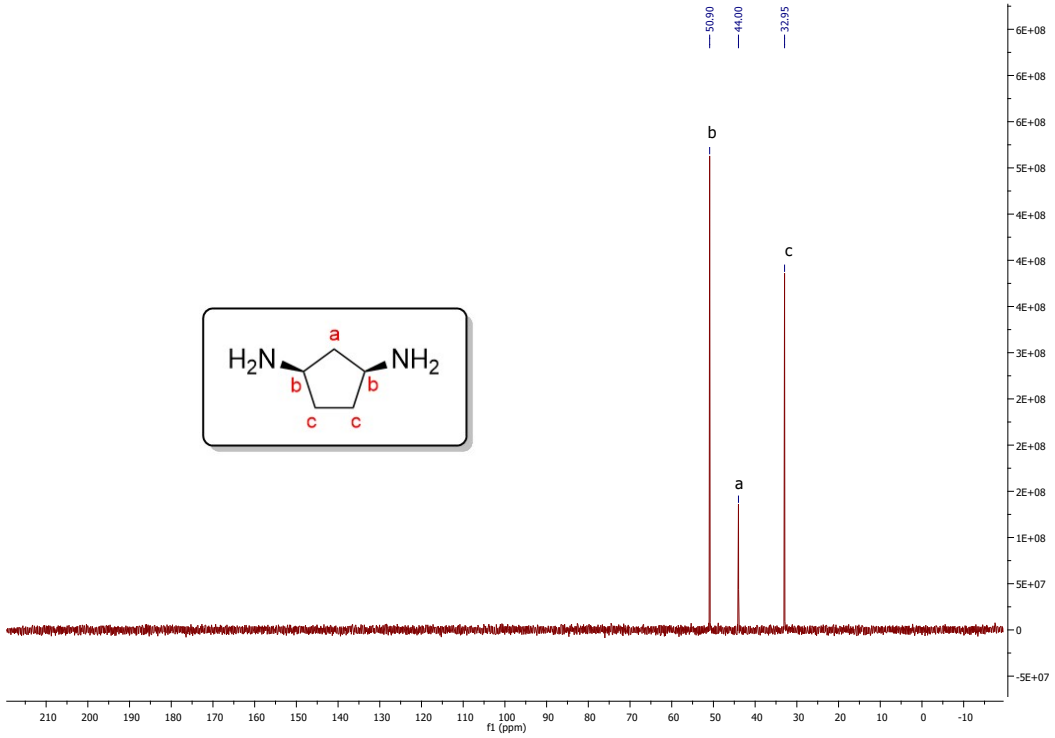


Figure S2.1.23: ^{13}*C-NMR spectrum of* ***cis-CPDA*** *(obtained from Matrix Chemicals) in* D_2O.

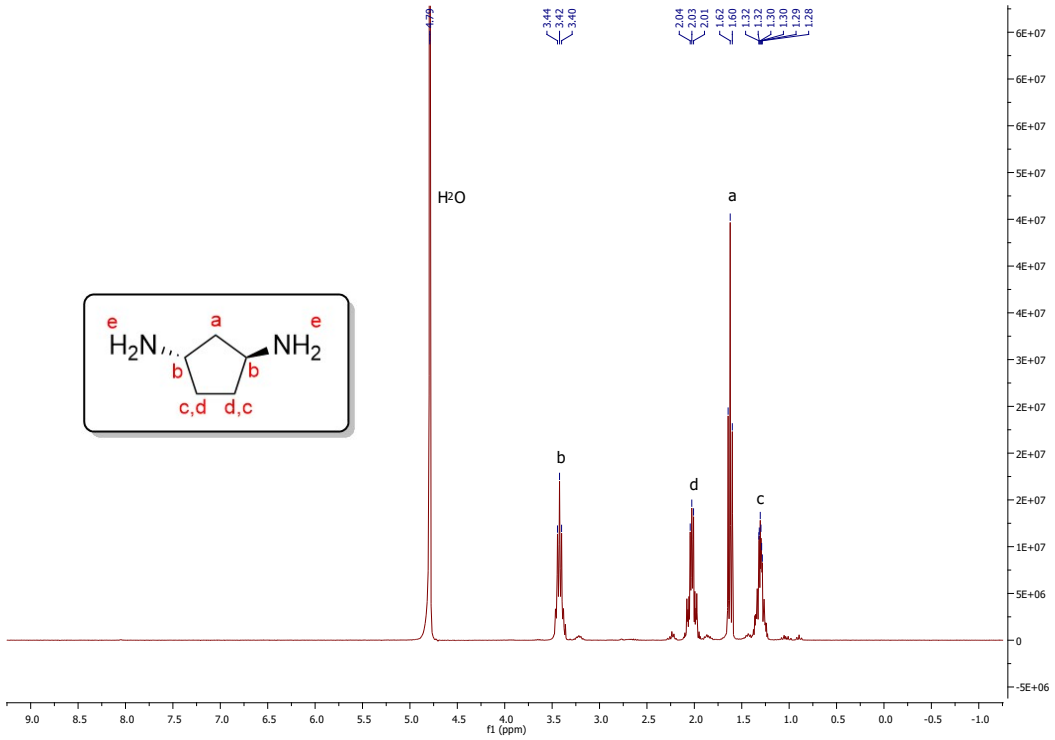


Figure S2.1.24: *[1]H-NMR spectrum of **trans-CPDA** (obtained from Matrix Chemicals) in D_2O.*

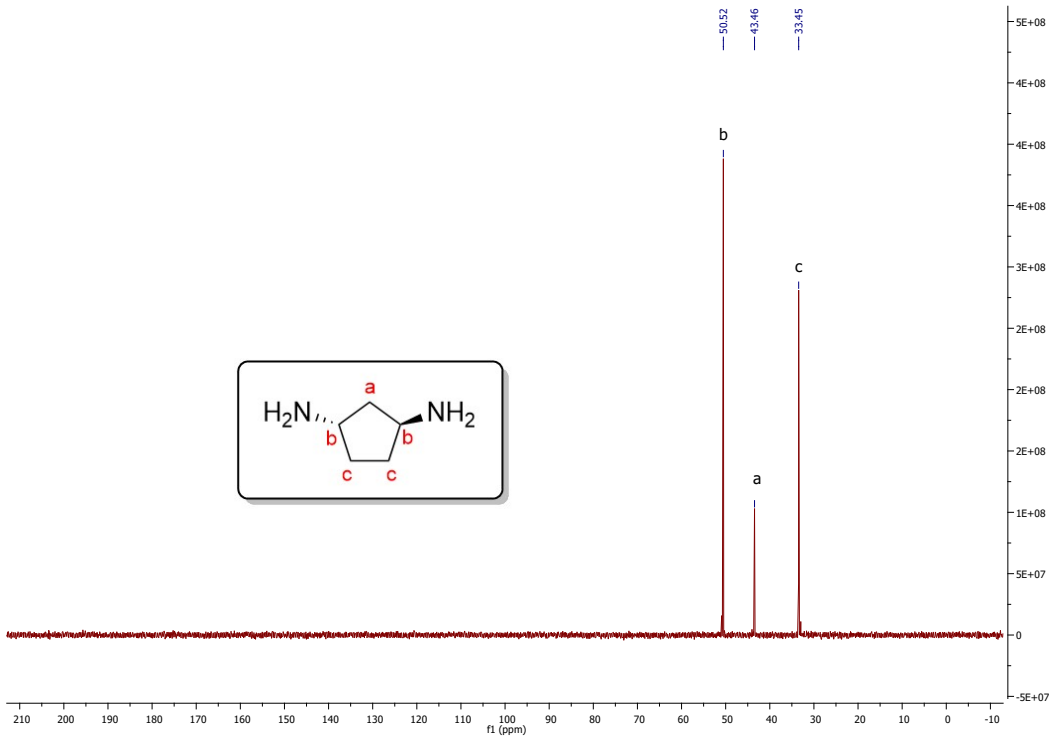


Figure S2.1.25: *[13]C-NMR spectrum of **trans-CPDA** (obtained from Matrix Chemicals) in D_2O.*

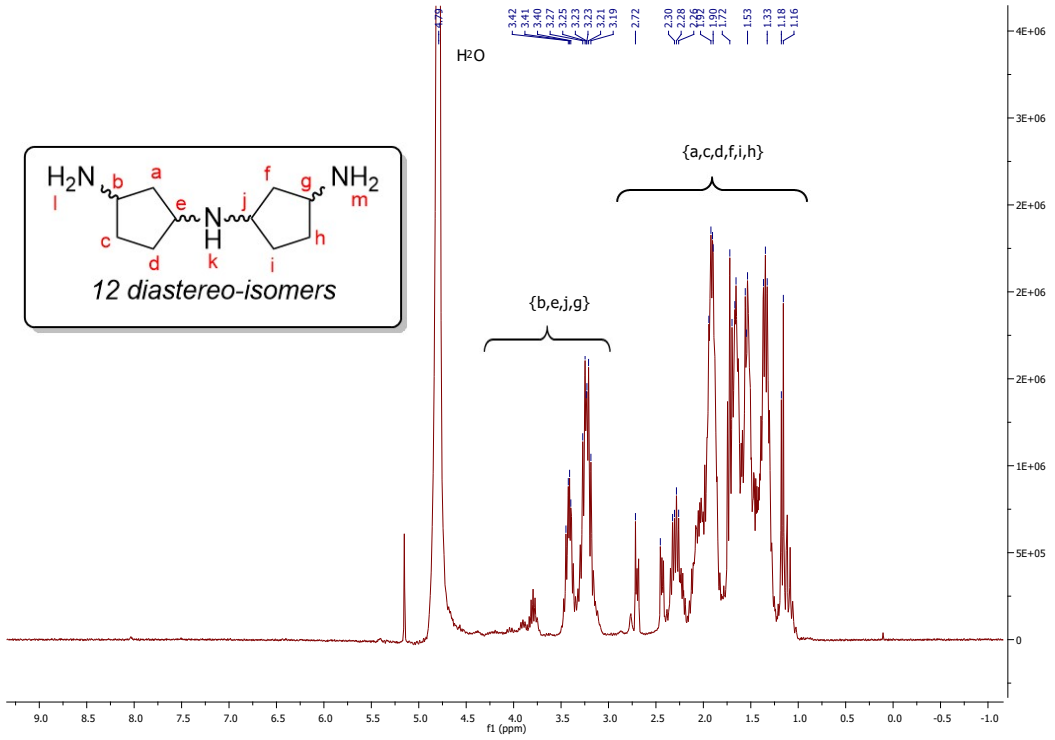


Figure S2.1.26: ^{1}*H-NMR spectrum of* ***CPDA-dimer*** *(obtained from preparative hydrogenation) in* D_2O.

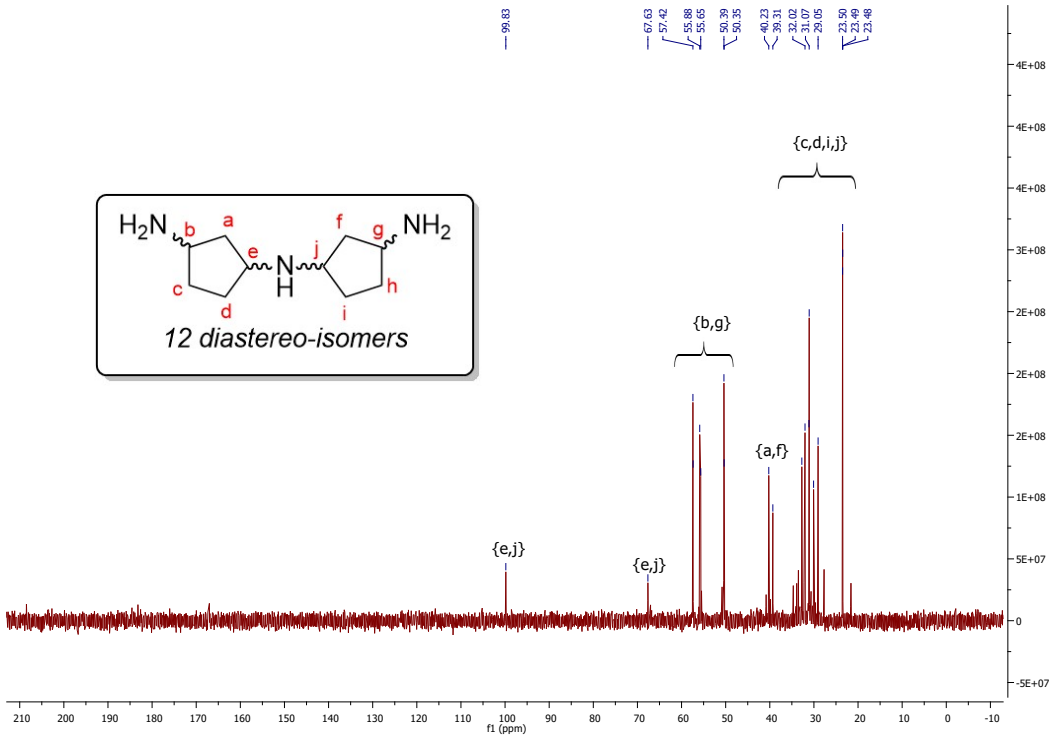


Figure S2.1.27: ^{13}*C-NMR spectrum of* ***CPDA-dimer*** *(obtained from preparative hydrogenation) in* D_2O.

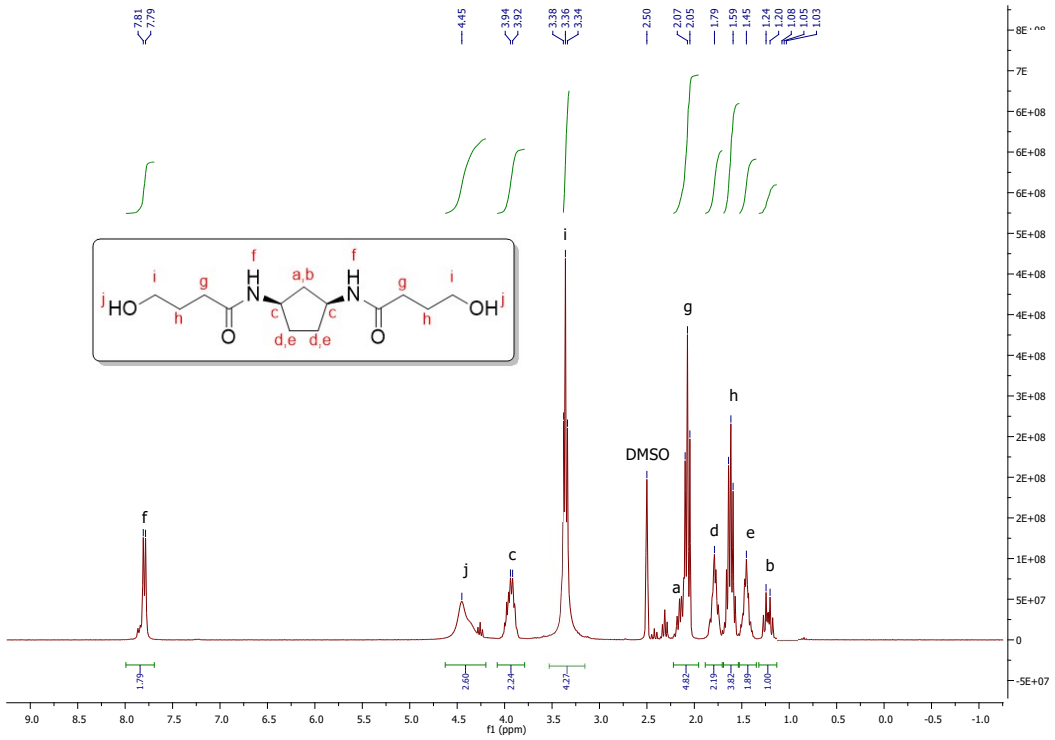


Figure S2.1.28: ^{1}*H-NMR spectrum of* ***3*** *in DMSO-d*$_6$.

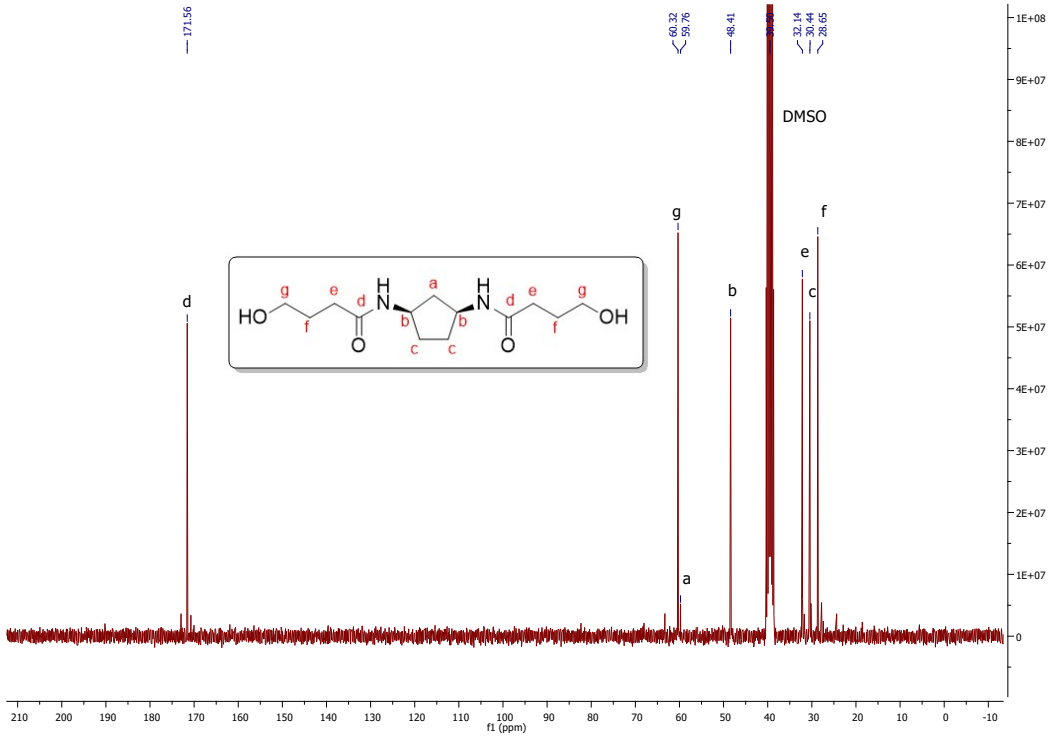


Figure S2.1.29: ^{13}*C-NMR spectrum of* ***3*** *in DMSO-d*$_6$.

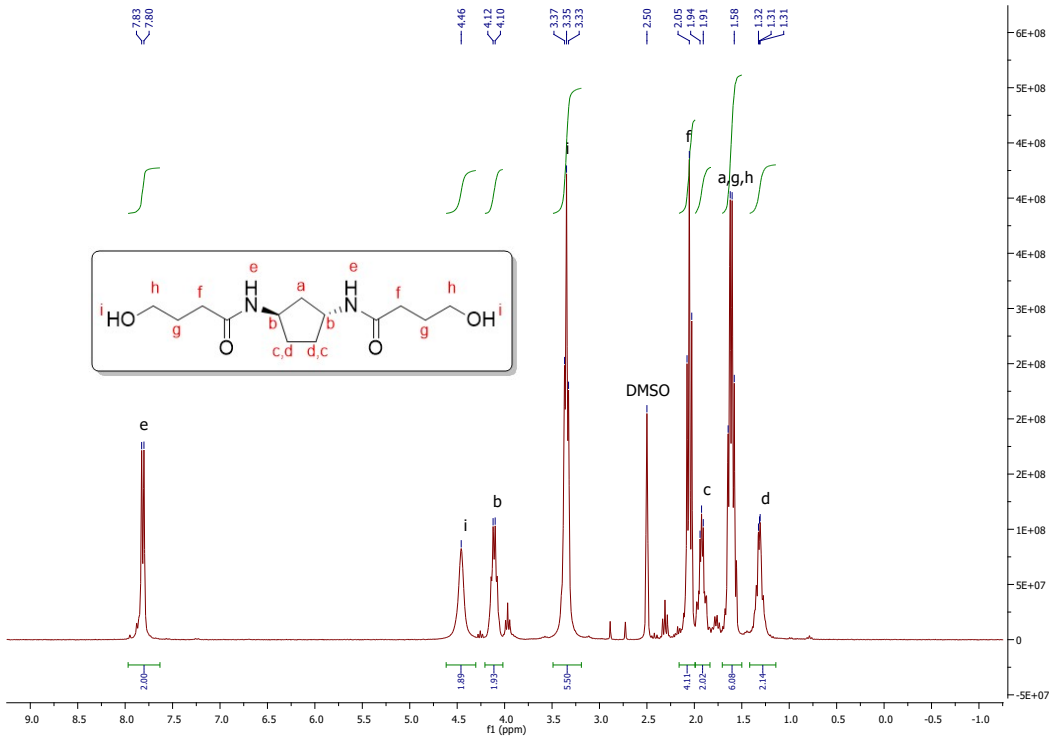


Figure S2.1.30: ^{1}*H-NMR spectrum of* ***4*** *in DMSO-d*$_6$.

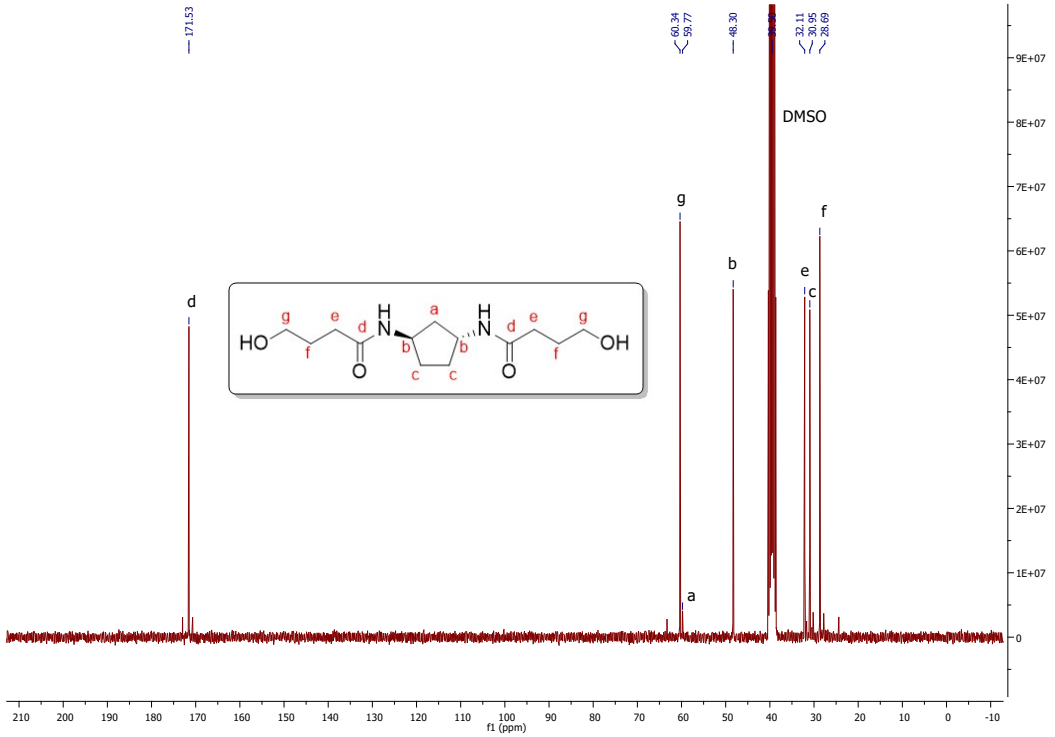


Figure S2.1.31: ^{13}*C-NMR spectrum of* ***4*** *in DMSO-d*$_6$.

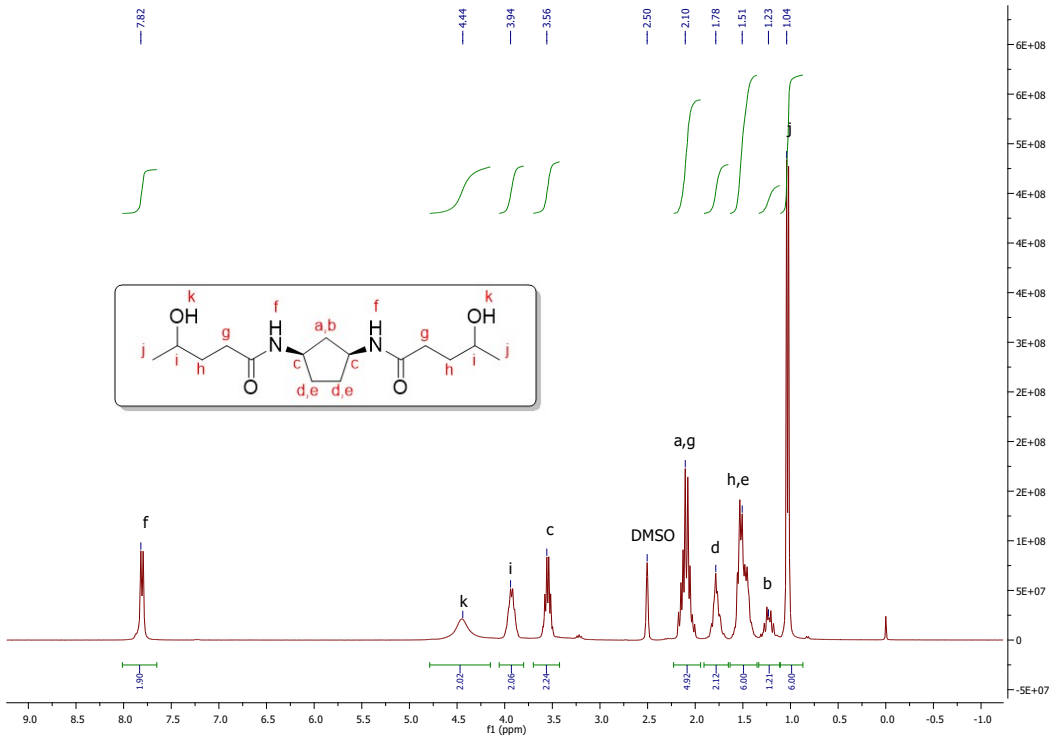


Figure S2.1.32: ^{1}*H-NMR spectrum of* ***5*** *in DMSO-d*$_6$.

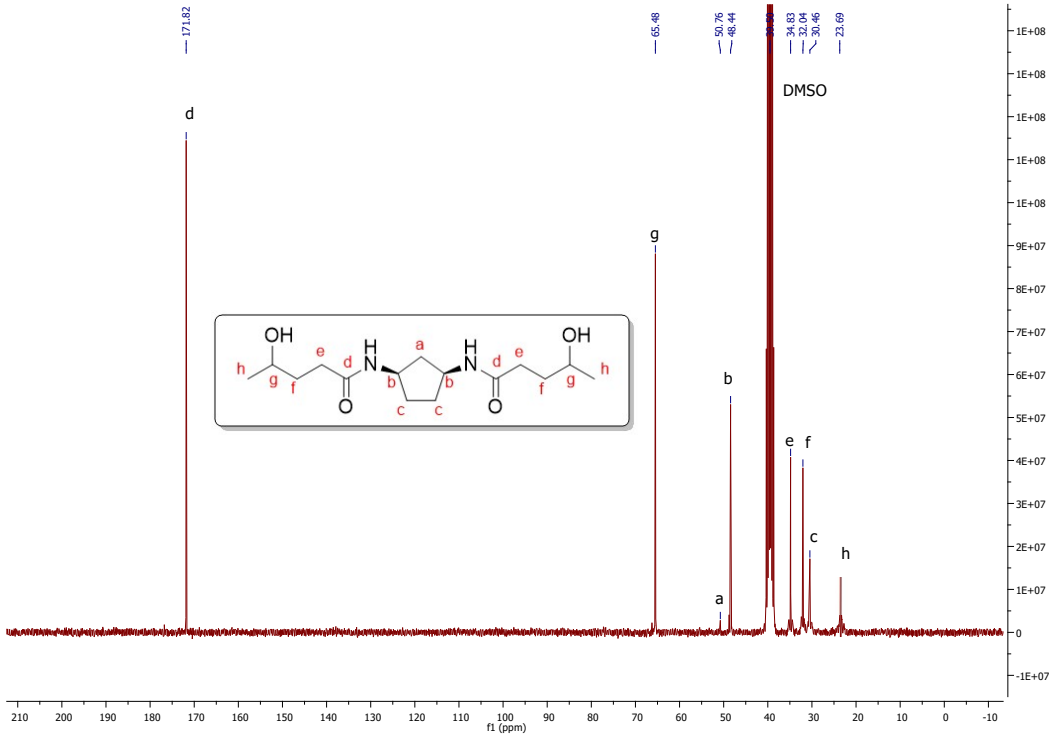


Figure S2.1.33: ^{13}*C-NMR spectrum of* ***5*** *in DMSO-d*$_6$.

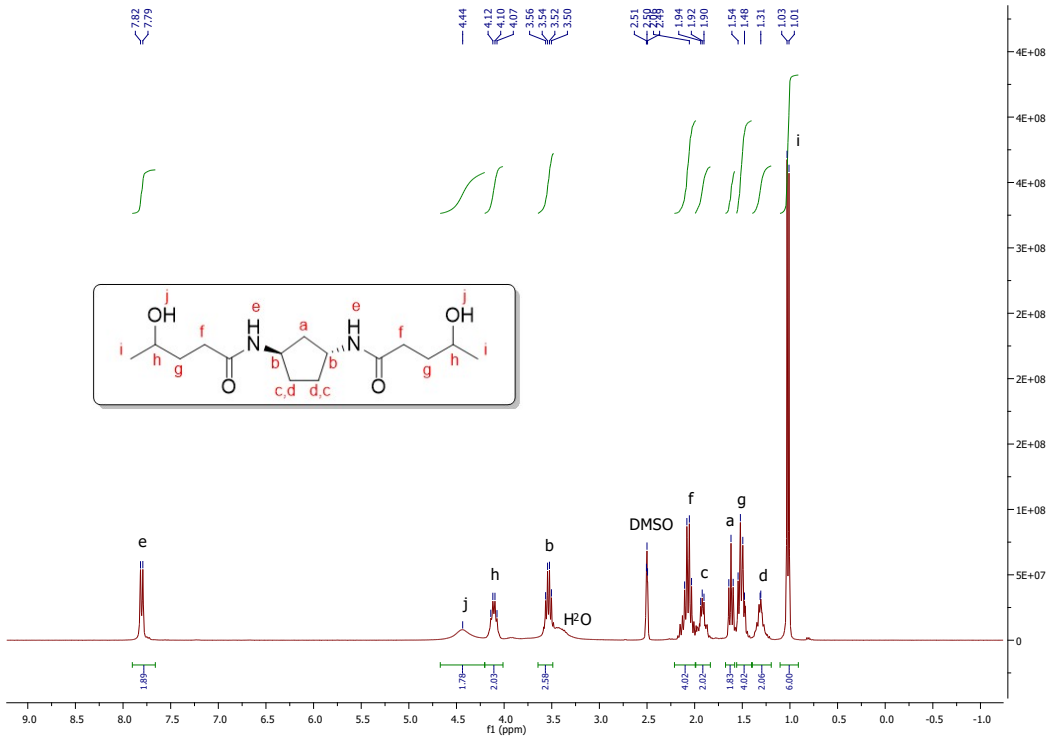


Figure S2.1.34: ^{1}*H-NMR spectrum of* ***6*** *in DMSO-d*$_6$.

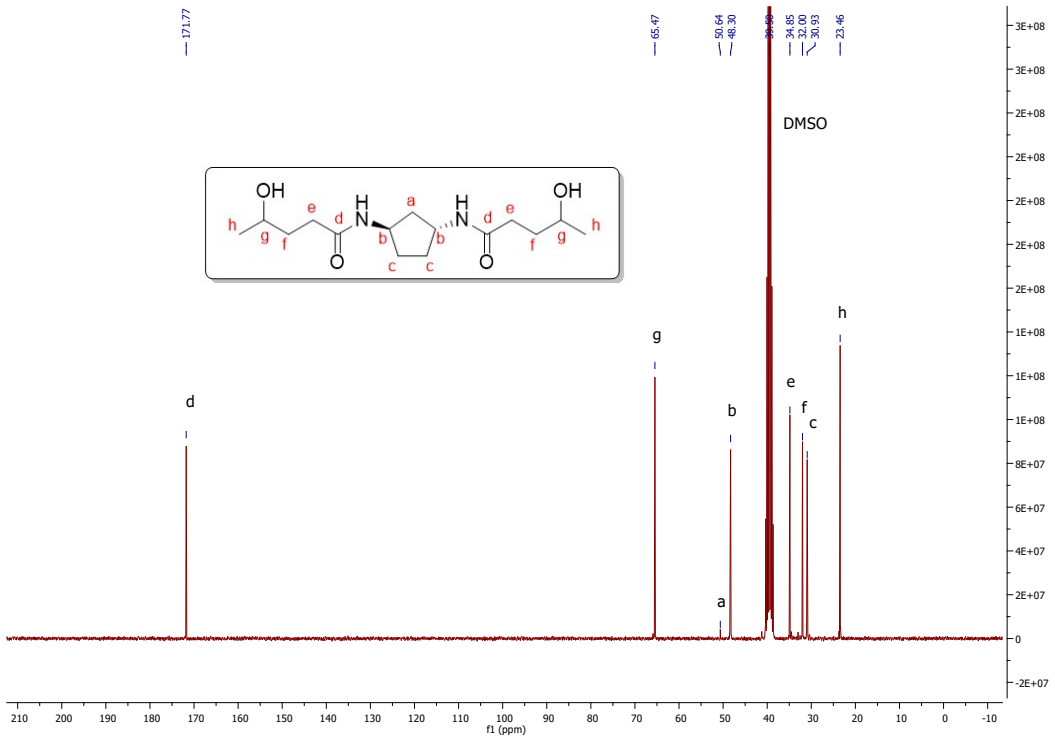


Figure S2.1.35: ^{13}*C-NMR spectrum of* ***6*** *in DMSO-d*$_6$.

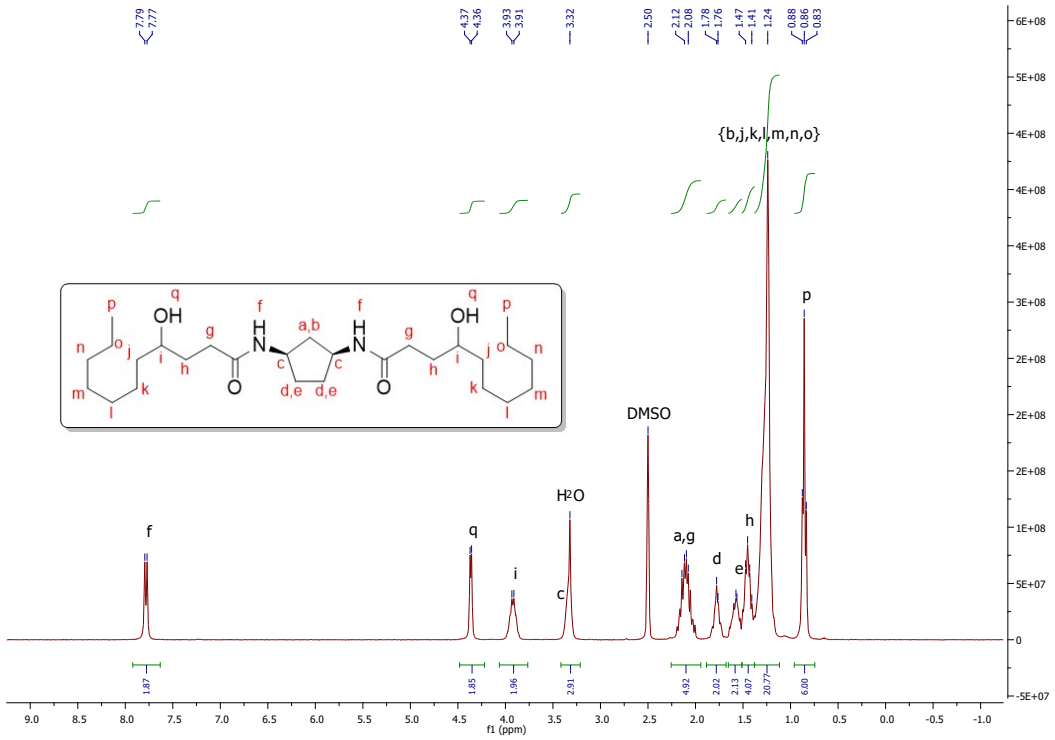


Figure S2.1.36: ^{1}*H-NMR spectrum of* **7** *in DMSO-d*$_6$.

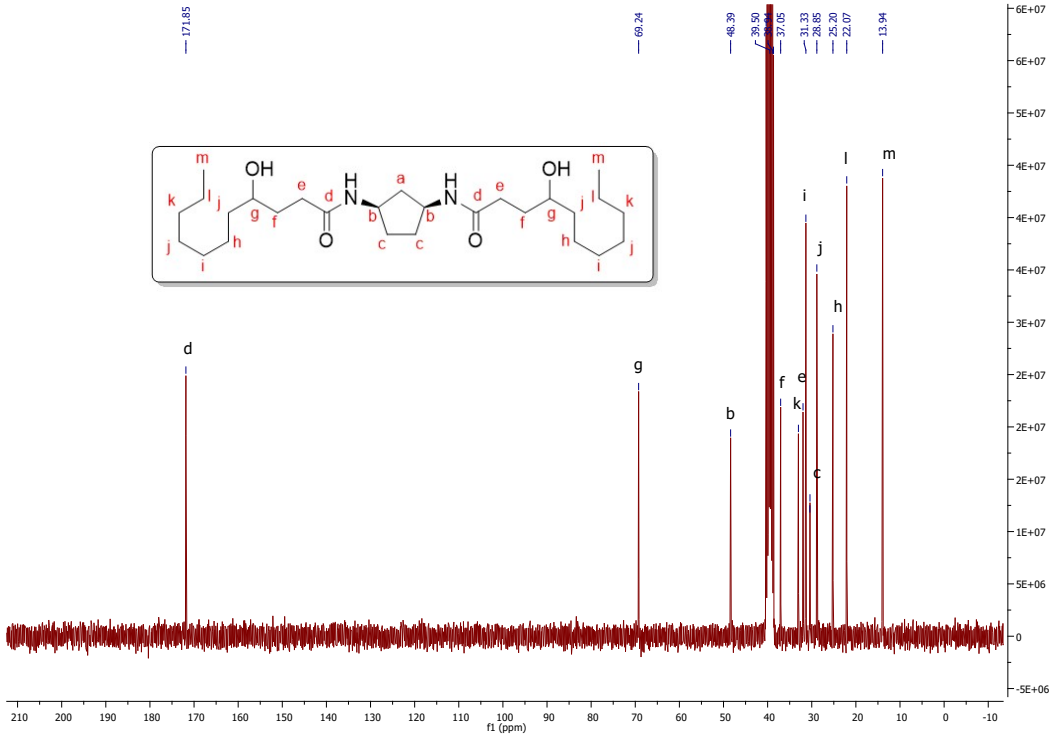


Figure S2.1.37: ^{13}*C-NMR spectrum of* **7** *in DMSO-d*$_6$.

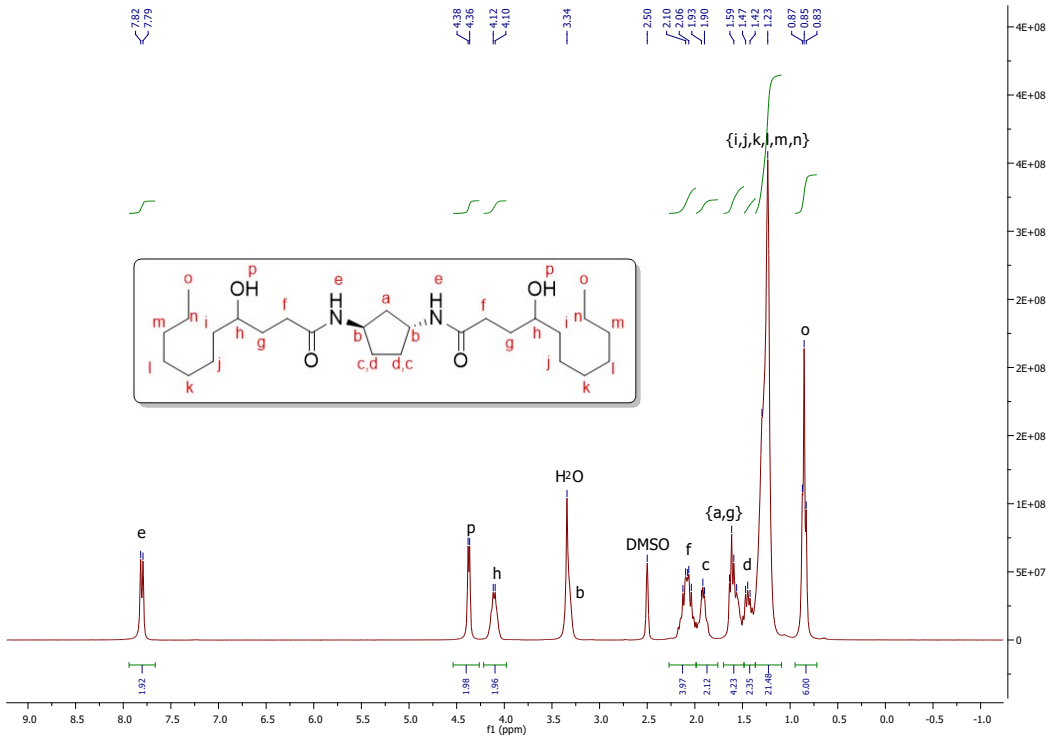


Figure S2.1.38: ^{1}*H-NMR spectrum of* ***8*** *in DMSO-d*$_6$.

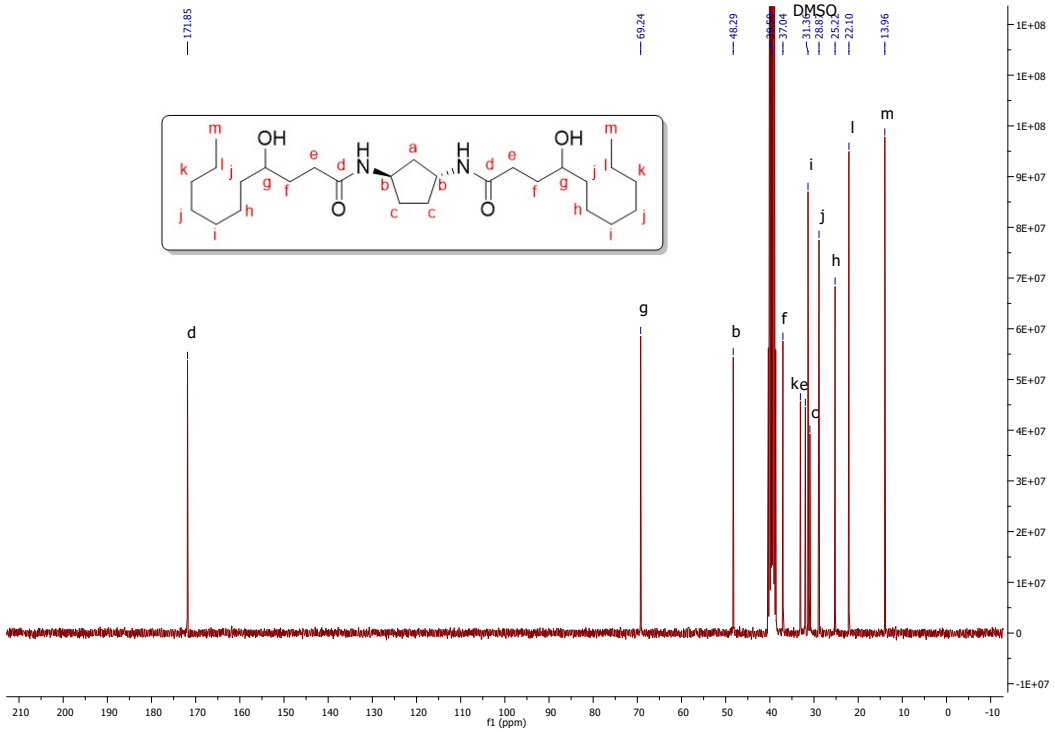


Figure S2.1.39: ^{13}*C-NMR spectrum of* ***8*** *in DMSO-d*$_6$.

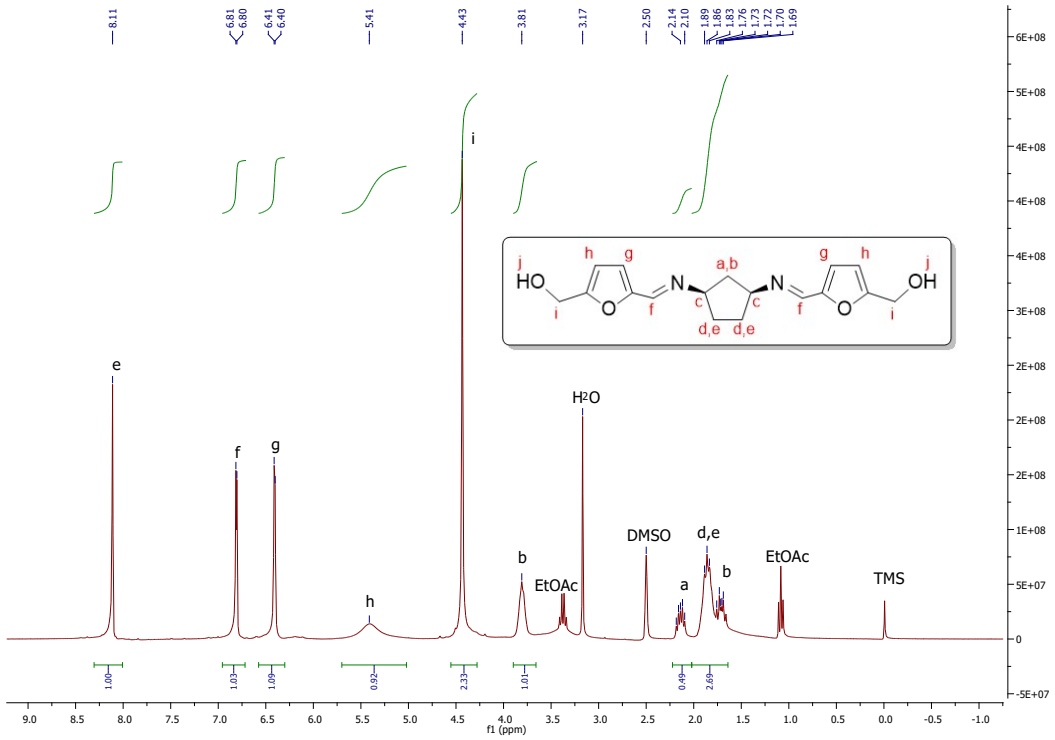


Figure S2.1.40: ^{1}*H-NMR spectrum of* ***9*** *in DMSO-d*$_6$.

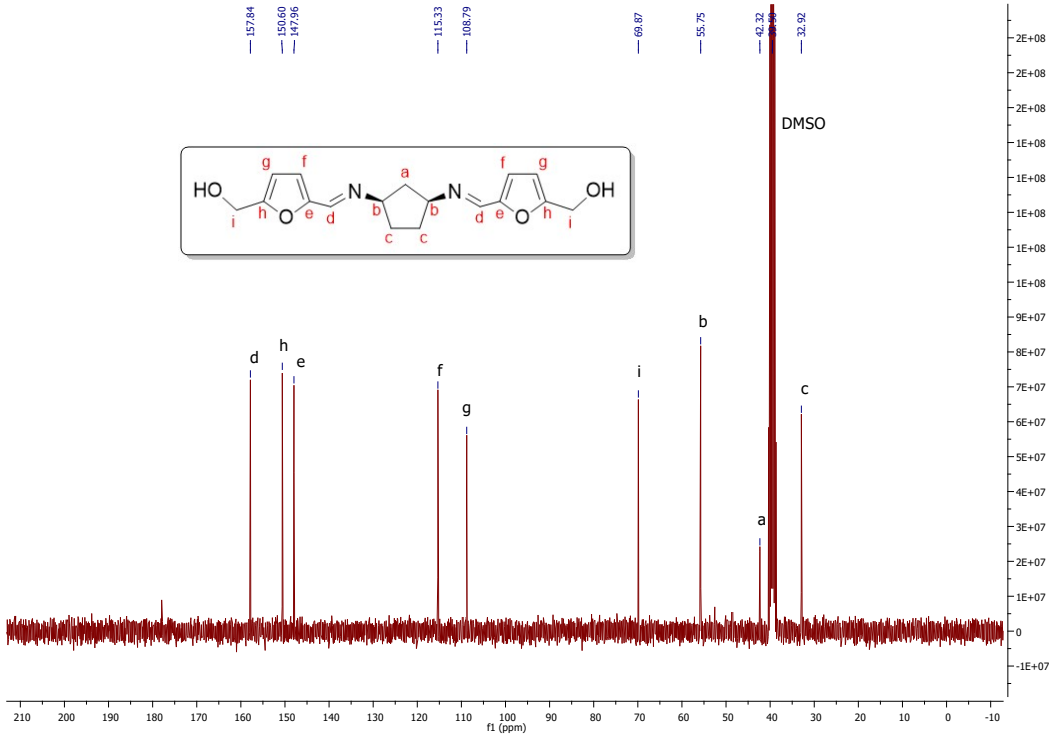


Figure S2.1.41: ^{13}*C-NMR spectrum of* ***9*** *in DMSO-d*$_6$.

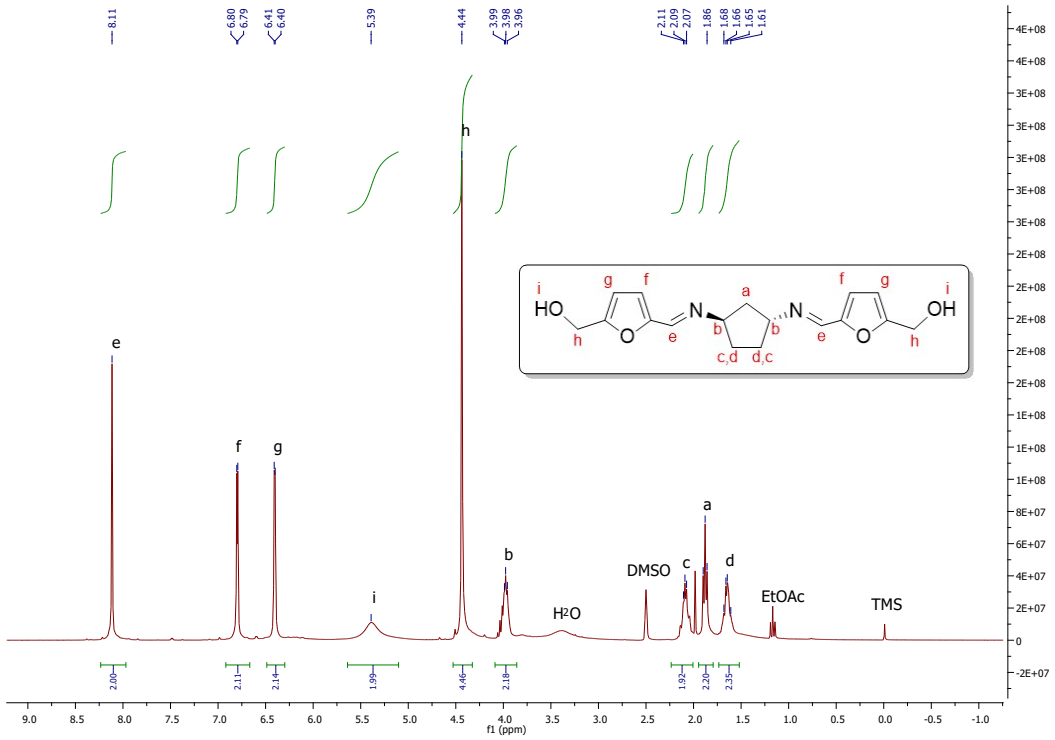


Figure S2.1.42: ^{1}*H-NMR spectrum of* ***10*** *in DMSO-d*$_6$.

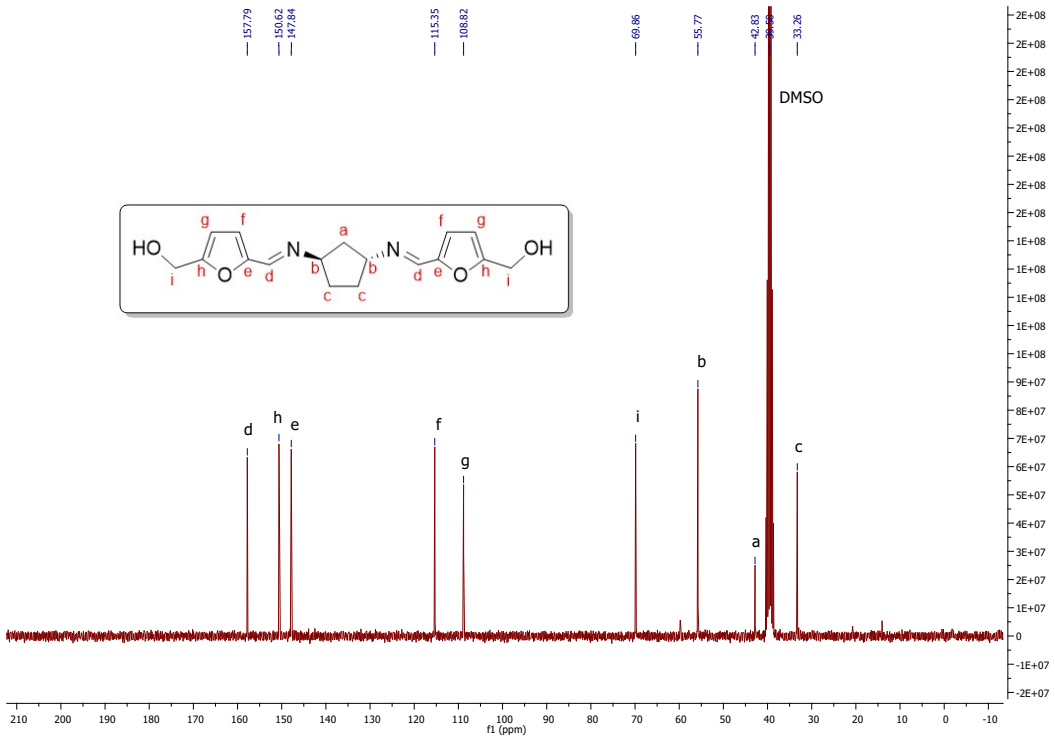


Figure S2.1.43: ^{13}*C-NMR spectrum of* ***10*** *in DMSO-d*$_6$.

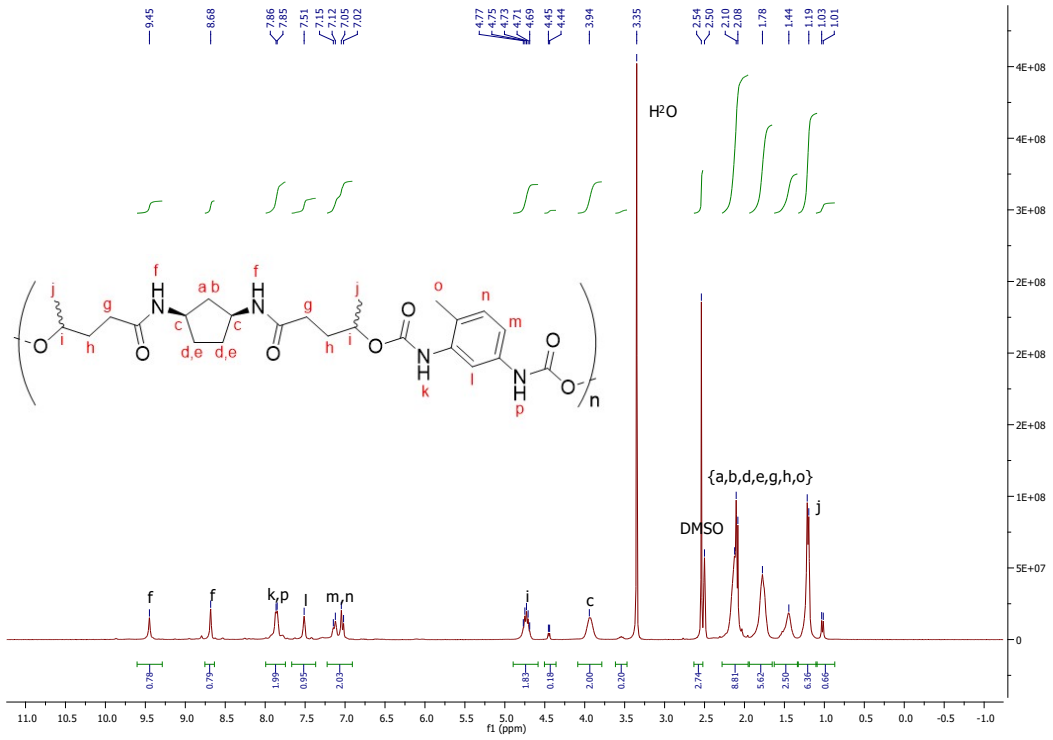


*Figure S2.1.44: [1]H-NMR spectrum of polyurethane derived from **TDI** and triblock **5** in DMSO-d_6.*

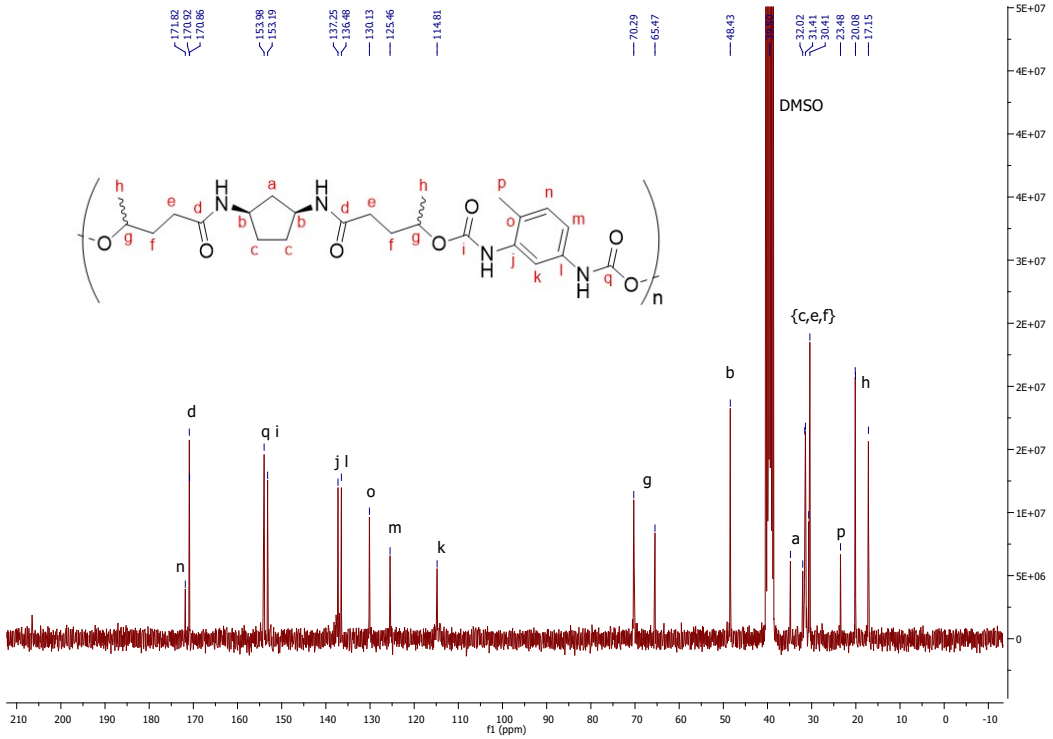


*Figure S2.1.45: [13]C-NMR spectrum of polyurethane derived from **TDI** and triblock **5** in DMSO-d_6.*

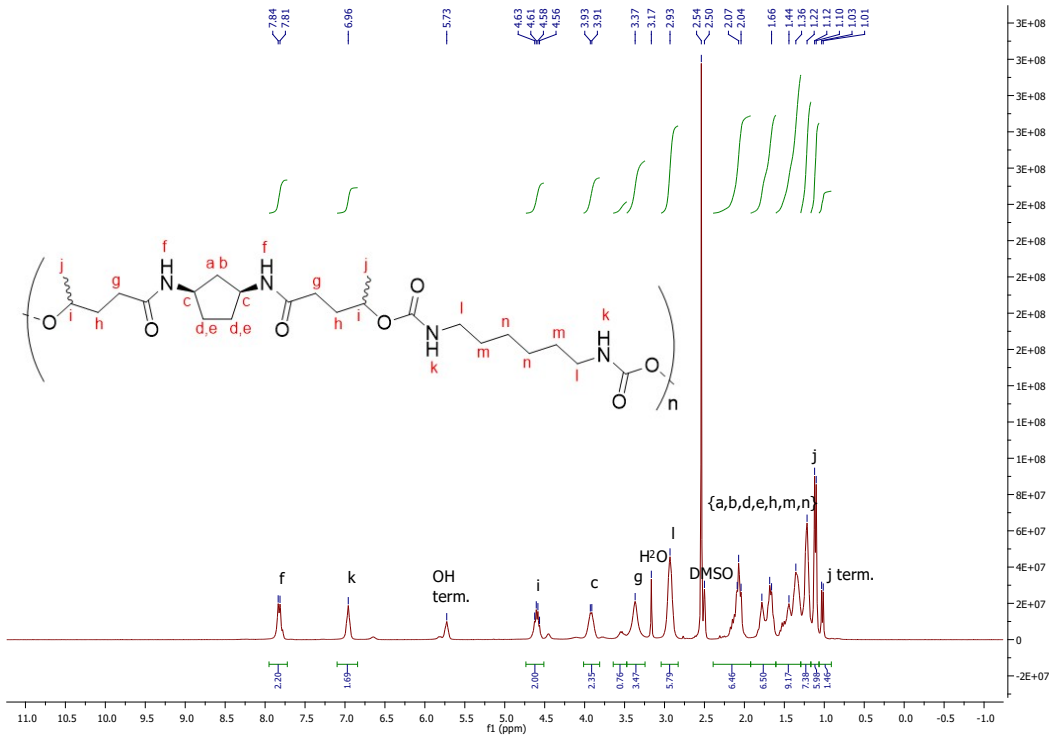


Figure S2.1.46: ^{1}*H-NMR spectrum of polyurethane derived from* ***HDI*** *and triblock* ***5*** *in DMSO-d*$_6$.

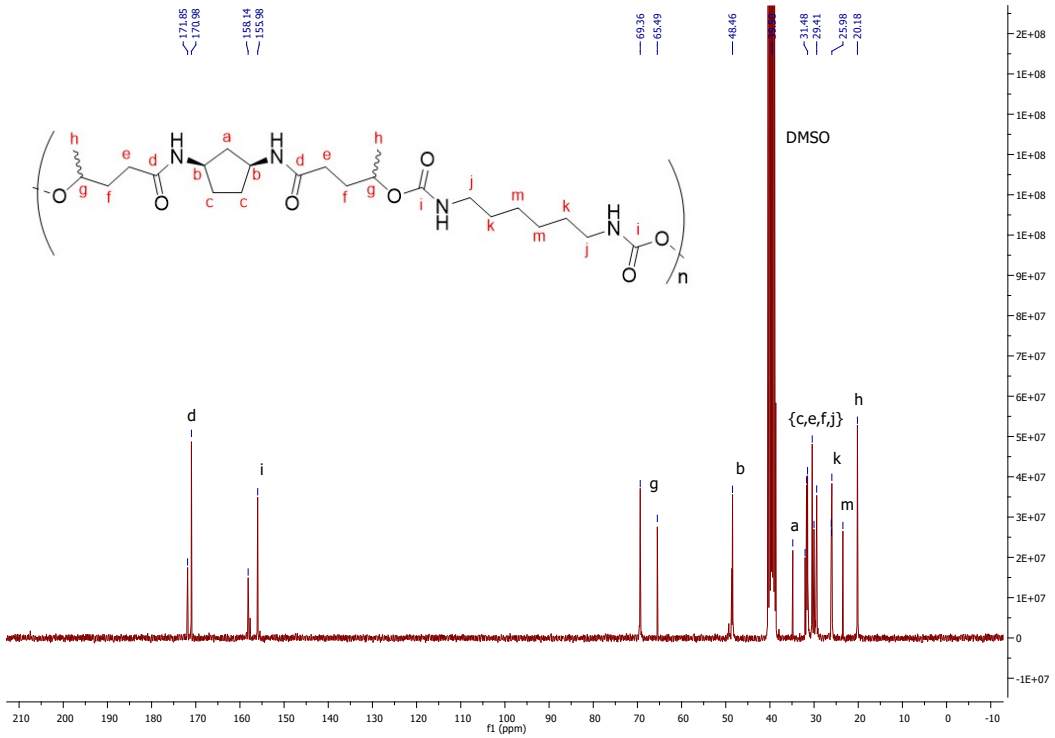


Figure S2.1.47: ^{13}*C-NMR spectrum of polyurethane derived from* ***HDI*** *and triblock* ***5*** *in DMSO-d*$_6$.

S2.2 FT-IR spectroscopy:

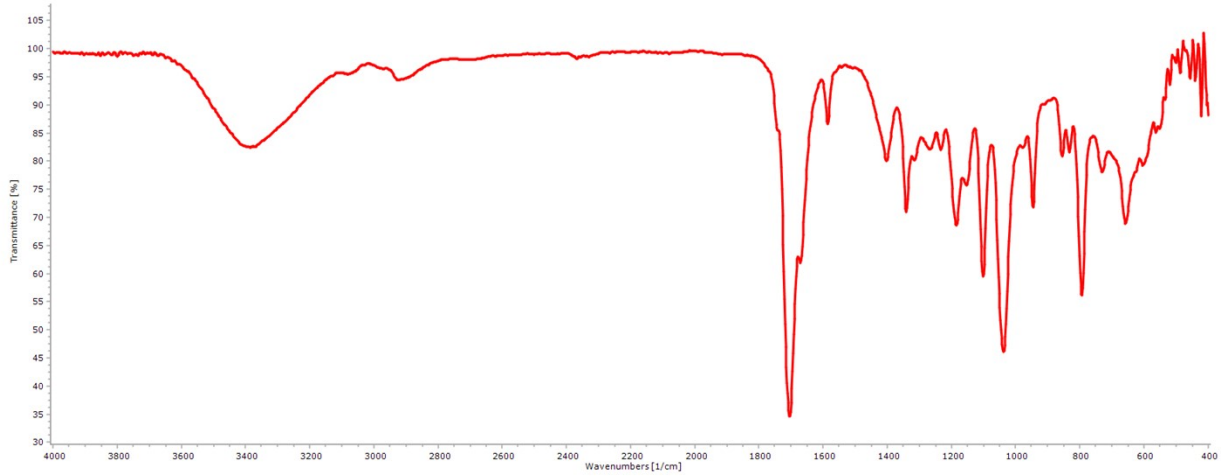


*Figure S2.2.1: FTIR spectrum of **4-HCP**.*

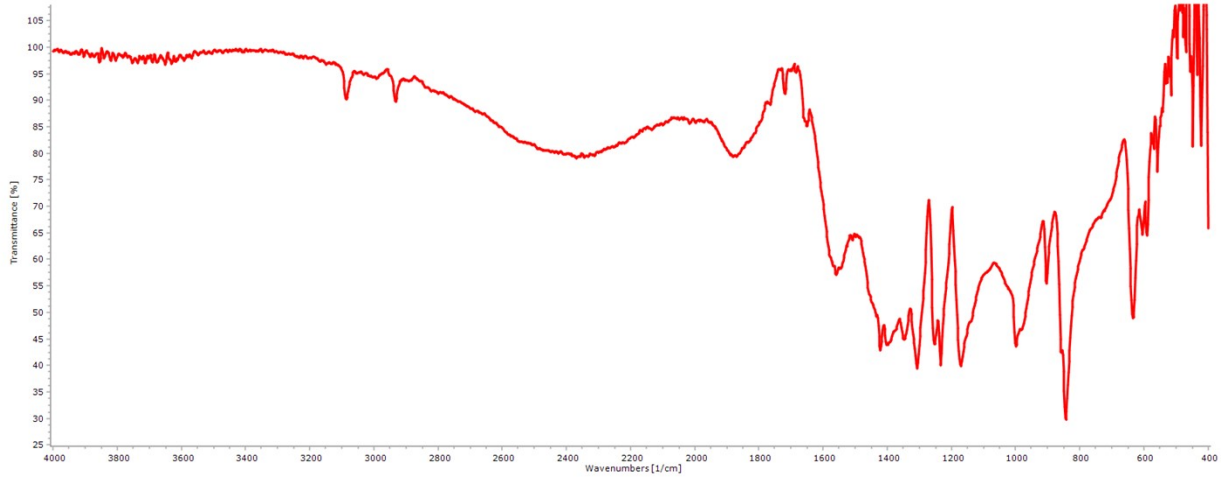


*Figure S2.2.2: FTIR spectrum of **CPDO**.*

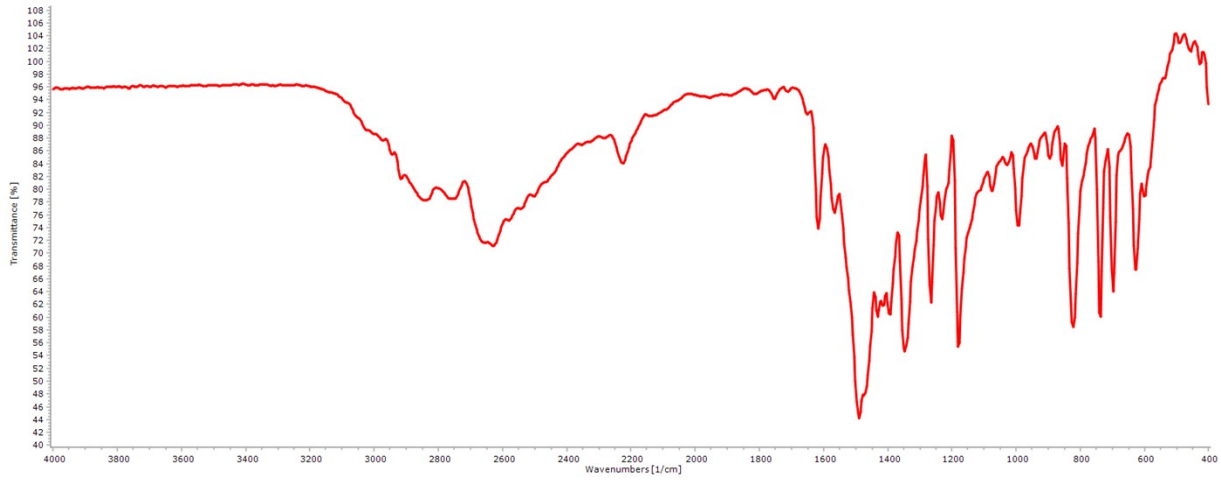


*Figure S2.2.3: FTIR spectrum of compound **1**.*

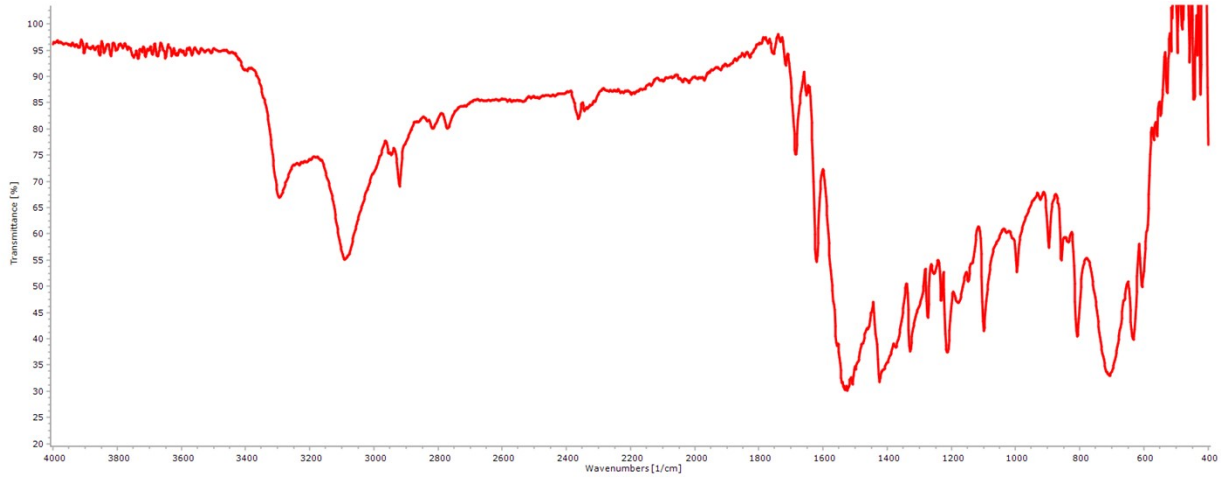


*Figure S2.2.4: FTIR spectrum of **CPDI**.*

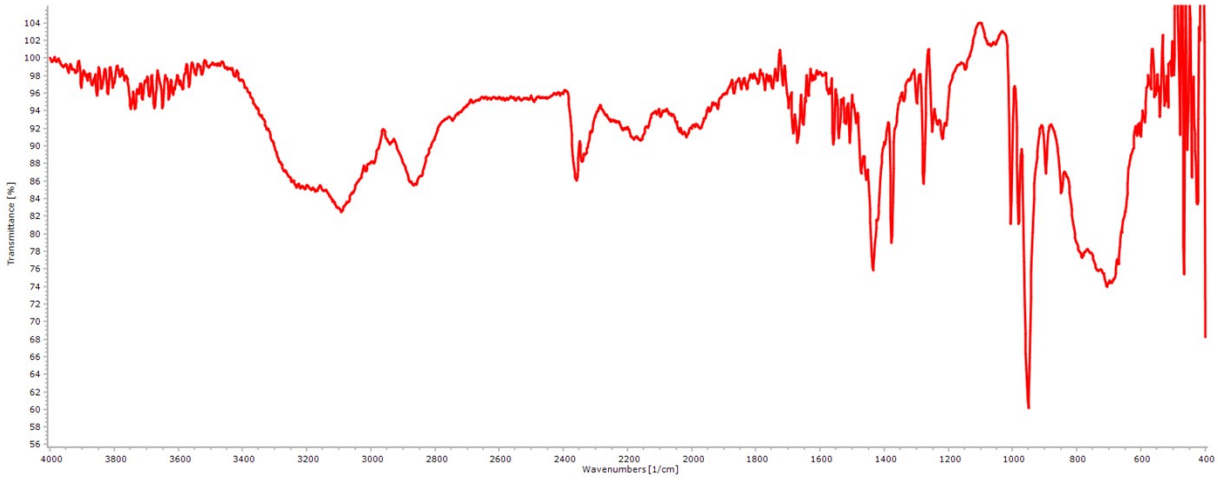


*Figure S2.2.5: FTIR spectrum of **CPDX**.*

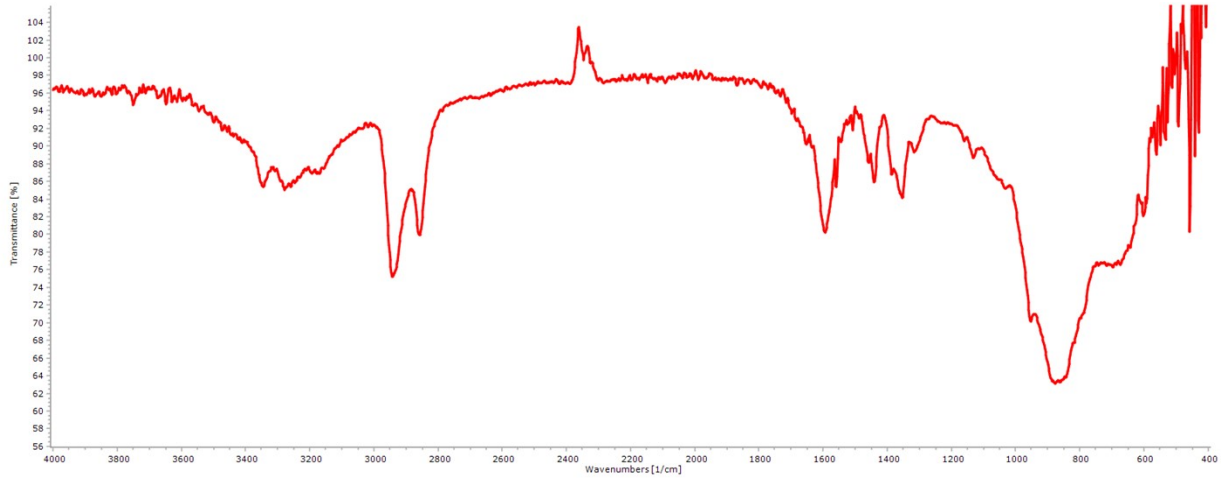


*Figure S2.2.6: FTIR spectrum of **CPDA** (distillate, cis-trans ratio = 1:1).*

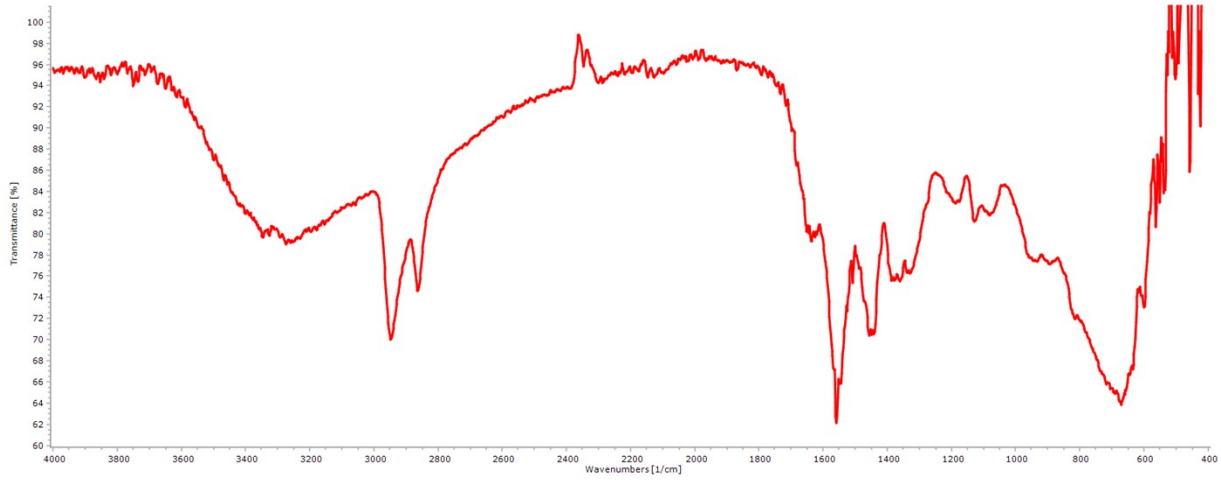


*Figure S2.2.7: FTIR spectrum of **CPDA-dimer.***

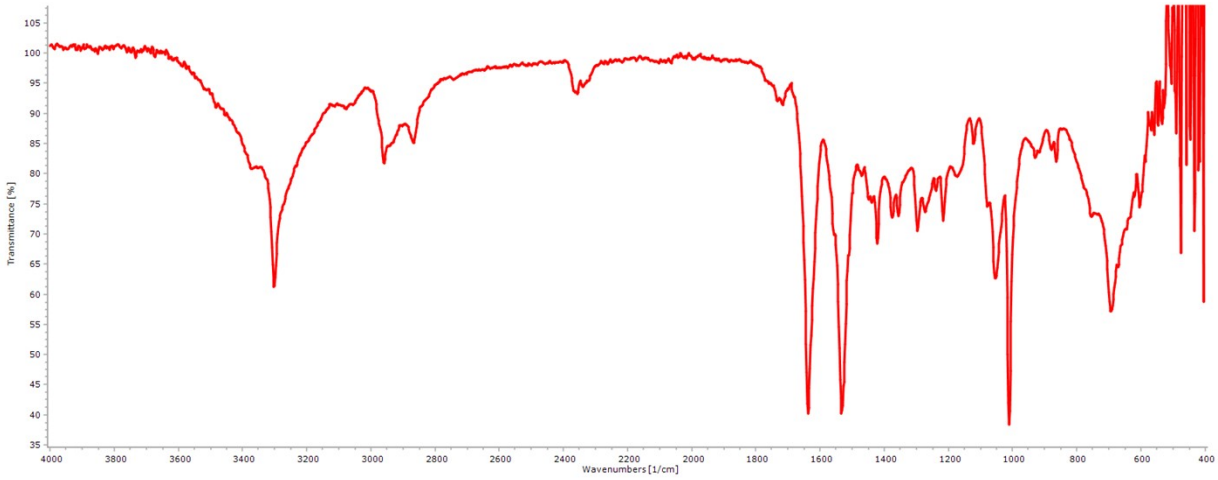


*Figure S2.2.8: FTIR spectrum of compound **3**.*

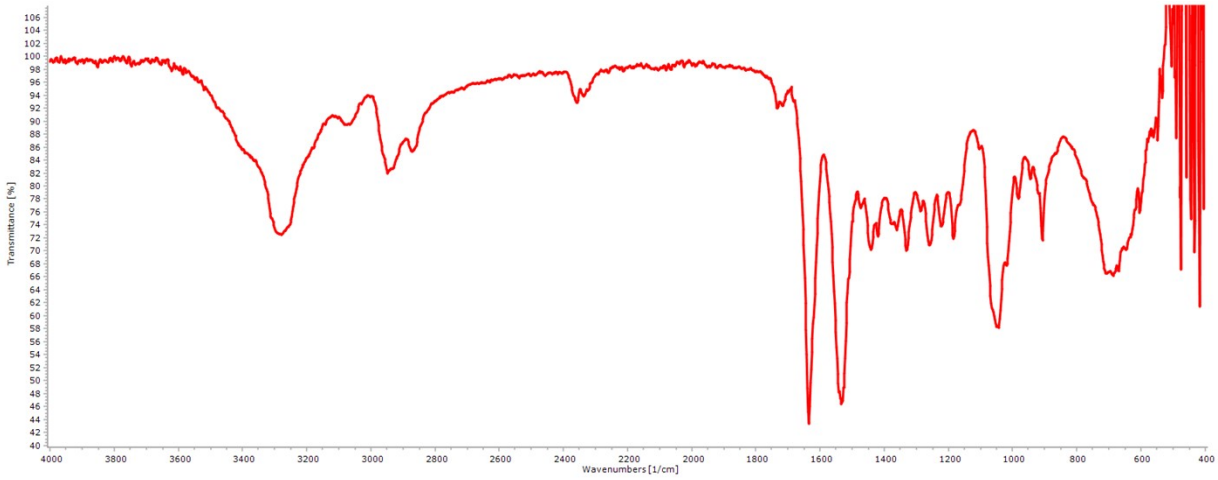


*Figure S2.2.9: FTIR spectrum of compound **4**.*

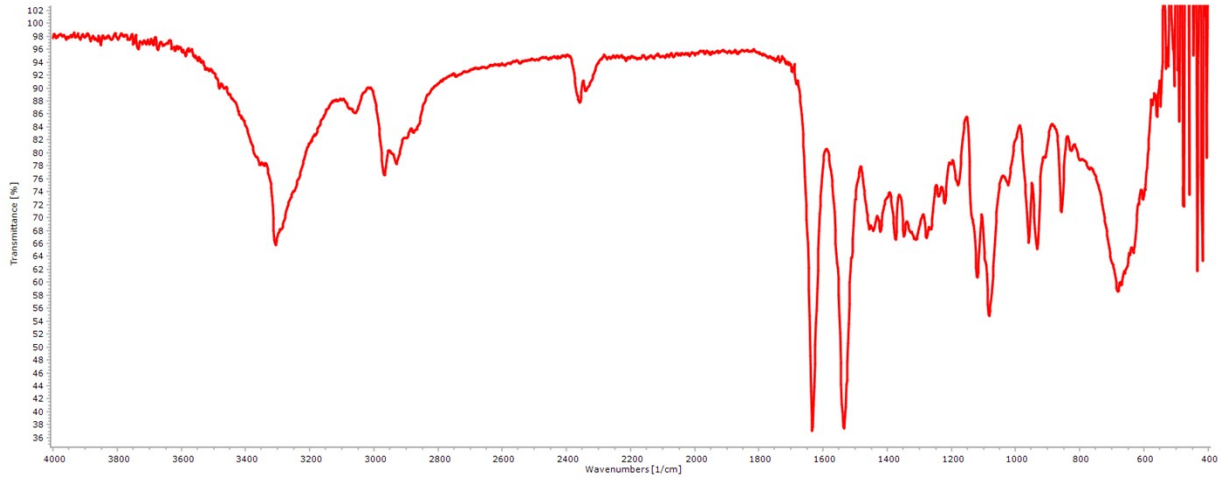


*Figure S2.2.10: FTIR spectrum of compound **5**.*

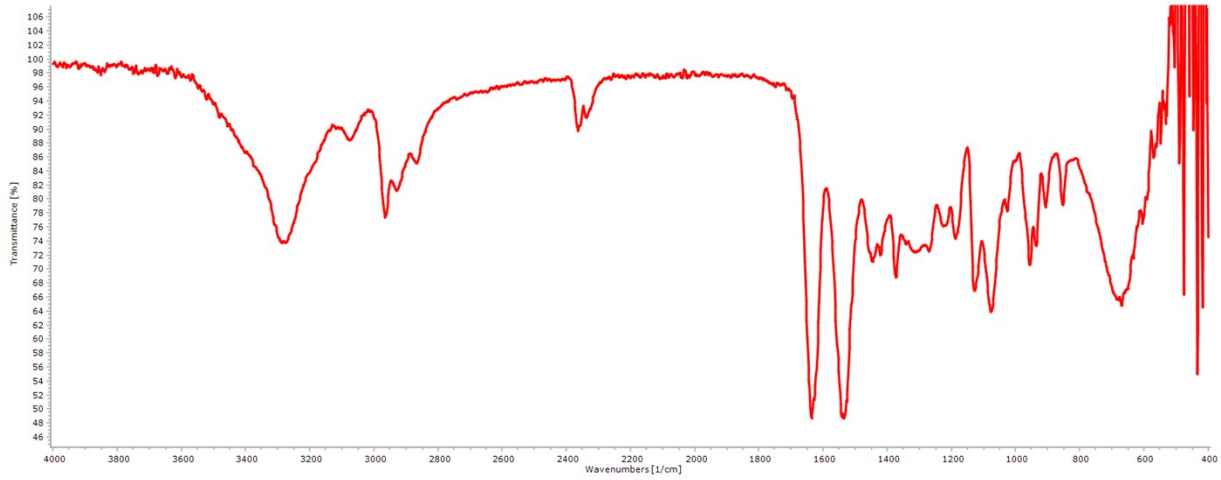


*Figure S2.2.11: FTIR spectrum of compound **6**.*

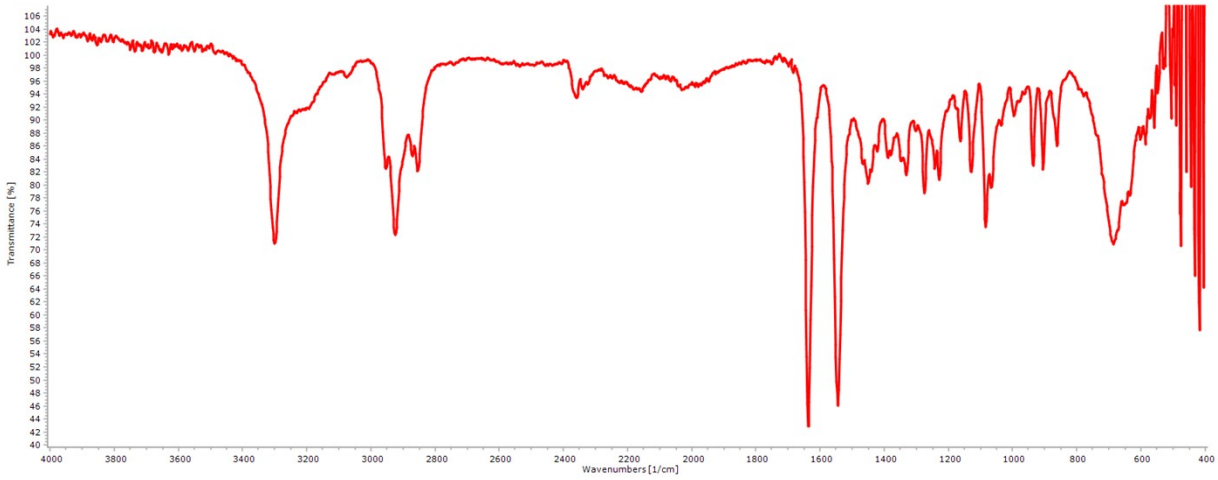


*Figure S2.2.12: FTIR spectrum of compound **7**.*

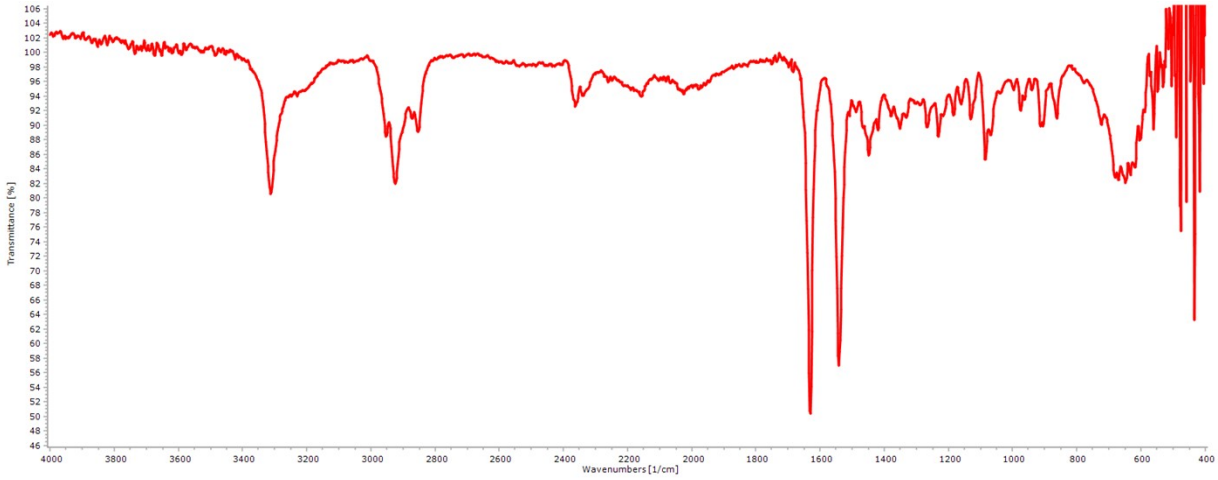


*Figure S2.2.13: FTIR spectrum of compound **8**.*

*Figure S2.2.14: FTIR spectrum of compound **9**.*

*Figure S2.2.15: FTIR spectrum of compound **10**.*

*Figure S2.2.16: FTIR spectrum of the polyurethane derived from **TDI** and triblock **5**.*

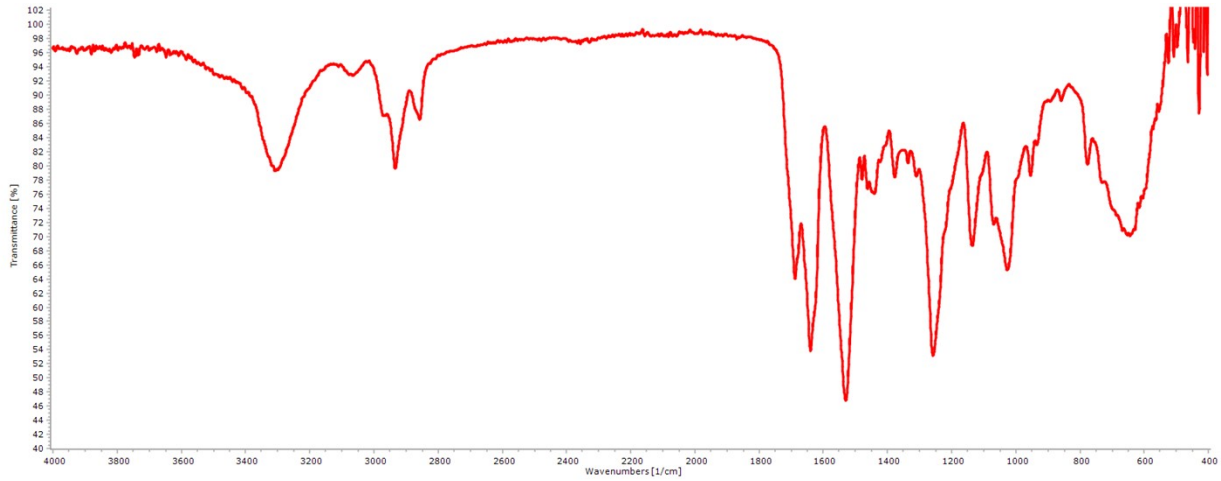


*Figure S2.2.17: FTIR spectrum of the polyurethane derived from **HDI** and triblock **5**.*

S2.3 GC-FID chromatograms:

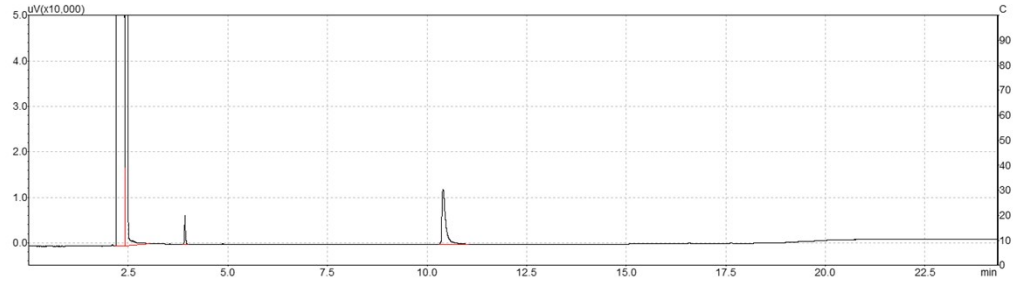


*Figure S2.3.1: Gas chromatogram of **4-HCP**.*

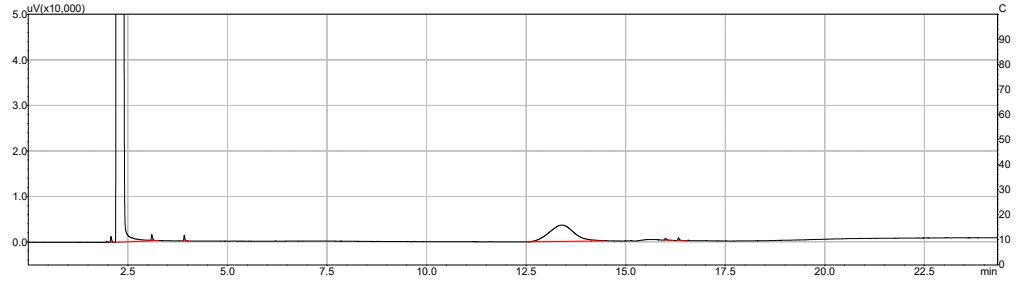


*Figure S2.3.2: Gas chromatogram of **CPDO**.*

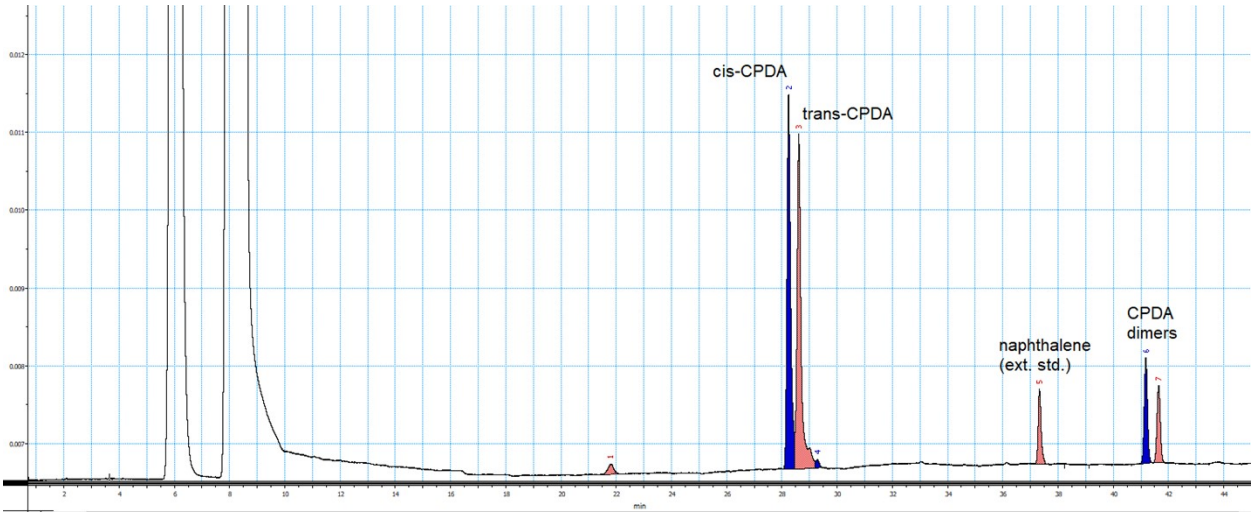


*Figure S2.3.3: Representative gas chromatogram of a crude reaction mixture from **CPDX** to **CPDA** hydrogenation.*

S2.4 High-resolution mass-spectrometry (HR-MS):

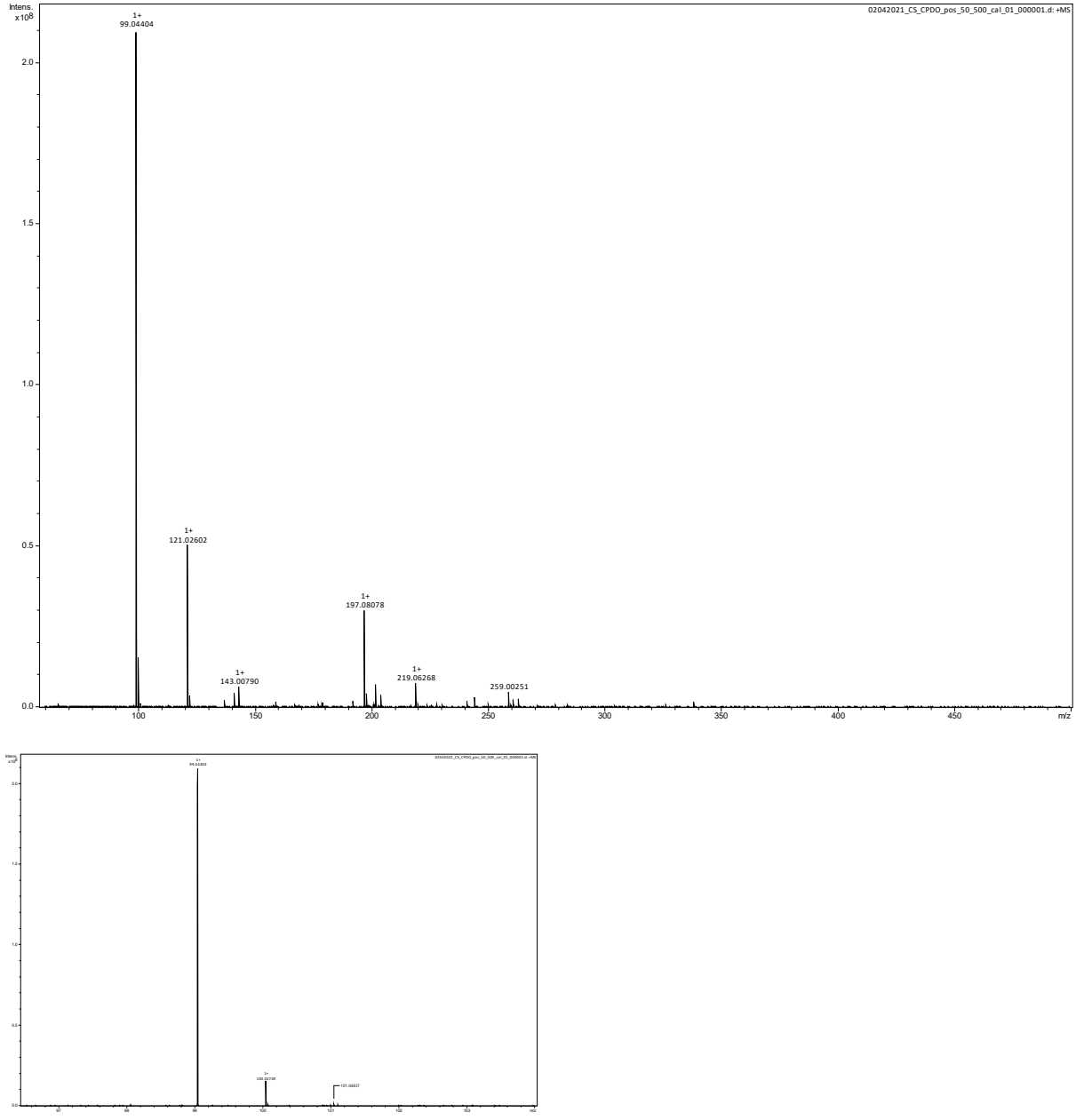


Figure S2.4.1: HR-MS analysis in ESI+ mode of CPDO; full spectrum (top), and zoom of $[CPDO + H]^+$ (bottom).

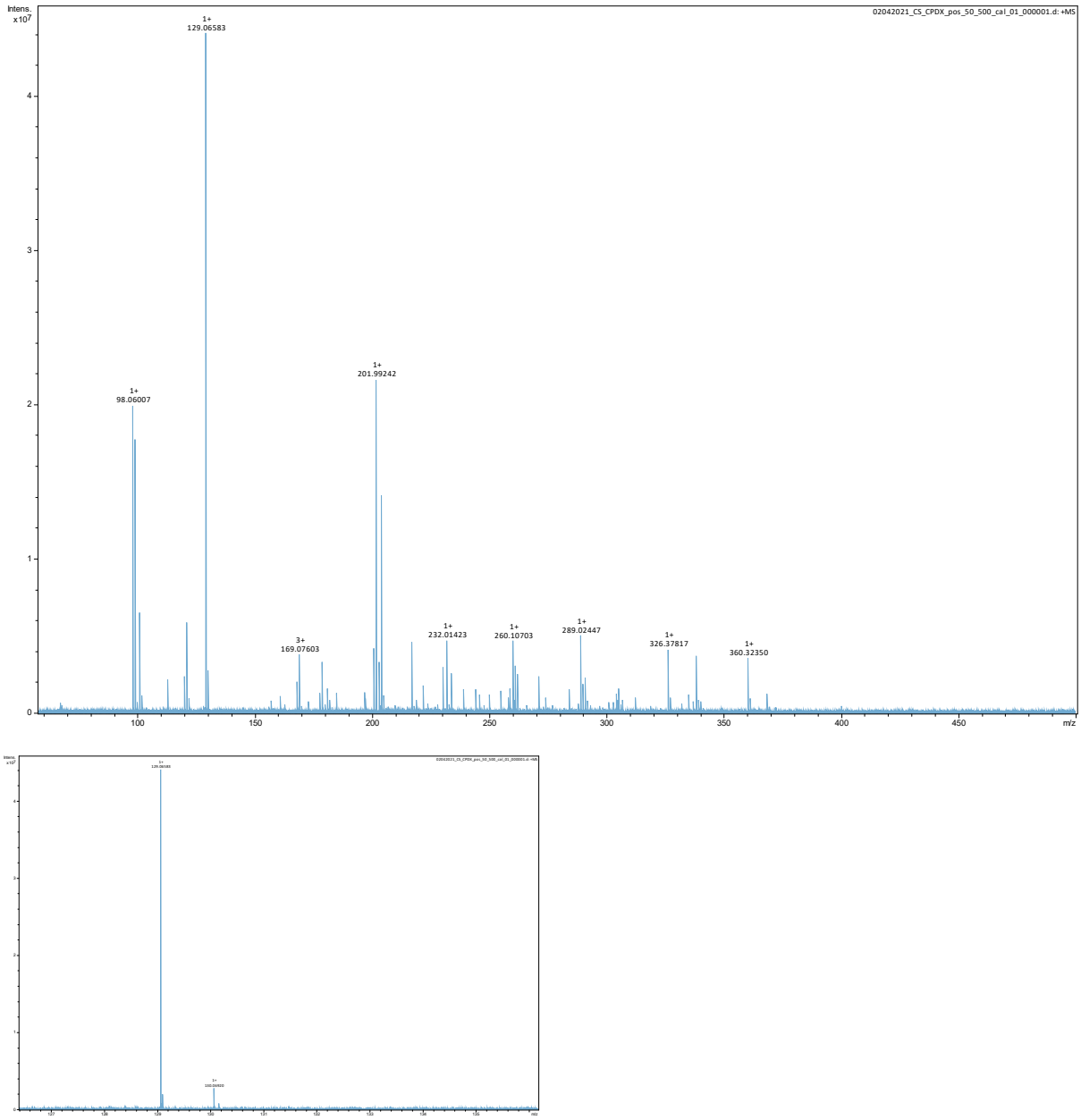


Figure S2.4.2: HR-MS analysis in ESI+ mode of CPDX; full spectrum (top), and zoom of $[CPDX + H]^+$ (bottom).

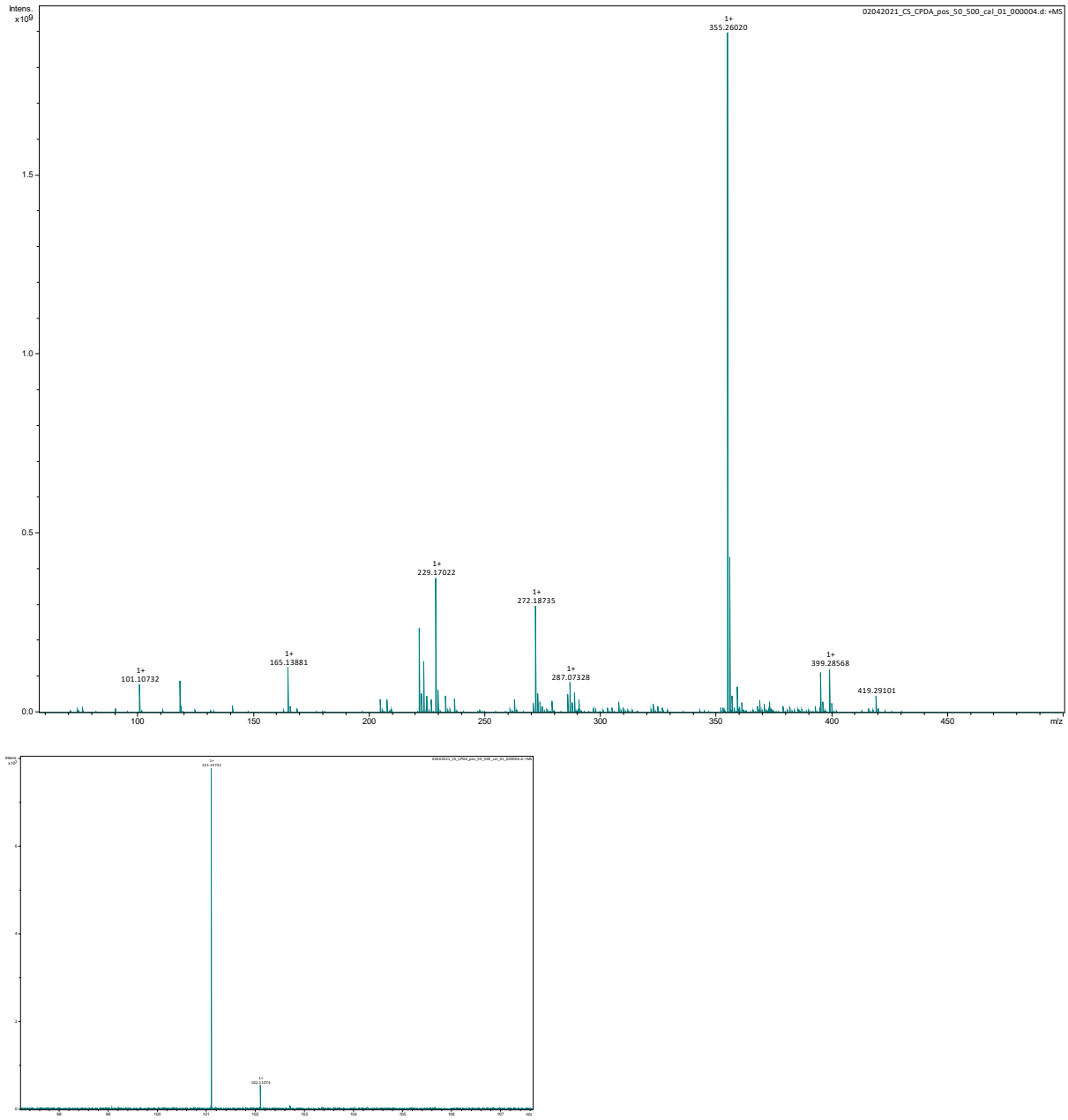


Figure S2.4.3: HR-MS analysis in ESI+ mode of CPDA; full spectrum (top), and zoom of $[CPDA + H]^+$ (bottom).

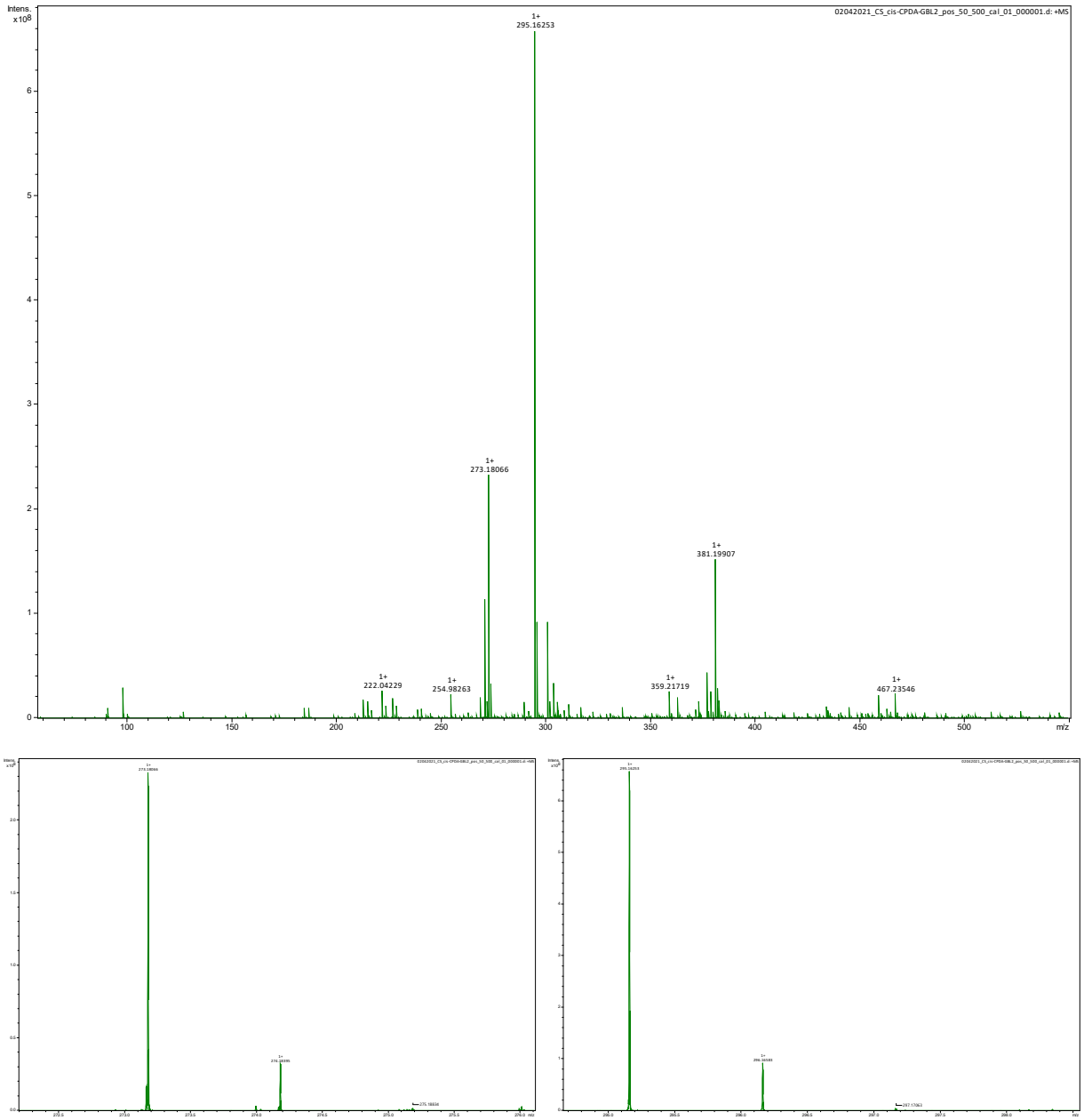


*Figure S2.4.4: HR-MS analysis in ESI+ mode of **3**; full spectrum (top); zoom of [**3** + H]$^+$ (bottom-left), and zoom of [**3** + Na]$^+$ (bottom-right).*

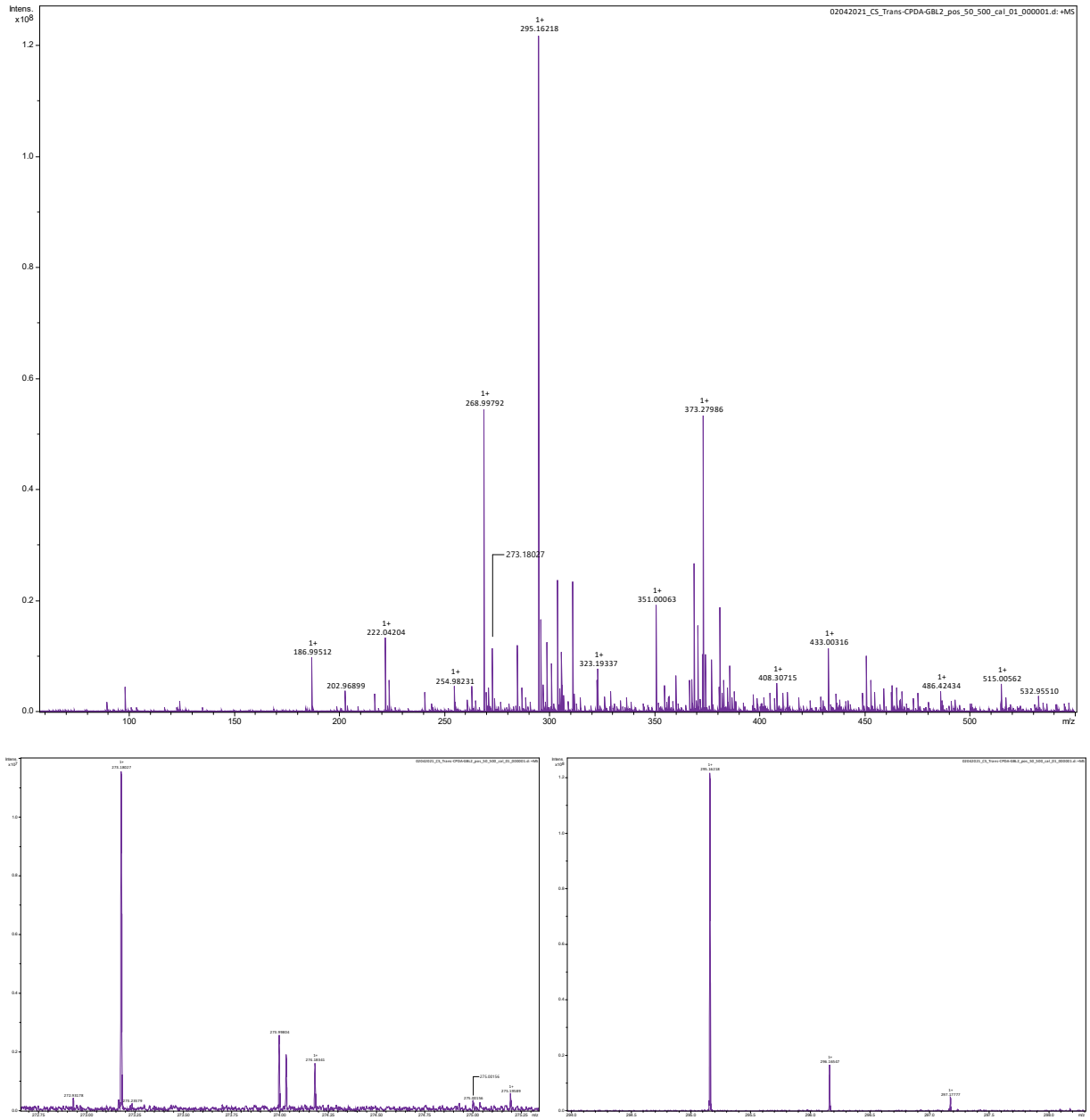


*Figure S2.4.4: HR-MS analysis in ESI+ mode of **4**; full spectrum (top); zoom of [**4** + H]$^+$ (bottom-left), and zoom of [**4** + Na]$^+$ (bottom-right).*

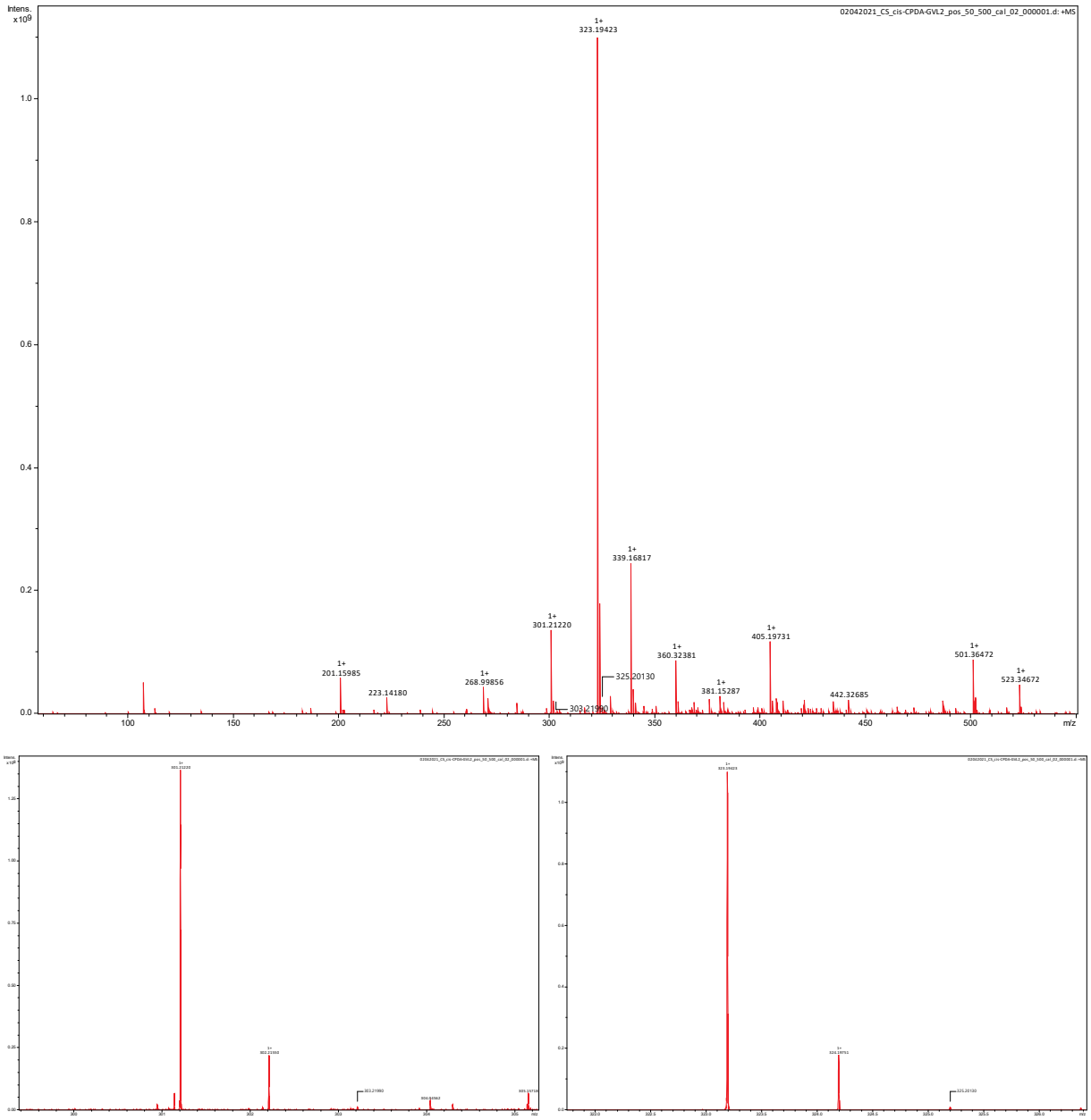


*Figure S2.4.5: HR-MS analysis in ESI+ mode of **5**; full spectrum (top); zoom of [**5** + H]$^+$ (bottom-left), and zoom of [**5** + Na]$^+$ (bottom-right).*

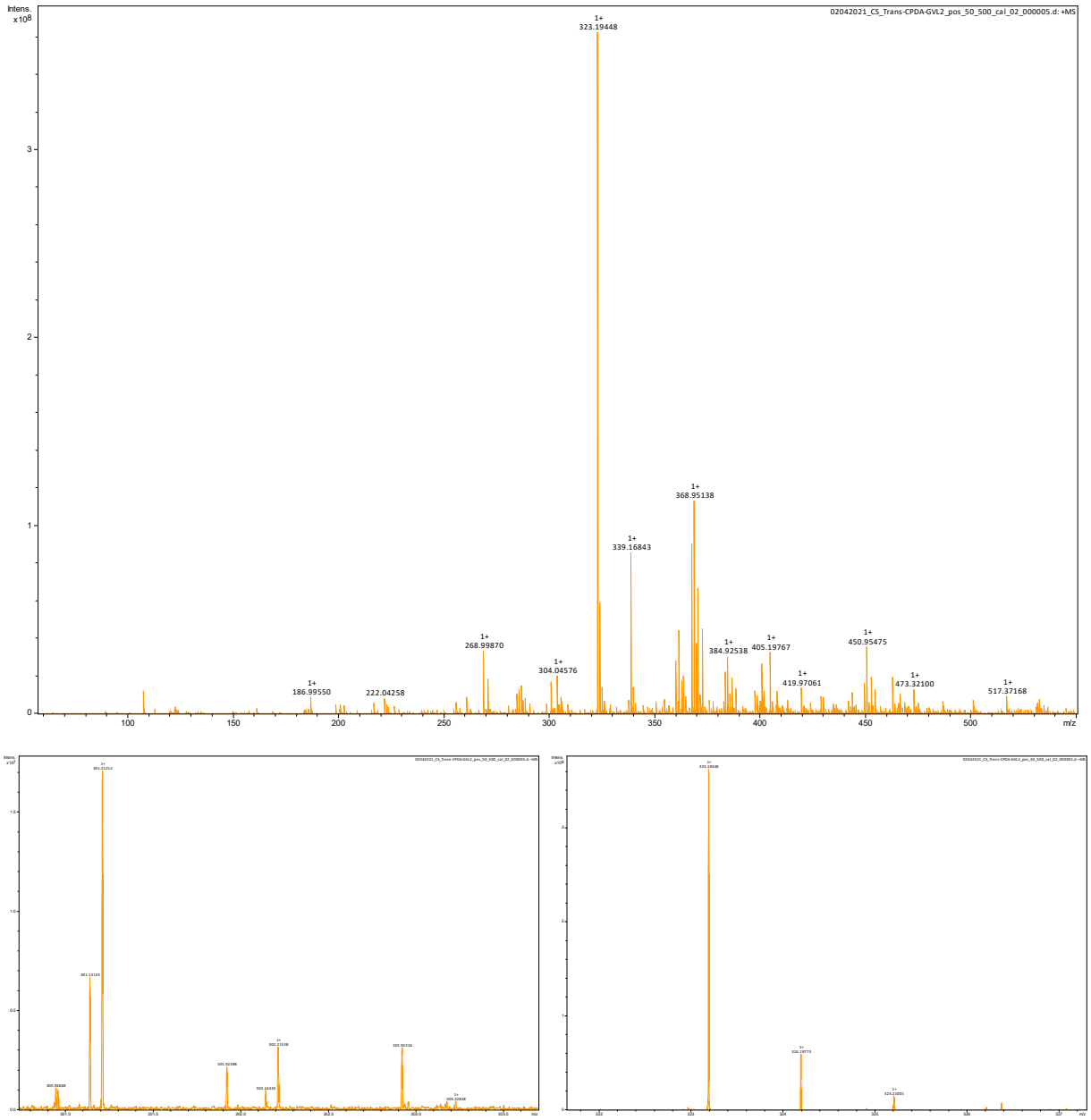


*Figure S2.4.6: HR-MS analysis in ESI+ mode of **6**; full spectrum (top); zoom of [**6** + H]$^+$ (bottom-left), and zoom of [**6** + Na]$^+$ (bottom-right).*

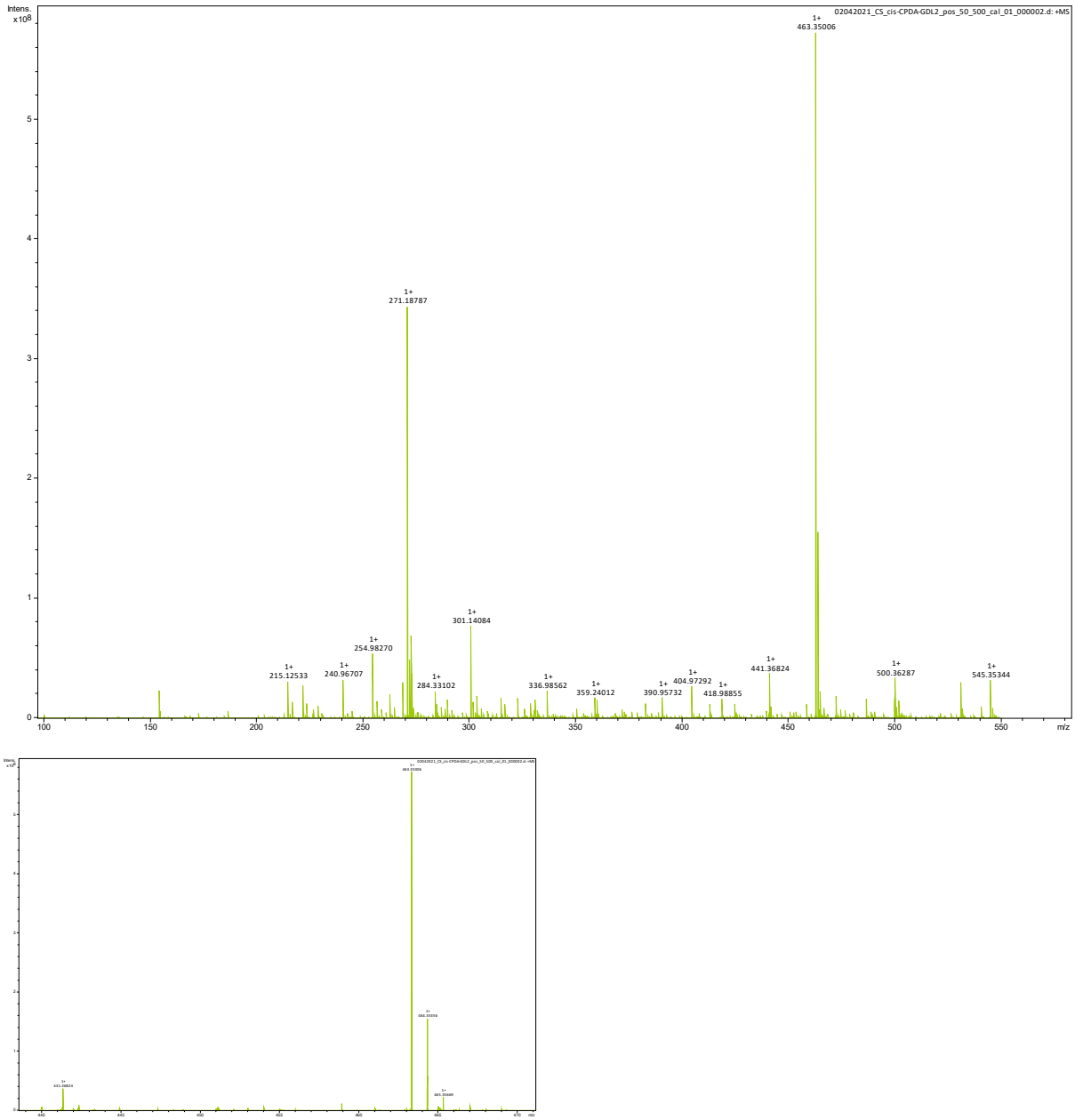


*Figure S2.4.7: HR-MS analysis in ESI+ mode of **7**; full spectrum (top); zoom of [**7** + H]$^+$ and [**7** + Na]$^+$ (bottom).*

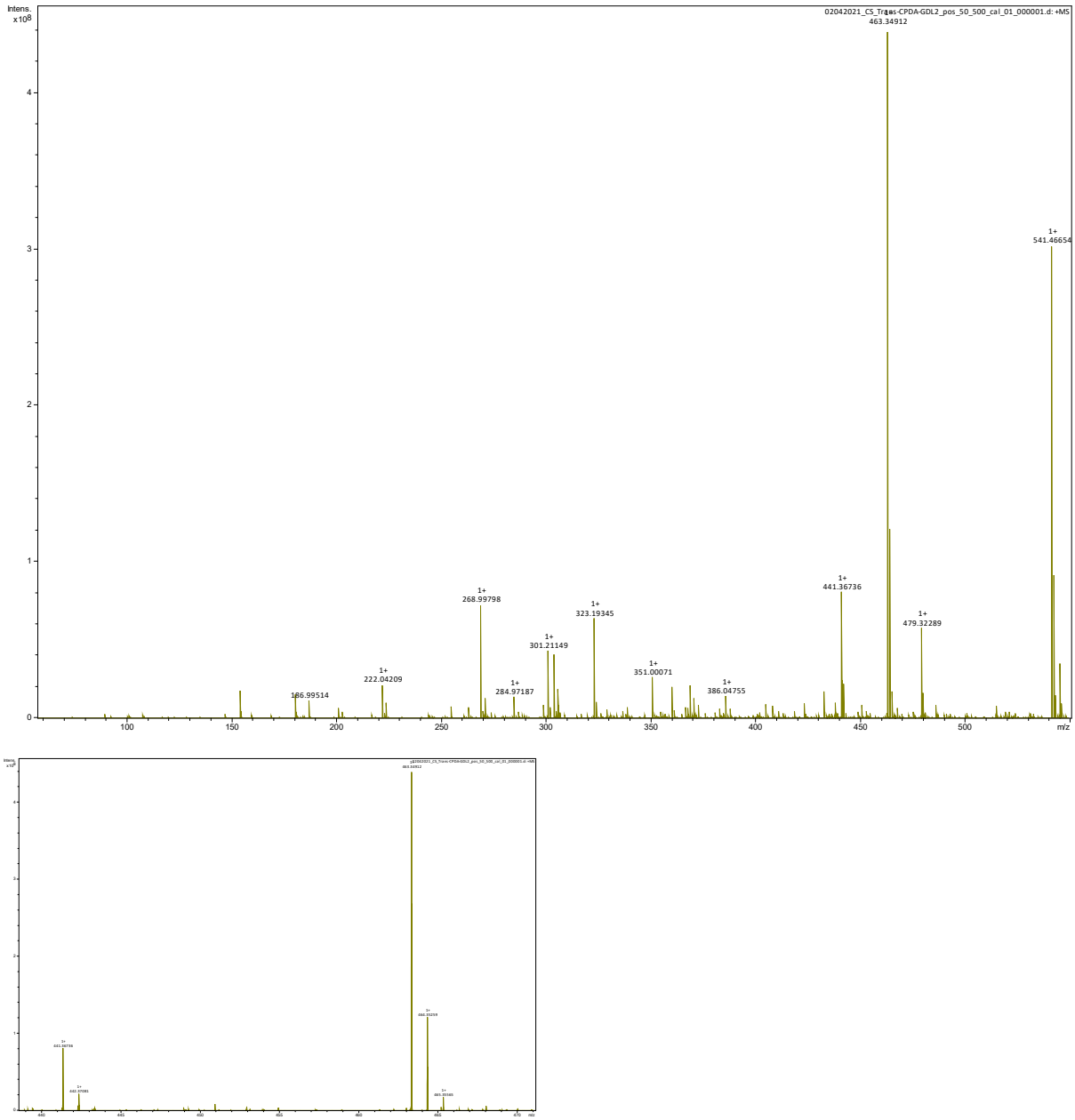


*Figure S2.4.8: HR-MS analysis in ESI+ mode of **8**; full spectrum (top); zoom of [**8** + H]$^+$ and [**8** + Na]$^+$ (bottom).*

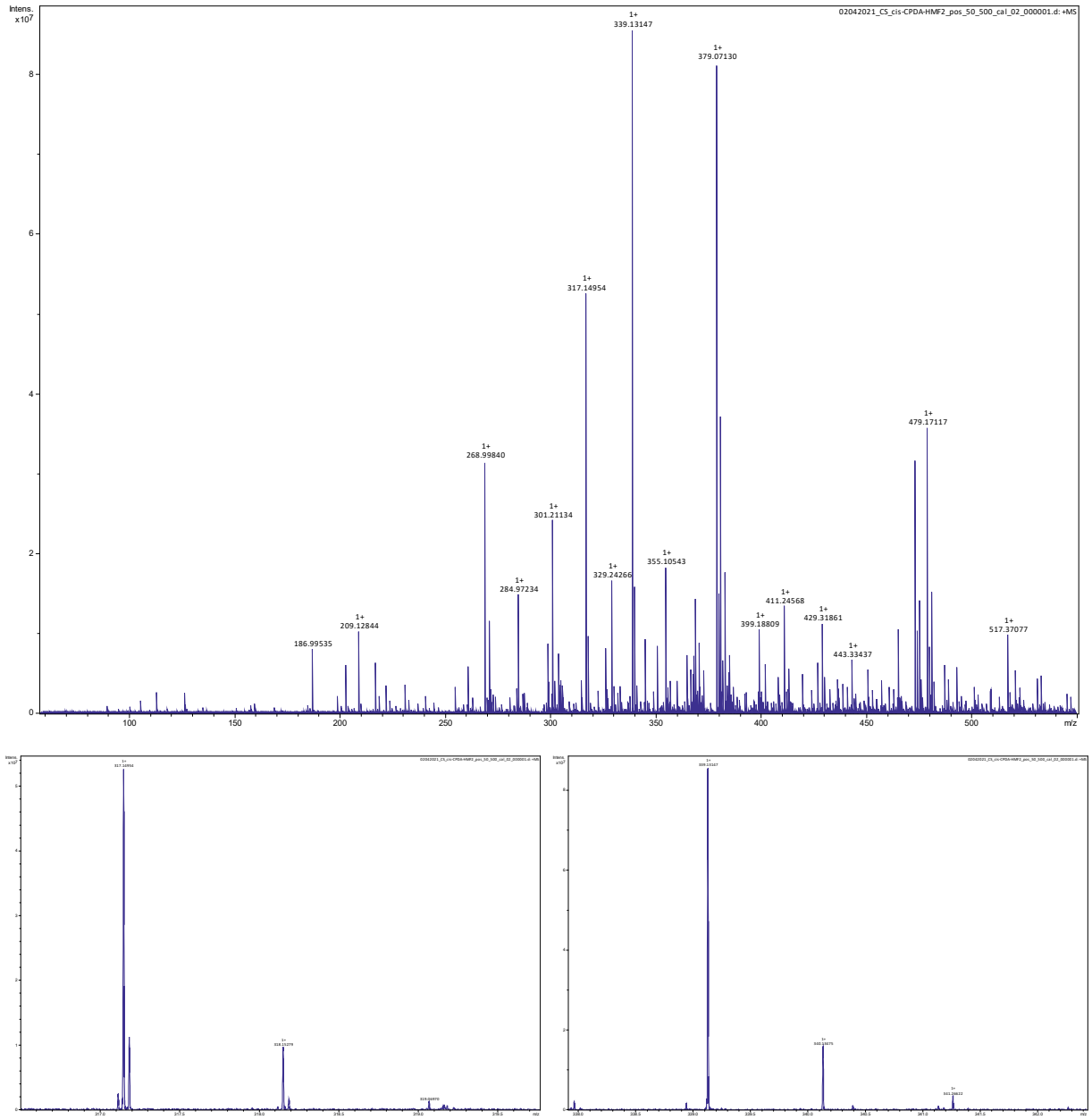


Figure S2.4.9: *HR-MS analysis in ESI+ mode of **9**; full spectrum (top); zoom of [**9** + H]$^+$ (bottom-left), and zoom of [**9** + Na]$^+$ (bottom-right).*

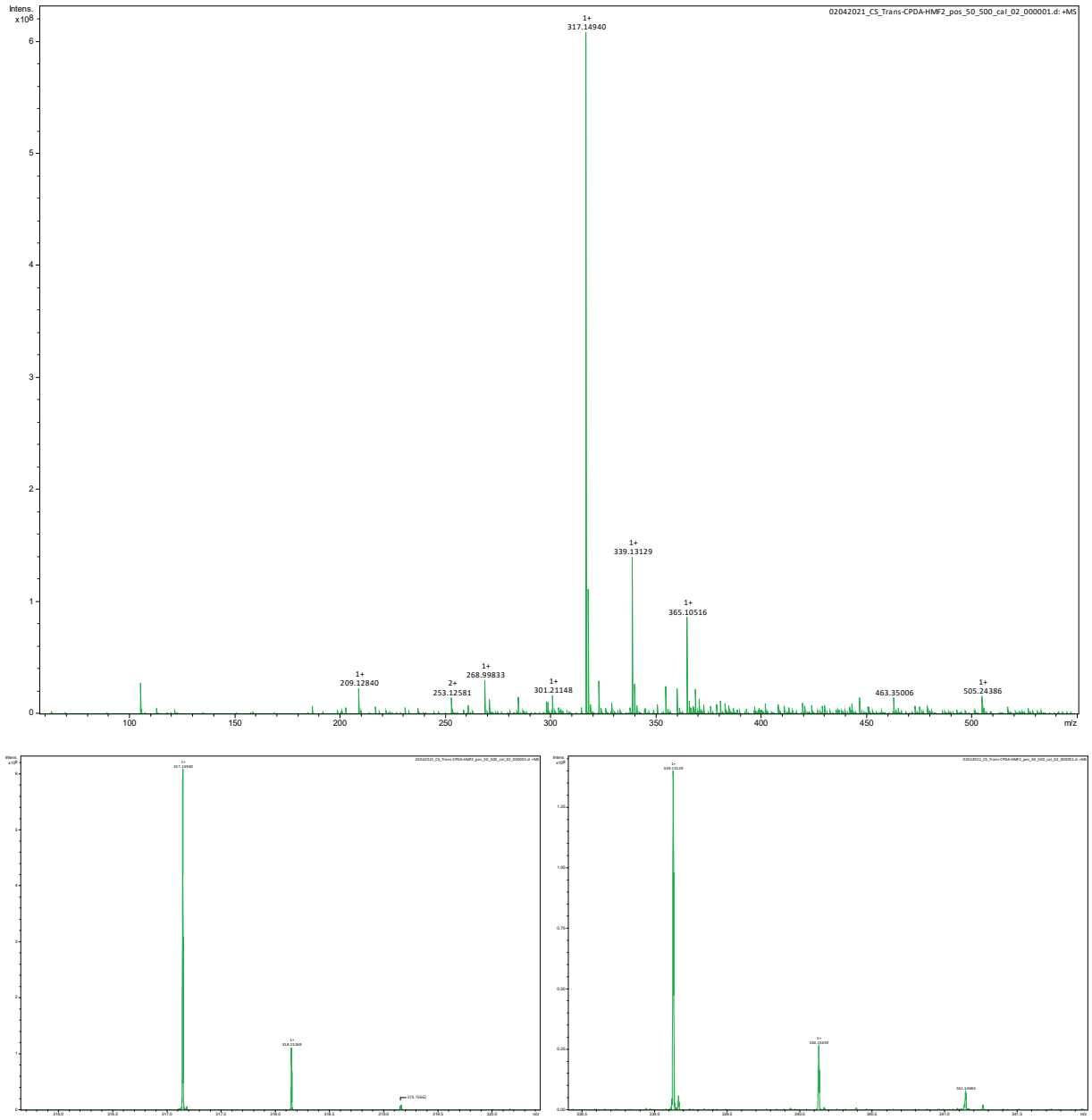


*Figure S2.4.10: HR-MS analysis in ESI+ mode of **10**; full spectrum (top); zoom of [**10** + H]⁺ (bottom-left), and zoom of [**10** + Na]⁺ (bottom-right).*

S2.5 Gel permeation chromatography (GPC):

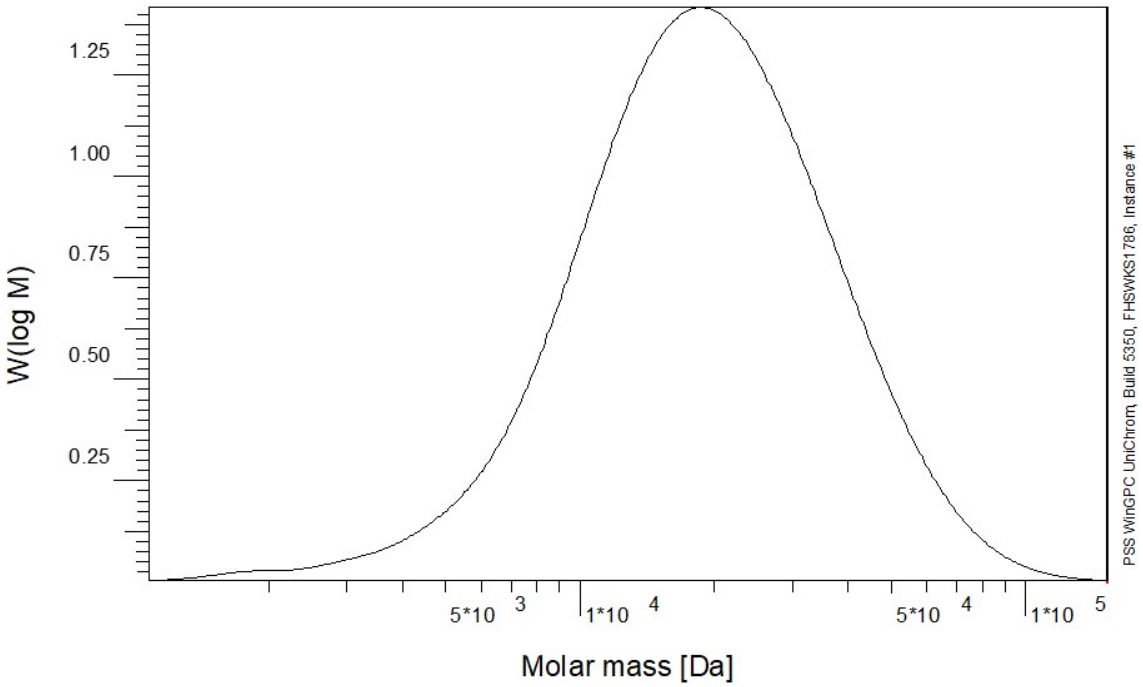


Figure S2.5.1: GPC chromatogram complementary to Table 3, entry 4.

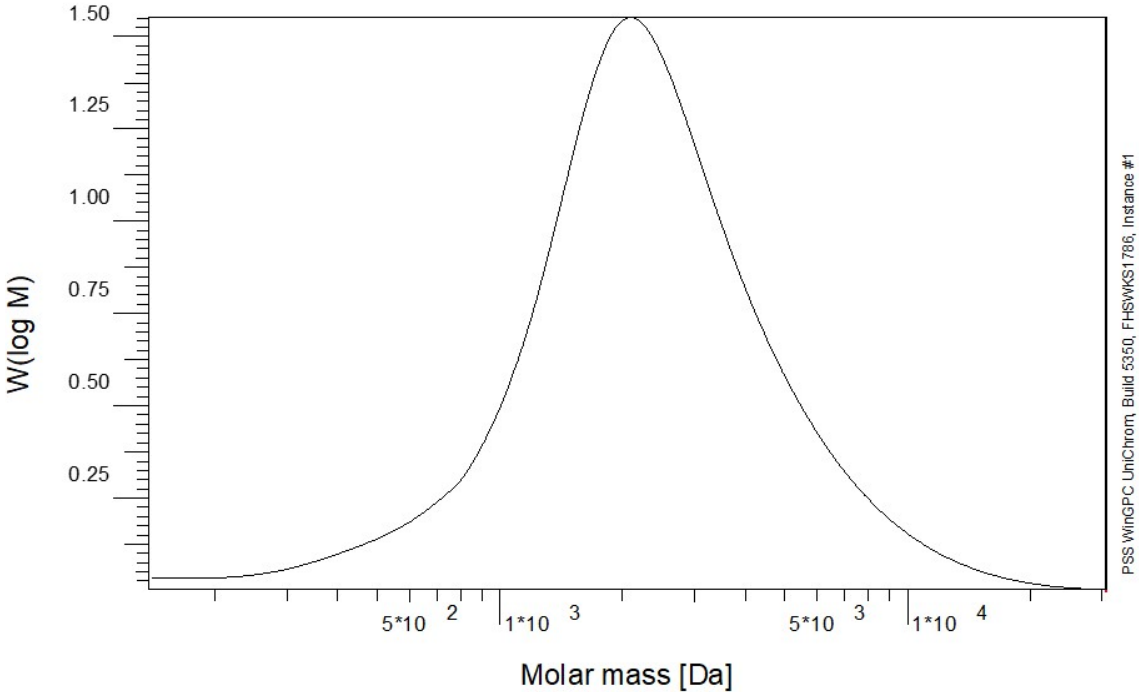


Figure S2.5.1: GPC chromatogram complementary to Table 3, entry 5.

S2.6 Thermogravic analysis (TGA):

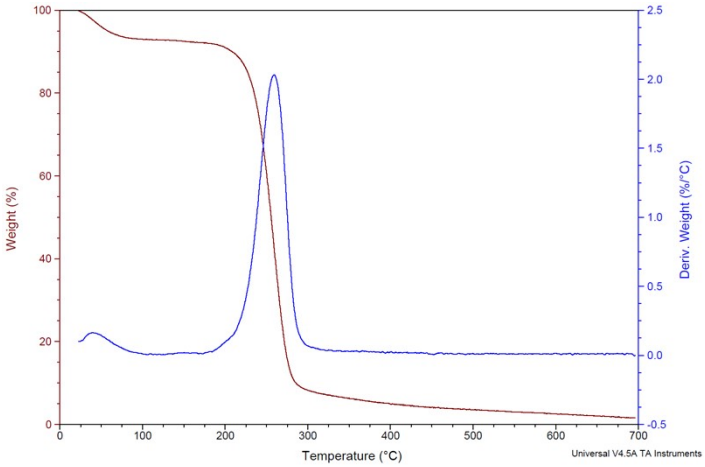


Figure S2.6.1: TGA plot complementary to Table 3, entry 3.

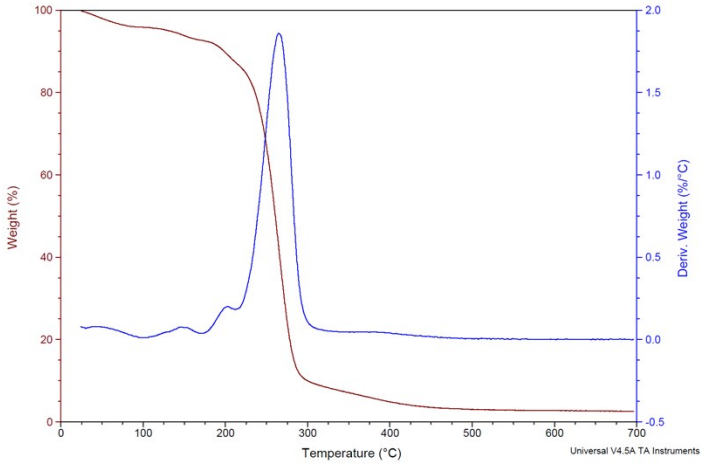


Figure S2.6.2: TGA plot complementary to Table 3, entry 4.

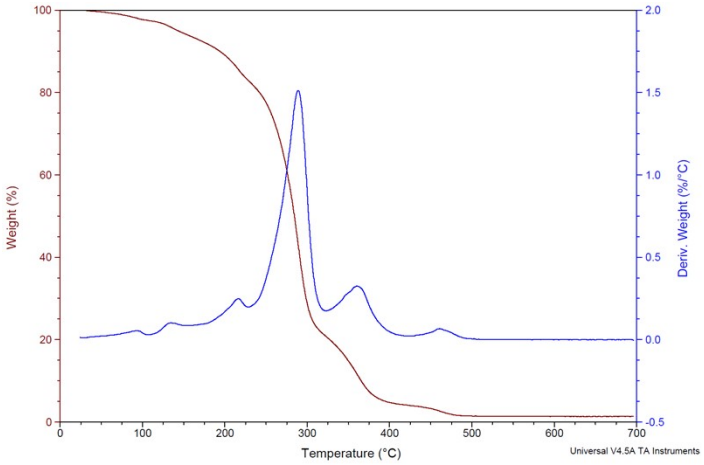


Figure S2.6.3: TGA plot complementary to Table 3, entry 5.

S2.7 Differential Scanning Calorimetry (DSC):

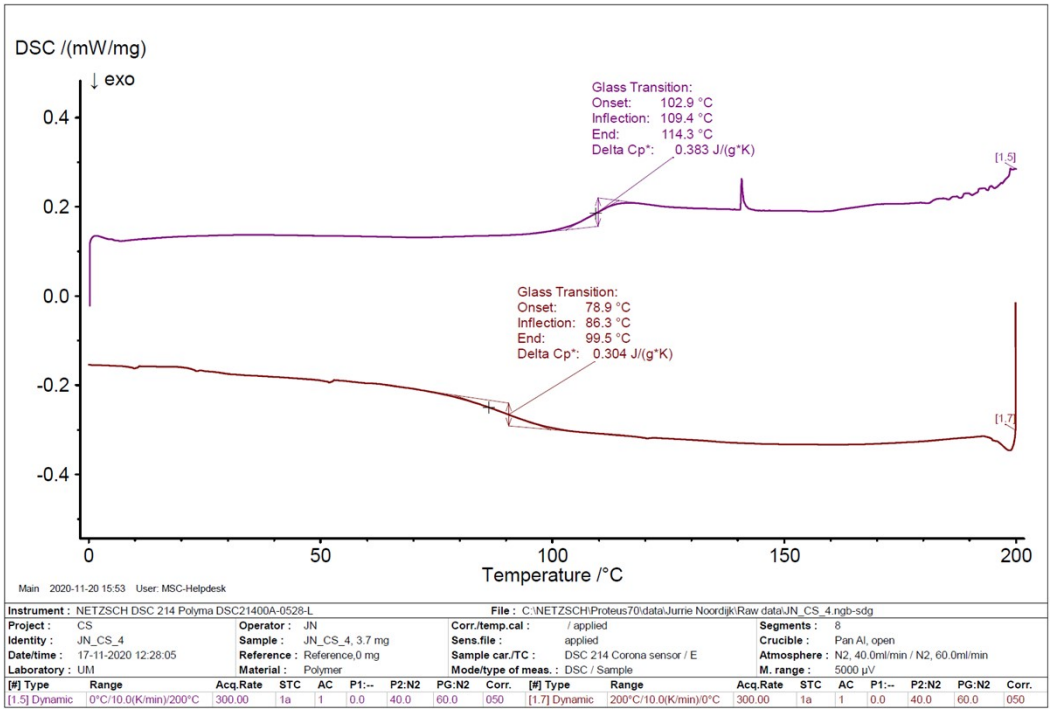


Figure S2.7.1: DSC plot complementary to Table 3, entry 3.

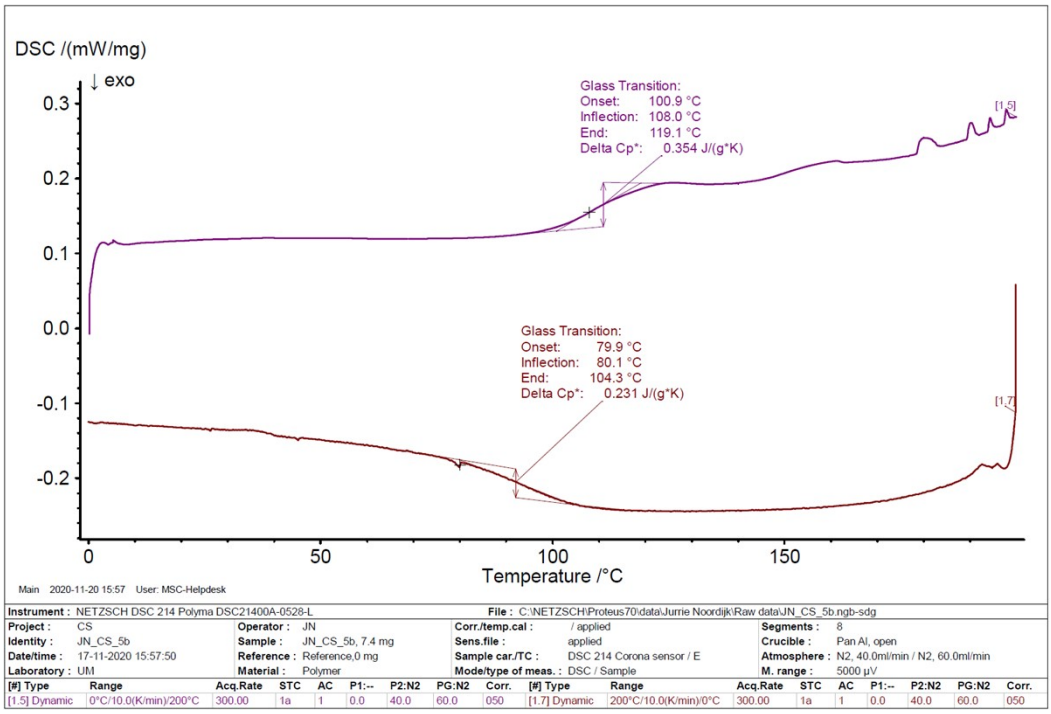
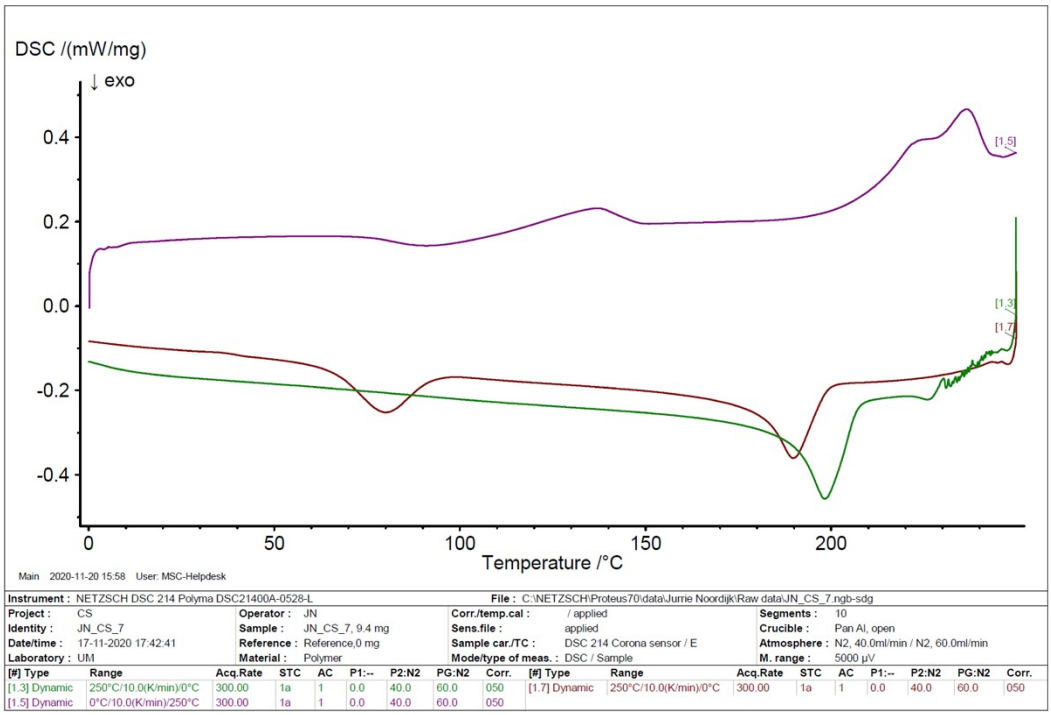


Figure S2.7.2: DSC plot complementary to Table 3, entry 4.



Instrument :	NETZSCH DSC 214 Polyma DSC21400A-0528-L							**File :**	C:\NETZSCH\Proteus70\data\Jurrie Noordijk\Raw data\JN_CS_7.ngb-sdg									
Project :	CS		**Operator :**	JN				**Corr./temp.cal :**	/ applied				**Segments :**	10				
Identity :	JN_CS_7		**Sample :**	JN_CS_7, 9.4 mg				**Sens.file :**	applied				**Crucible :**	Pan Al, open				
Date/time :	17-11-2020 17:42:41		**Reference :**	Reference,0 mg				**Sample car./TC :**	DSC 214 Corona sensor / E				**Atmosphere :**	N2, 40.0ml/min / N2, 60.0ml/min				
Laboratory :	UM		**Material :**	Polymer				**Mode/type of meas. :**	DSC / Sample				**M. range :**	5000 µV				
[#] Type	**Range**	**Acq.Rate**	**STC**	**AC**	**P1:--**	**P2:N2**	**PG:N2**	**Corr.**	**[#] Type**	**Range**	**Acq.Rate**	**STC**	**AC**	**P1:--**	**P2:N2**	**PG:N2**	**Corr.**	
[1.3] Dynamic	250°C/10.0(K/min)/0°C	300.00	1a	1	0.0	40.0	60.0	050	[1.7] Dynamic	250°C/10.0(K/min)/0°C	300.00	1a	1	0.0	40.0	60.0	050	
[1.5] Dynamic	0°C/10.0(K/min)/250°C	300.00	1a	1	0.0	40.0	60.0	050										

Figure S2.7.3: DSC plot complementary to Table 3, entry 5.