

Figure 1: Residue formation trends in 3-methylmercaptopropionaldehyde with varying water content (Examples 6-9)

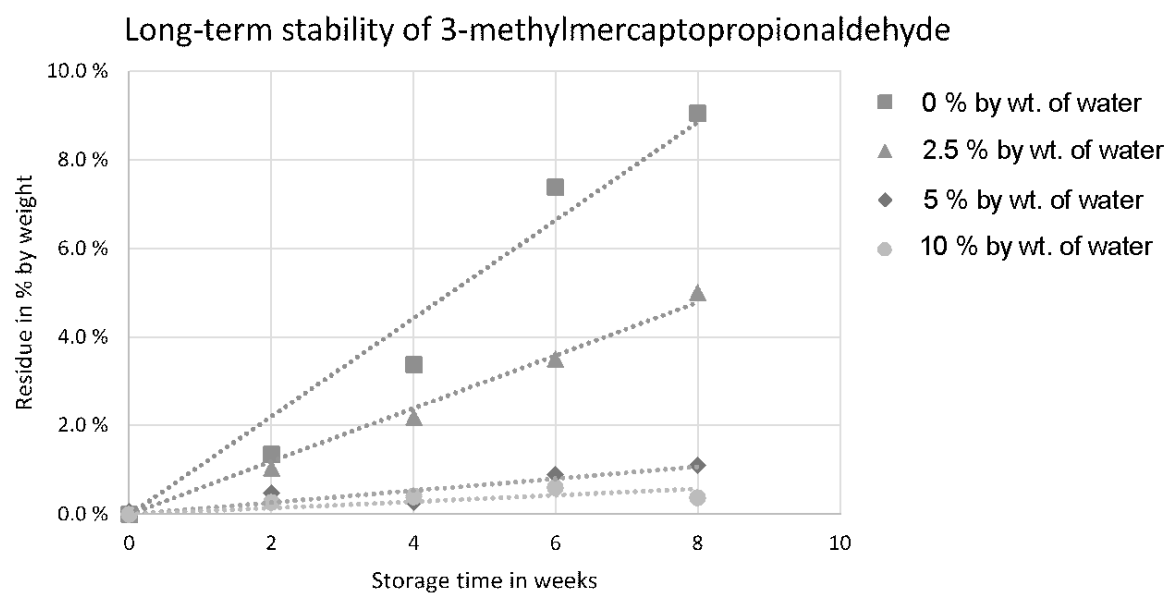


Figure 2: Exemplary ^{13}C NMR spectrum of a composition according to the invention

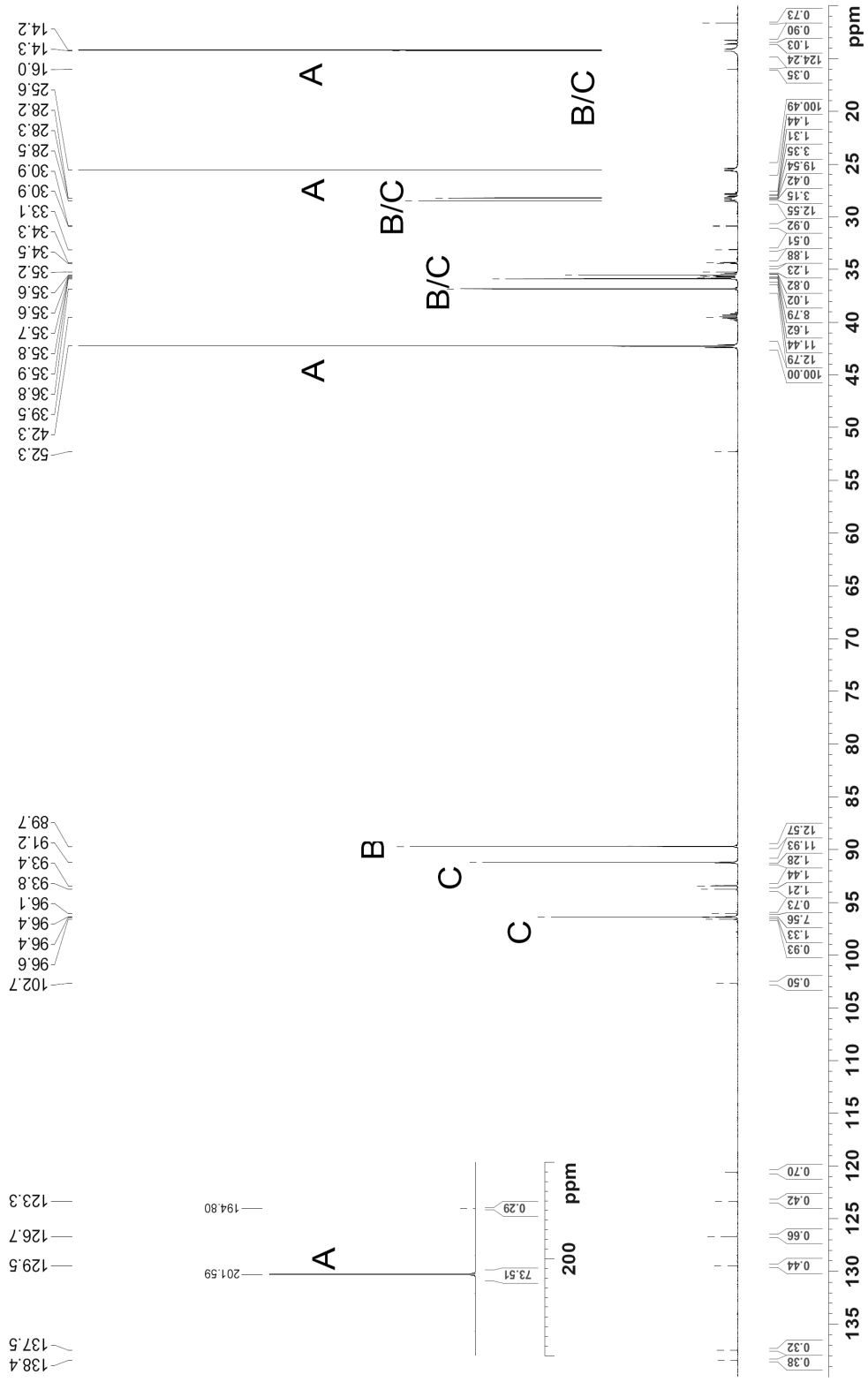
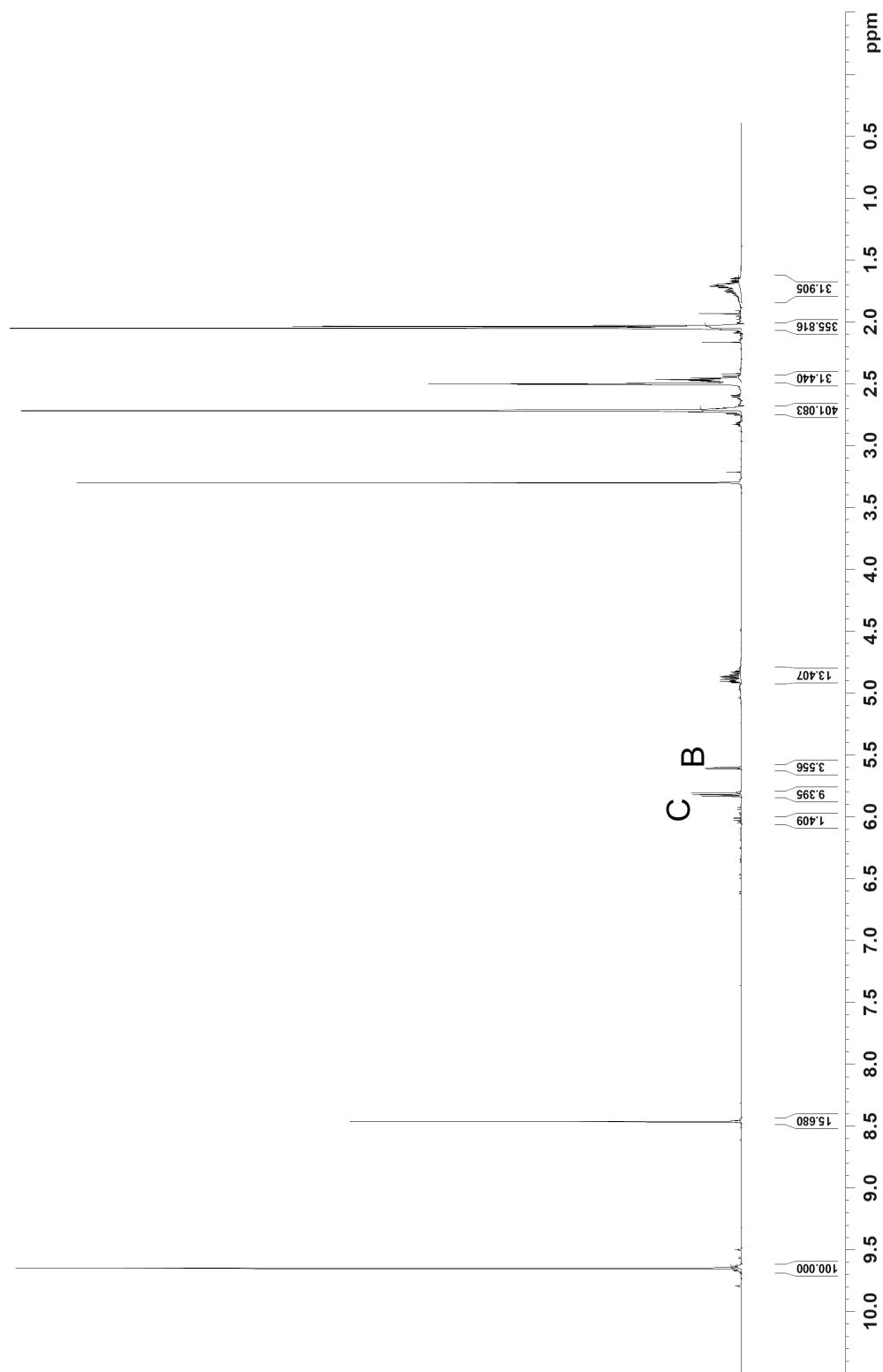
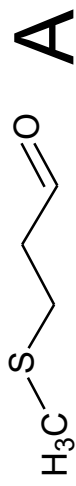


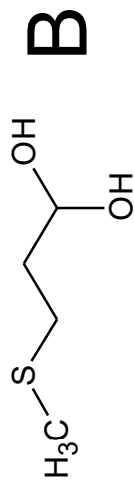
Figure 3: Exemplary ^1H NMR spectrum of a composition according to the invention



Explanations regarding Figures 2 and 3 for the purpose of signal assignment

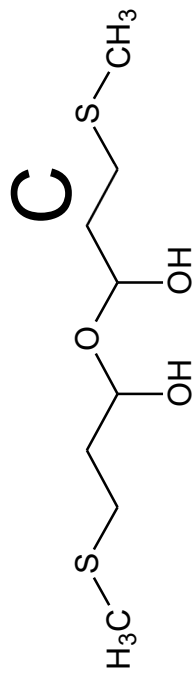


Molecular weight: 104.17



Empirical formula: $C_4H_{10}O_2S$

Molecular weight: 122.19



Empirical formula: $C_8H_{18}O_3S_2$

Molecular weight: 226.36

Expanation regarding Figures 2 and 3
Determination of the molar and weight proportions of the composition according to the invention according to ¹³C and ¹H NMR spectra:

Relative, molar proportions from ¹³C spectrum

Component	Signal position [ppm]	Integral	Factor	Corrected integral	Ratio [mol%]
A: MMP	42.3	100.000	1	100.000	81.8
B: MMP hydrate (MMP-OH)	89.7	12.570	1	12.570	10.3
C: Dimers (MMP2O)	96.6/91.2	19.490	2	9.745	7.9
				122.315	100.0

Content determination (quantitative NMR) ¹H NMR

	Integral	Factor	Corrected integral	Ratio in mol%	Molar amount (mmol)	Molar mass (g/mol)	Mass (mg)	Content (wt%)
Tetrachloronitrobenzene	15.680	1	15.680	12.8	0.027	260.89	7.02	
A: MMP	100.000	1	100.000	81.9	0.172	104.17	17.88	82.28
B: MMP hydrate (MMP-OH)	3.556	2	1.778	1.5	0.003	122.19	0.37	1.72
C: Dimers (MMP2O)	9.395	2	4.698	3.8	0.008	226.36	1.83	8.40
			122.156	100.0				92.40