

## Electronic Supplementary Information

### Nanoemulsions based on protic ionic liquids and oleic acid for treatment of dermatophytosis caused by *Microsporum canis*

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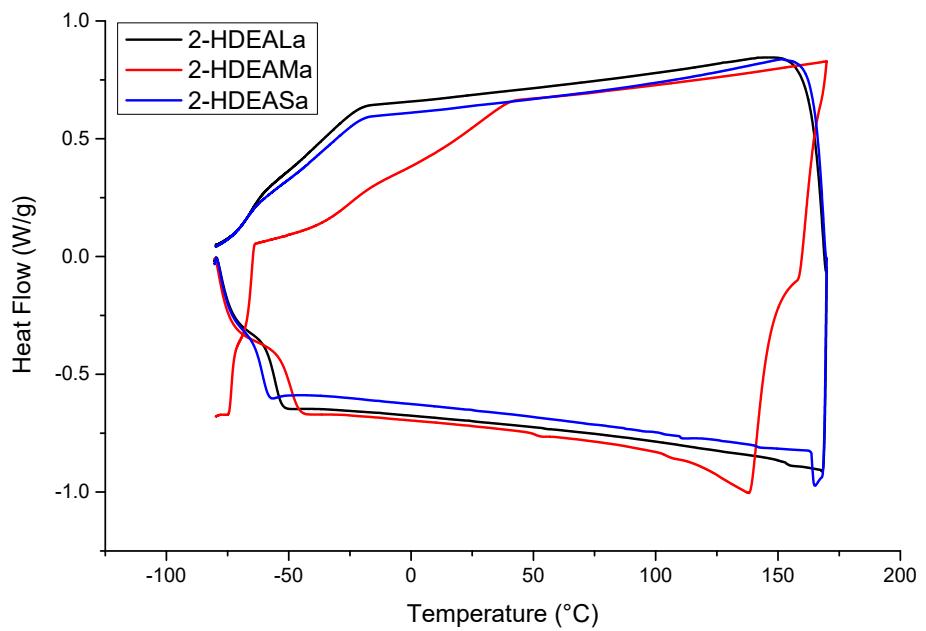
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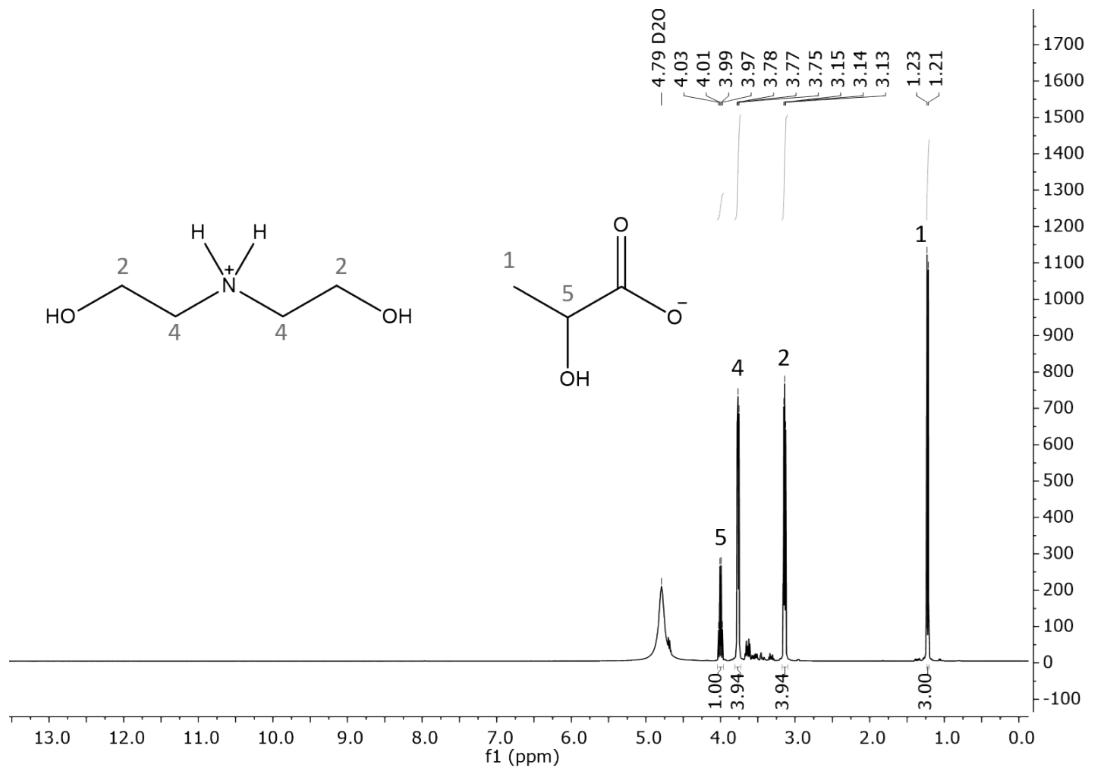
<sup>d</sup>Laboratory of Molecular Catalysis, Institute of Chemistry, Universidade Federal do Rio Grande do Sul (UFRGS), Av. Bento Gonçalves 9500, 91501-970, Porto Alegre, RS, Brazil.

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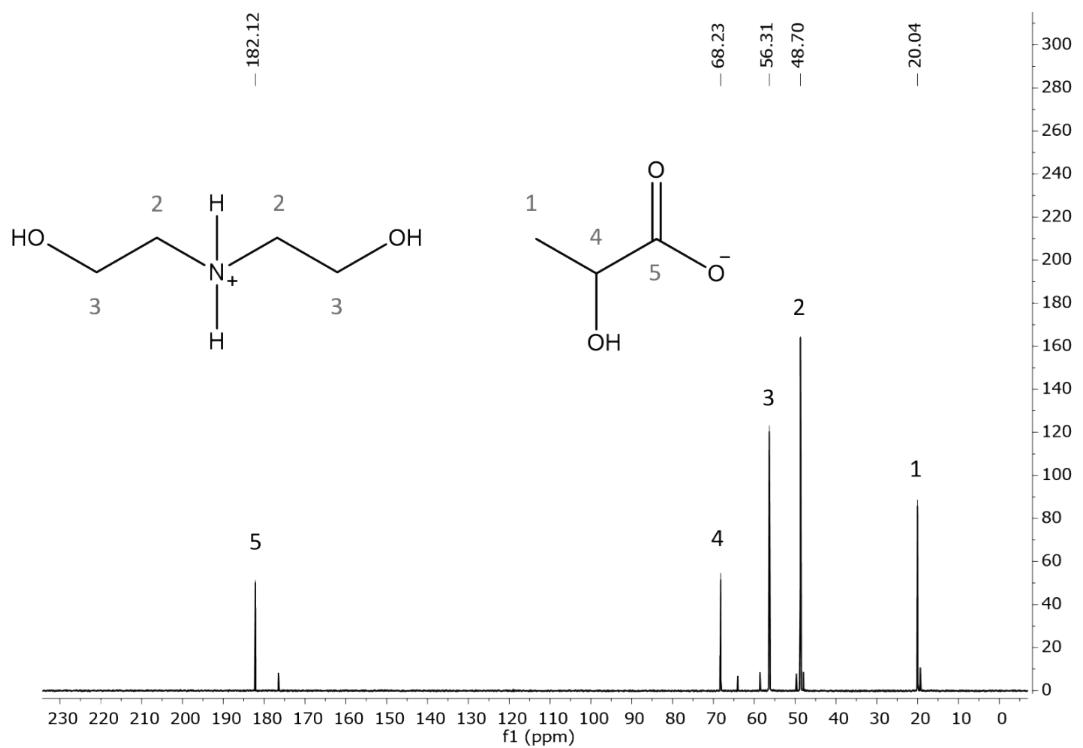
**\*Corresponding Author:** roberta.bussamara@ufrgs.br



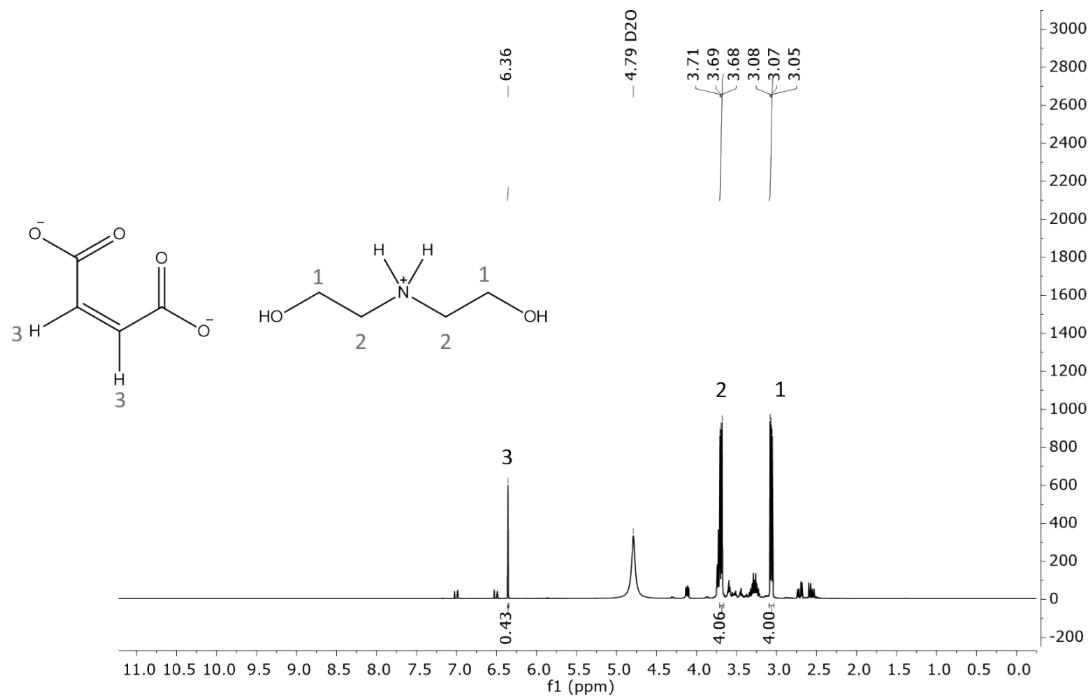
**Figure S1:** DSC thermogram of pure protic ionic liquids 2- HDEALa, 2- HDEAMa, 2- HDEASa.



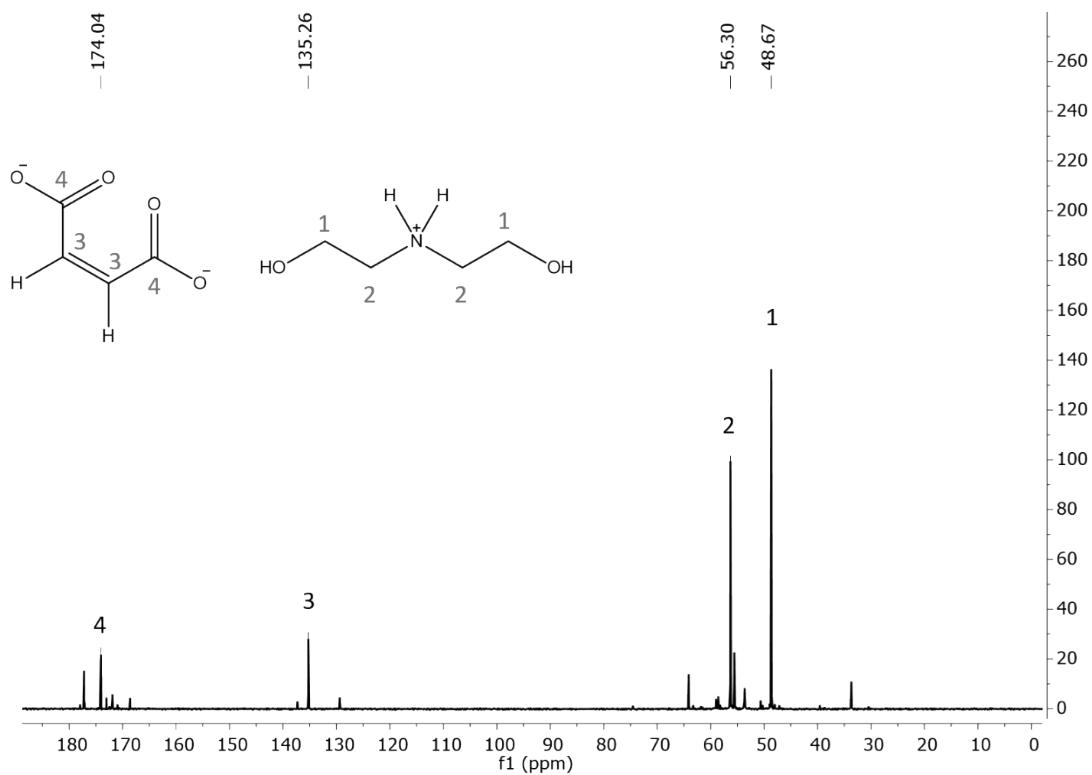
**Figure S2:** <sup>1</sup>H NMR spectrum of pure protic ionic liquid 2- HDEALa.



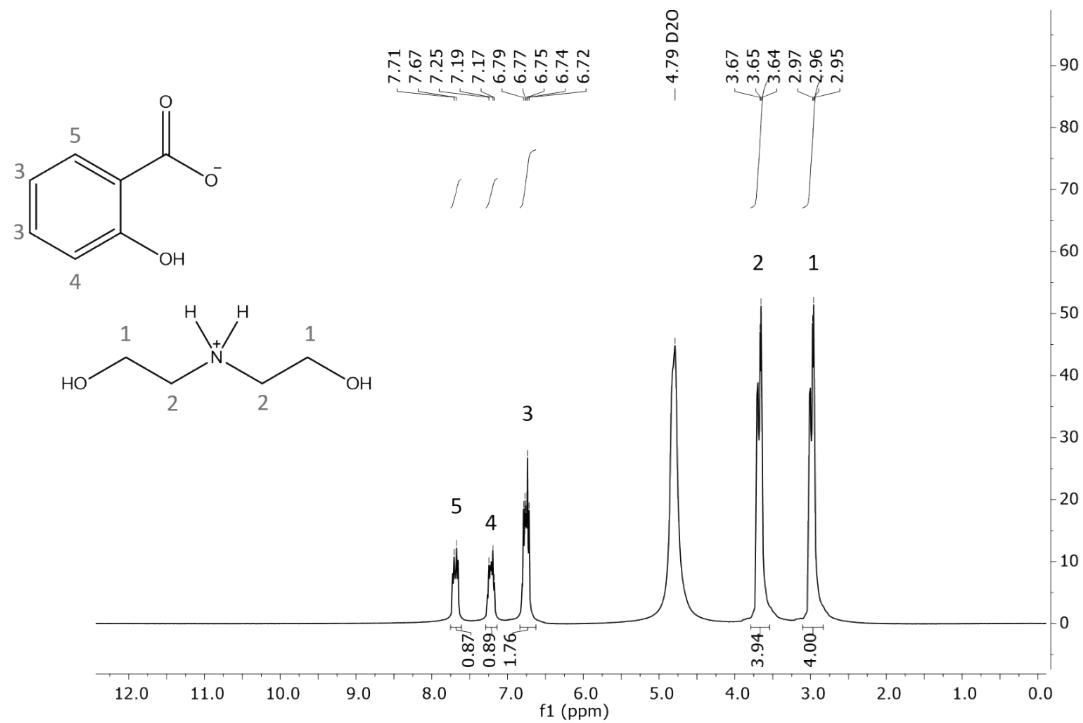
**Figure S3:**  $^{13}\text{C}$  NMR spectrum of pure protic ionic liquid 2- HDEALa.



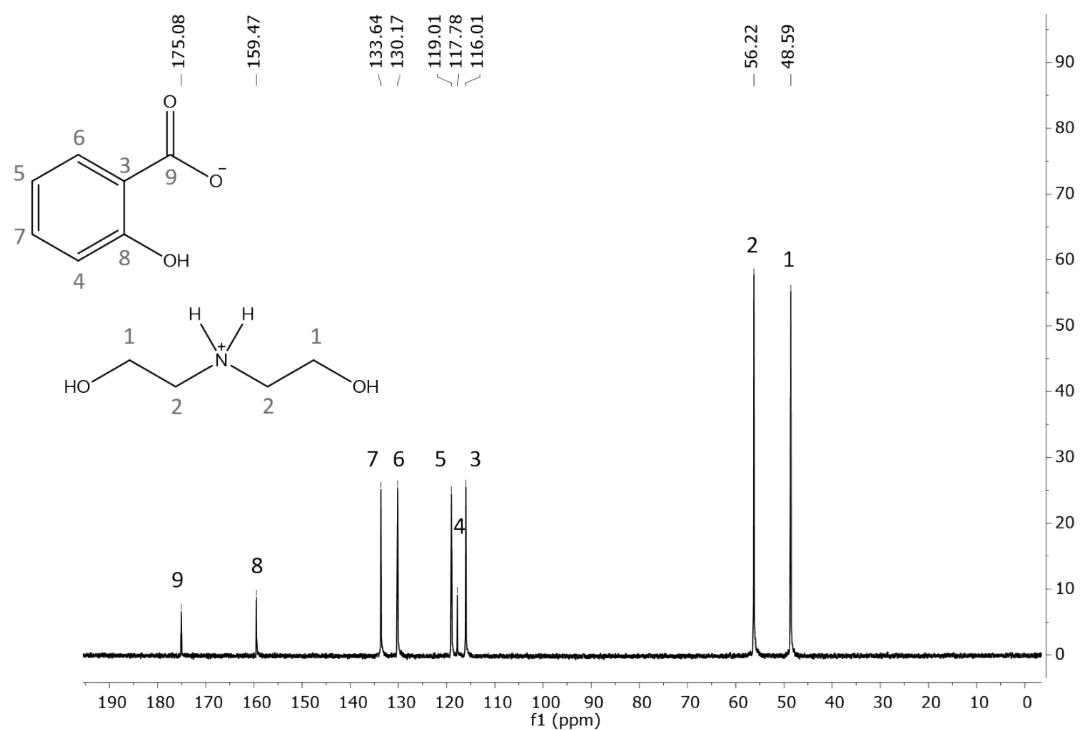
**Figure S4:**  $^1\text{H}$  NMR spectrum of pure protic ionic liquid 2- HDEAMa.



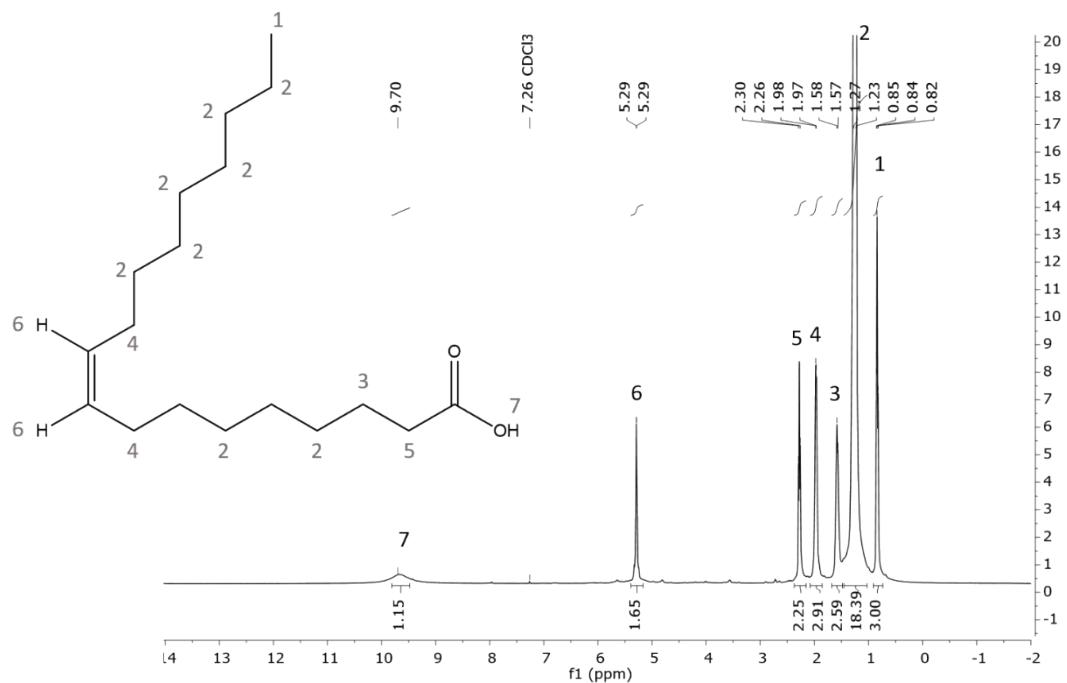
**Figure S5:**  $^{13}\text{C}$  NMR spectrum of pure protic ionic liquid 2- HDEAMa.



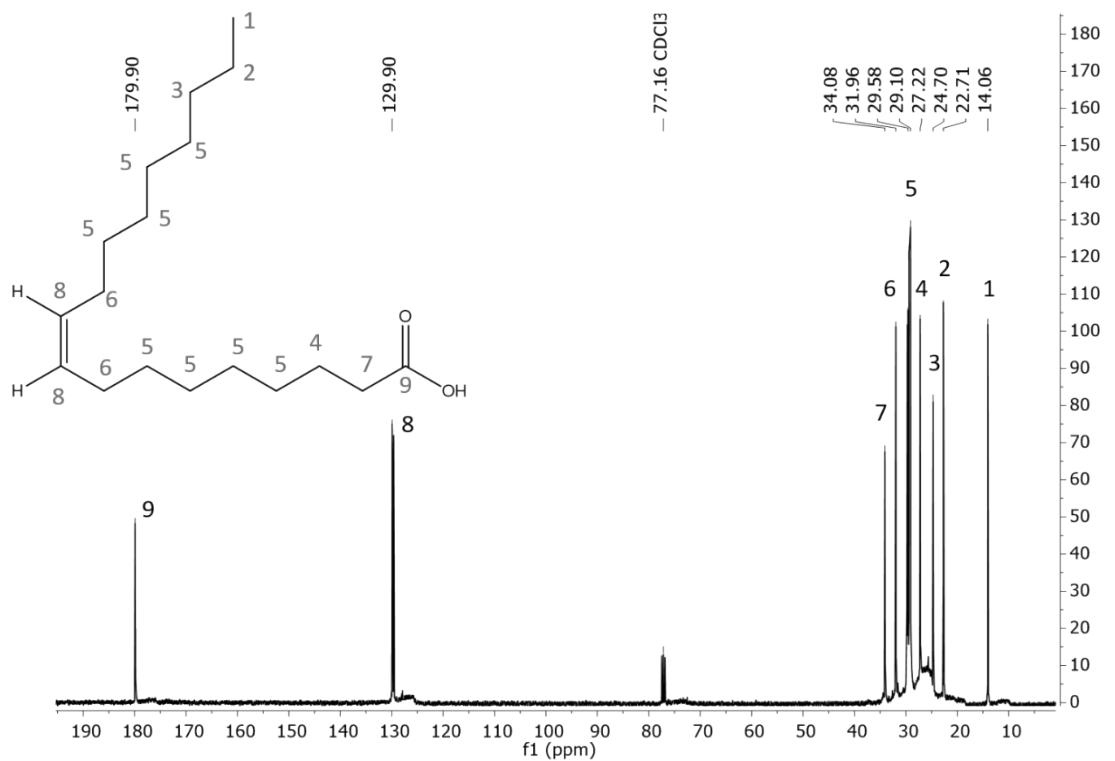
**Figure S6:**  $^1\text{H}$  NMR spectrum of pure protic ionic liquid 2- HDEASa.



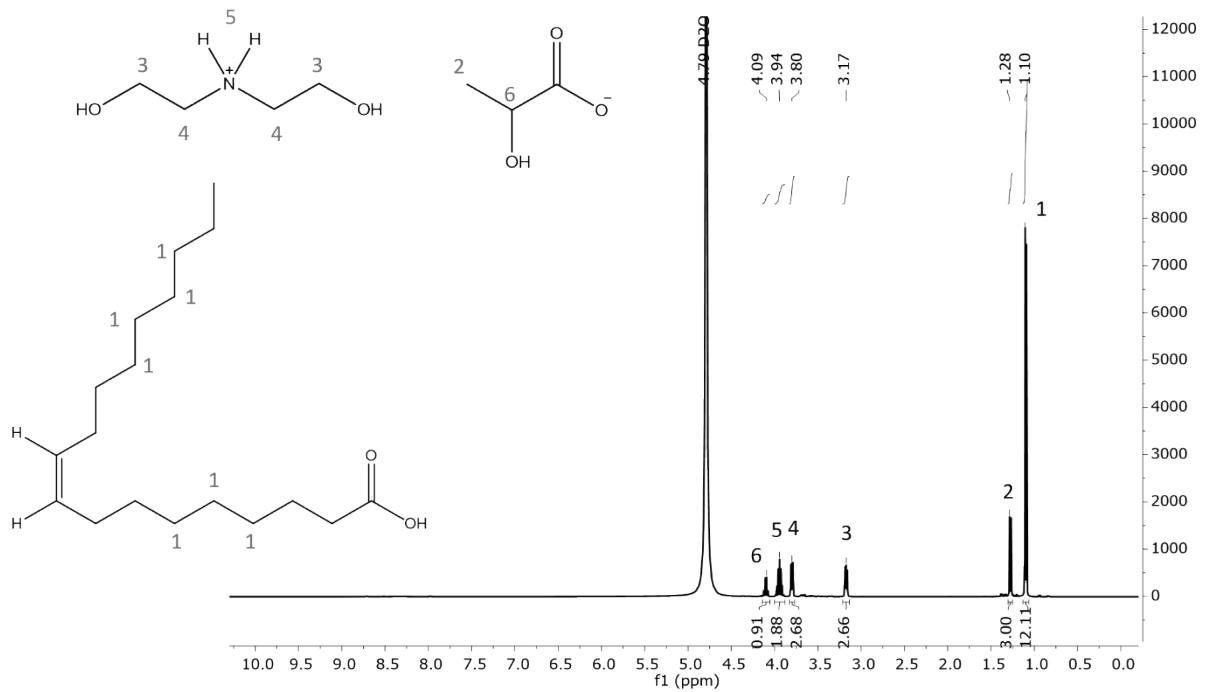
**Figure S7:**  $^{13}\text{C}$  NMR spectrum of pure protic ionic liquid 2- HDEASa.



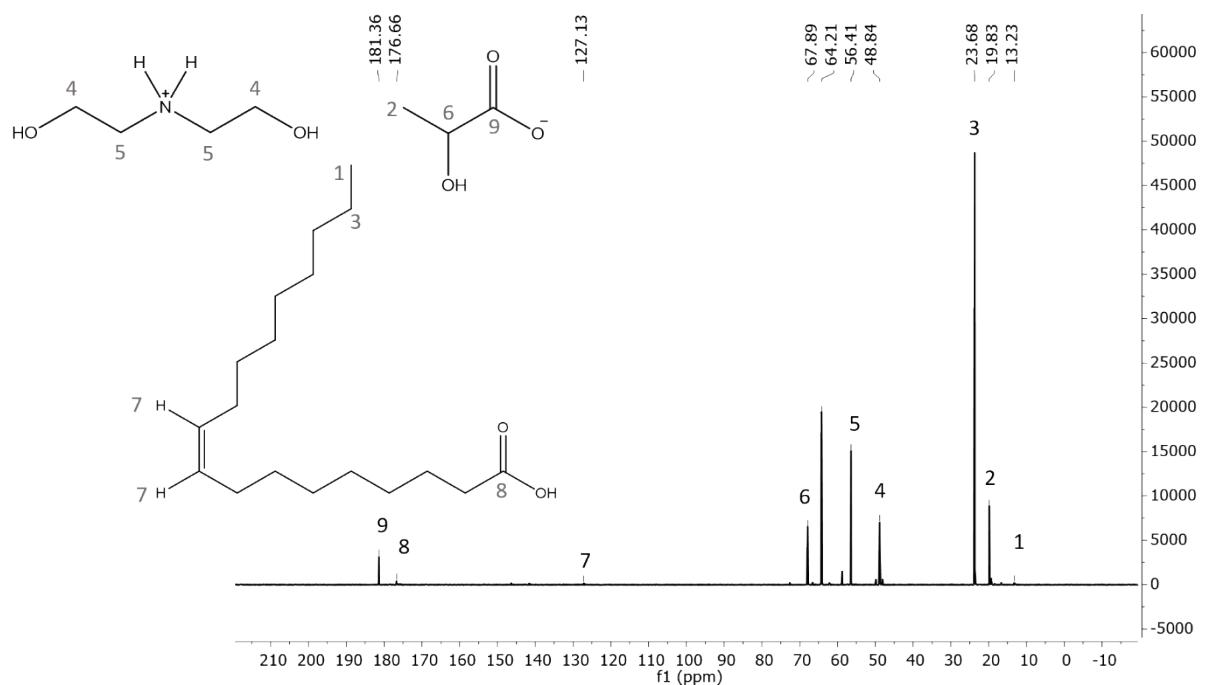
**Figure S8:**  $^1\text{H}$  NMR spectrum of oleic acid.



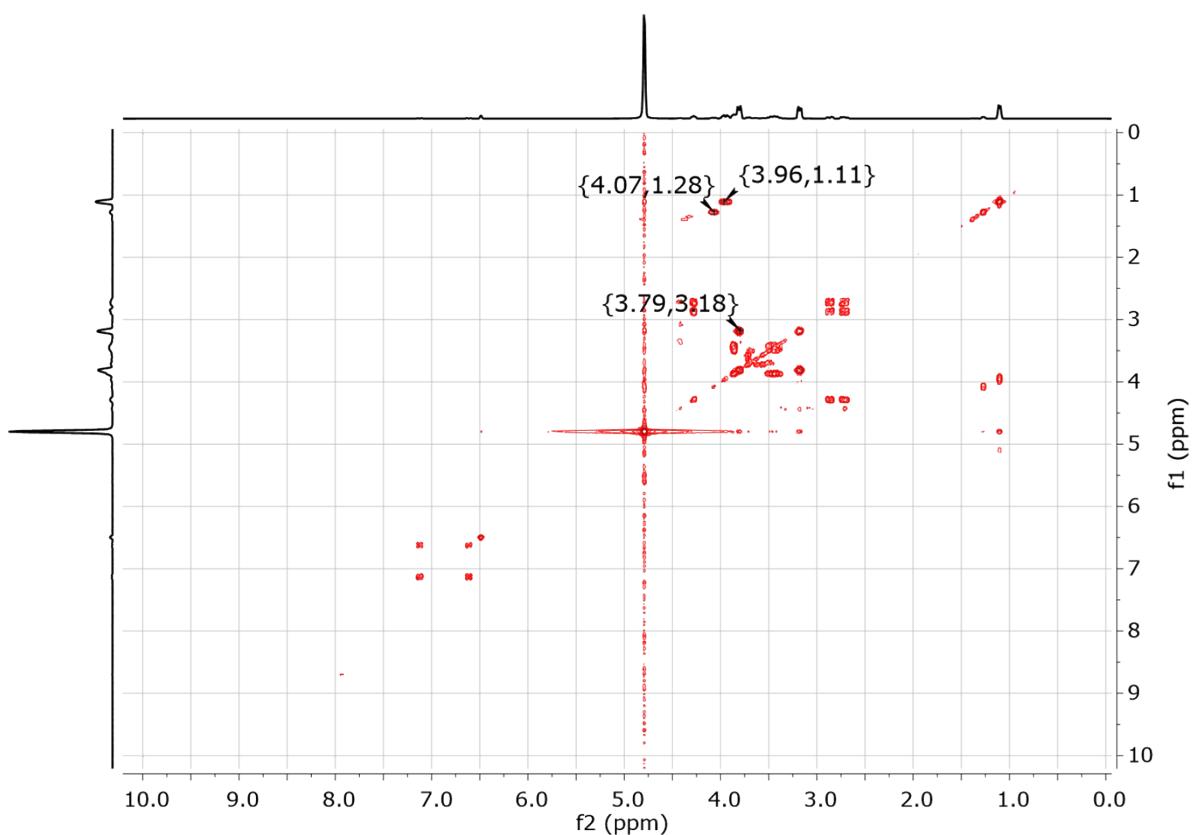
**Figure S9:**  $^{13}\text{C}$  NMR spectrum of oleic acid.



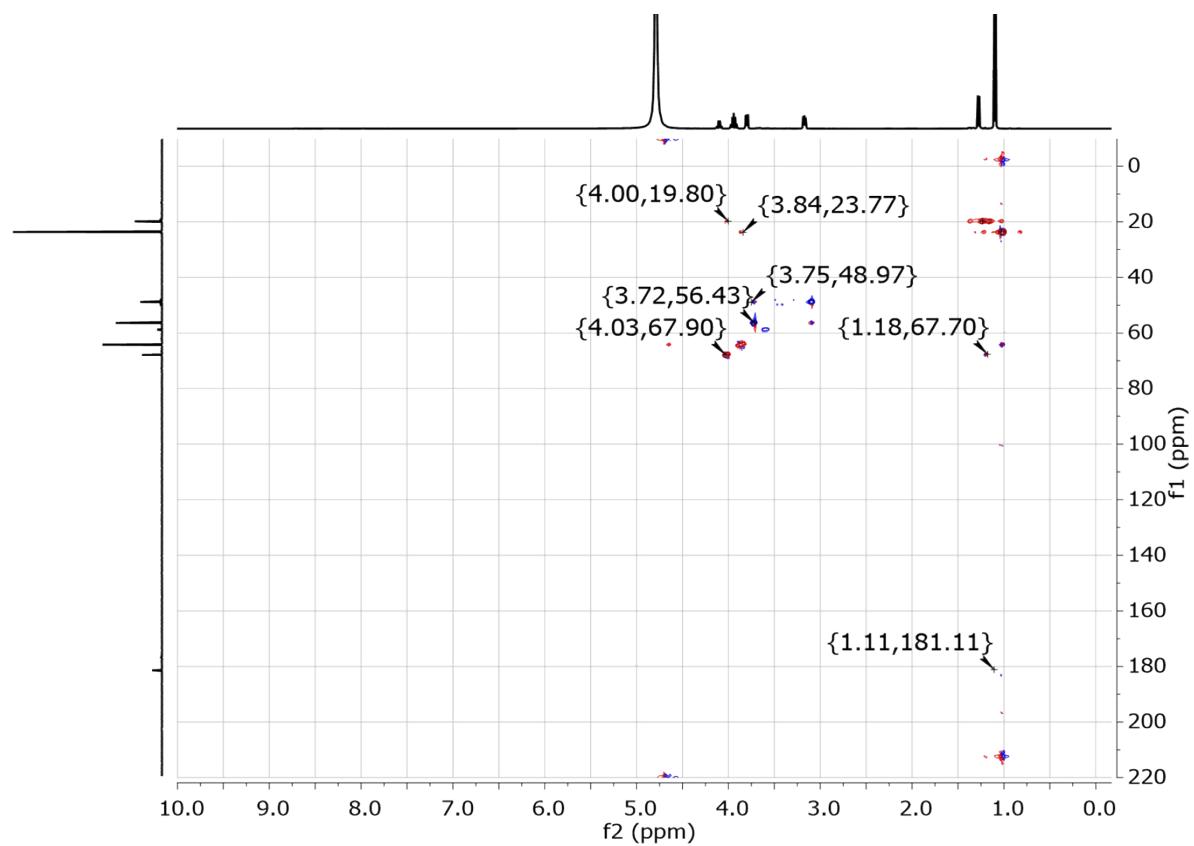
**Figure S10.**  $^1\text{H}$ -NMR (400 MHz) spectra of nanoemulsion with PIL 2-HDEALa in  $\text{D}_2\text{O}$



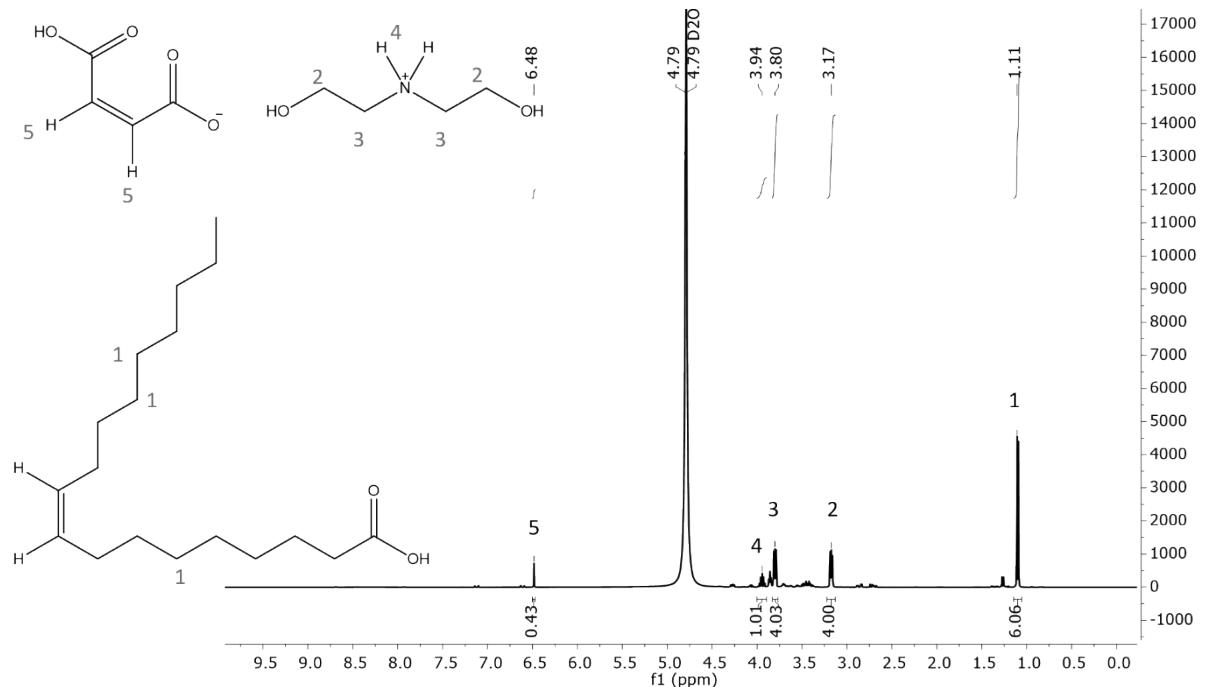
**Figure S11.**  $^{13}\text{C}$ -NMR (100 MHz) spectra of nanoemulsion with PIL 2-HDEALa in  $\text{D}_2\text{O}$



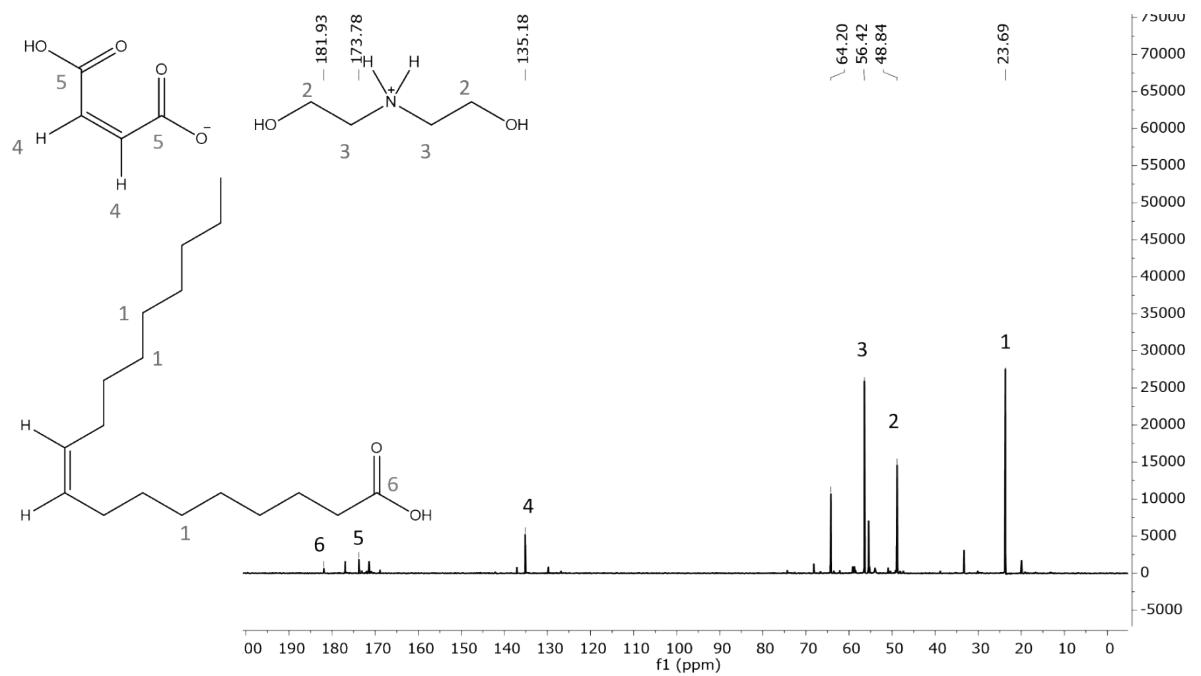
**Figure S12.**  $^1\text{H}$ - $^1\text{H}$  COSY contour map of nanoemulsion with PIL 2-HDEALa in  $\text{D}_2\text{O}$



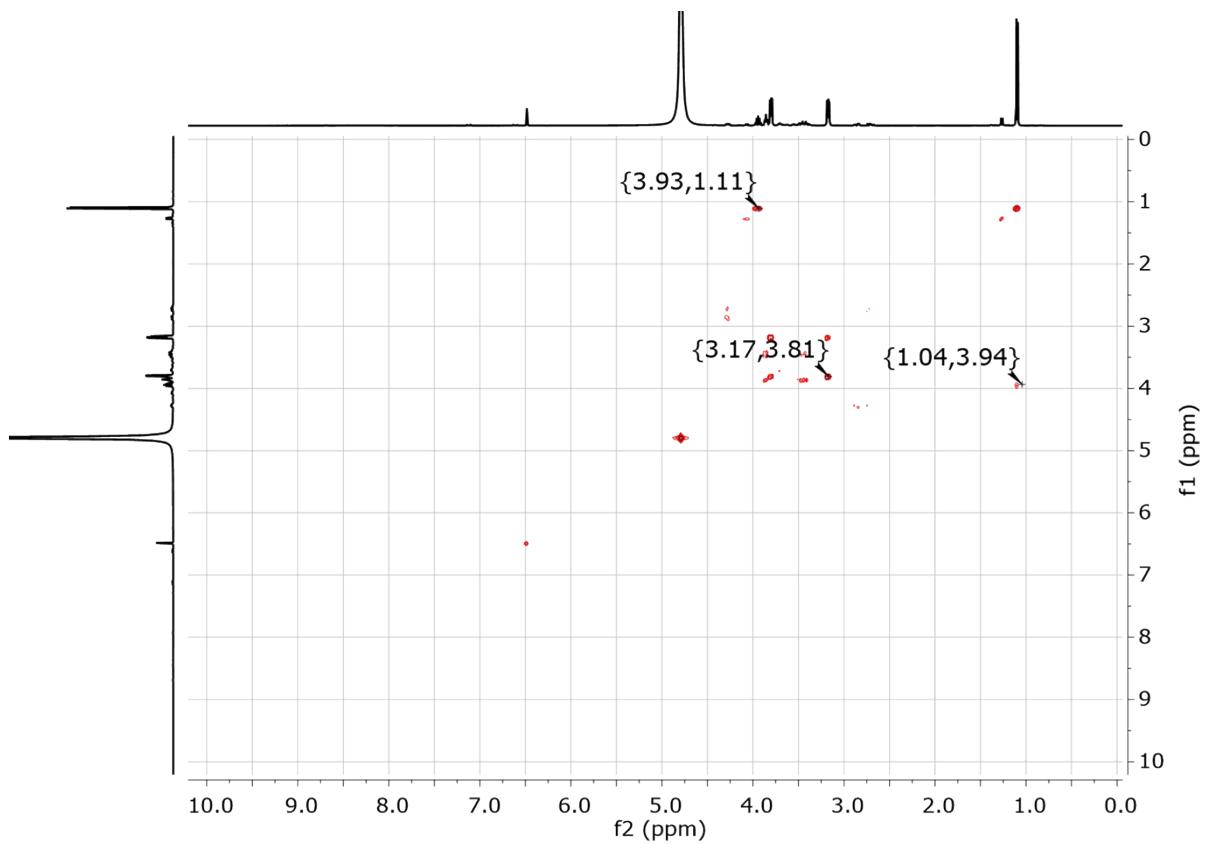
**Figure S13.**  $^1\text{H}$ - $^{13}\text{C}$  HSQC contour map of nanoemulsion with PIL 2-HDEALa in  $\text{D}_2\text{O}$



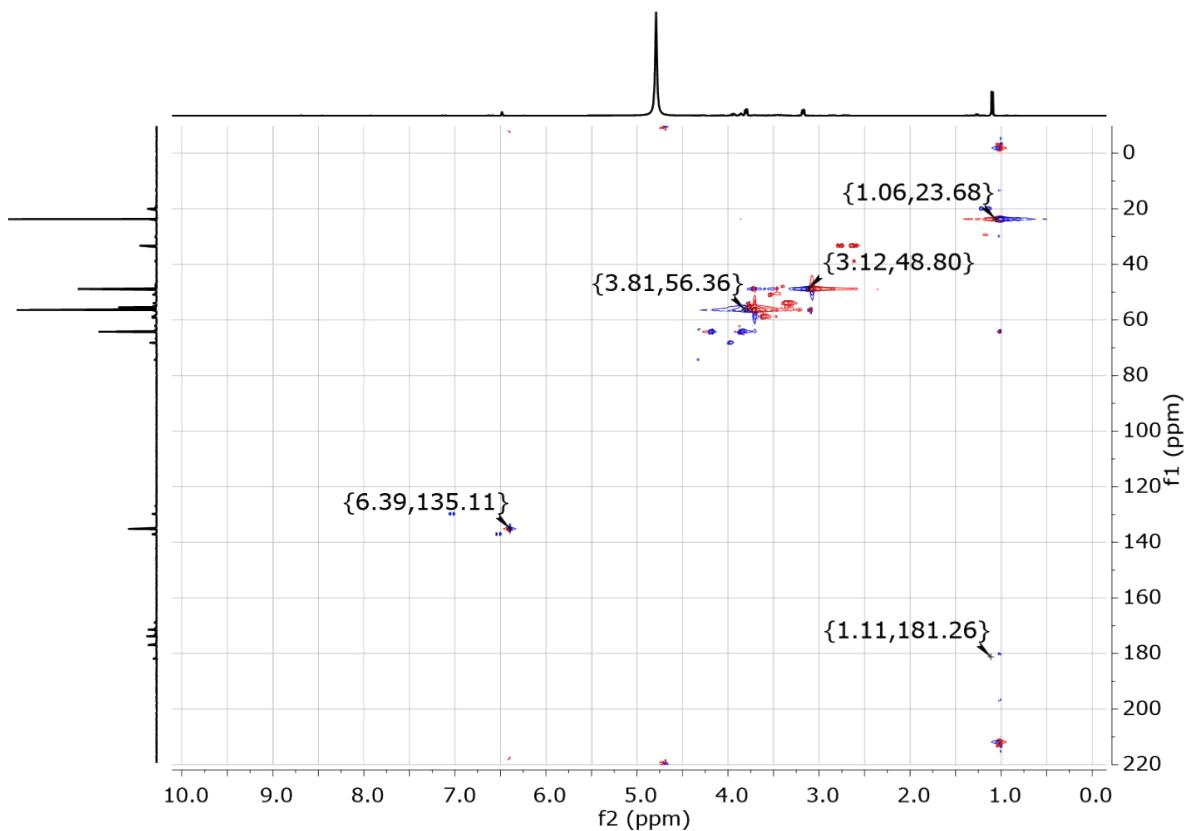
**Figure S14.**  $^1\text{H}$ -NMR (400 MHz) spectra of nanoemulsion with PIL 2-HDEAMa in  $\text{D}_2\text{O}$



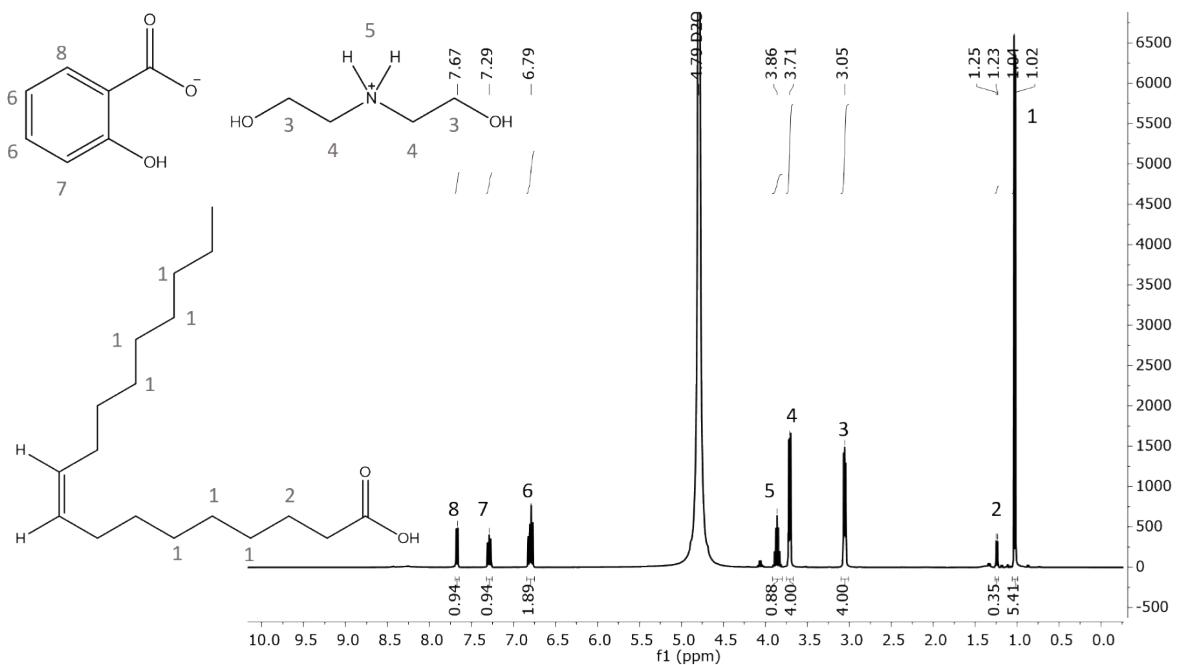
**Figure S15.**  $^{13}\text{C}$ -NMR (100 MHz) spectra of nanoemulsion with PIL 2-HDEAMa in  $\text{D}_2\text{O}$



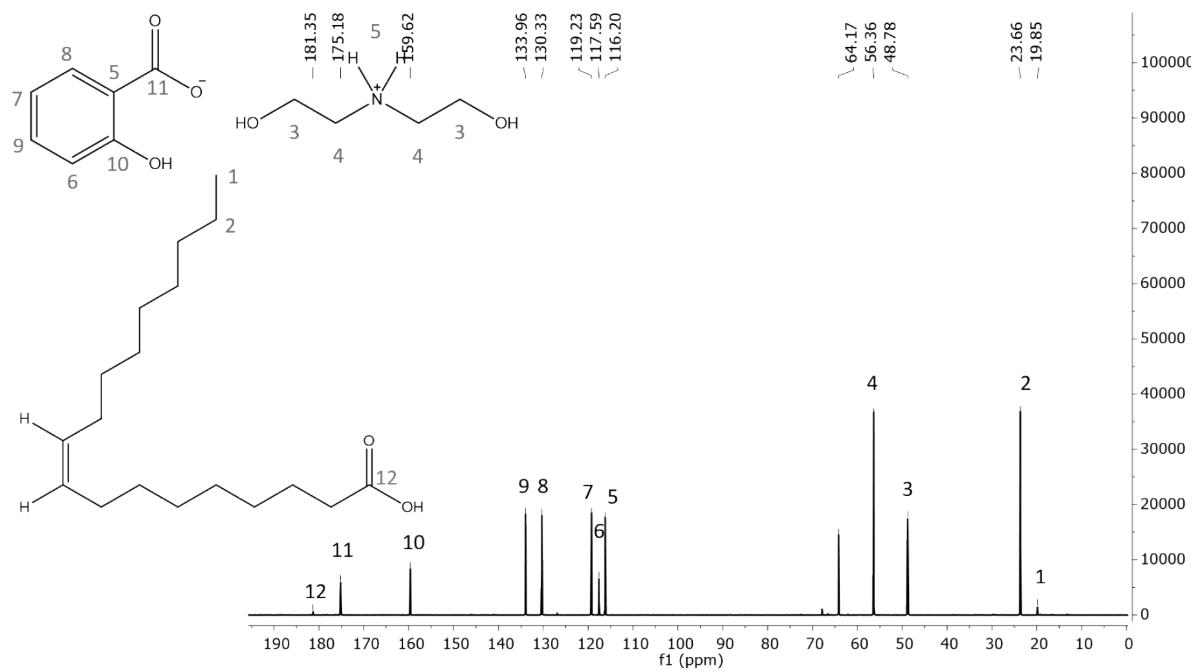
**Figure S16.**  $^1\text{H}$ - $^1\text{H}$  COSY contour map of nanoemulsion with PIL 2-HDEAMa in  $\text{D}_2\text{O}$



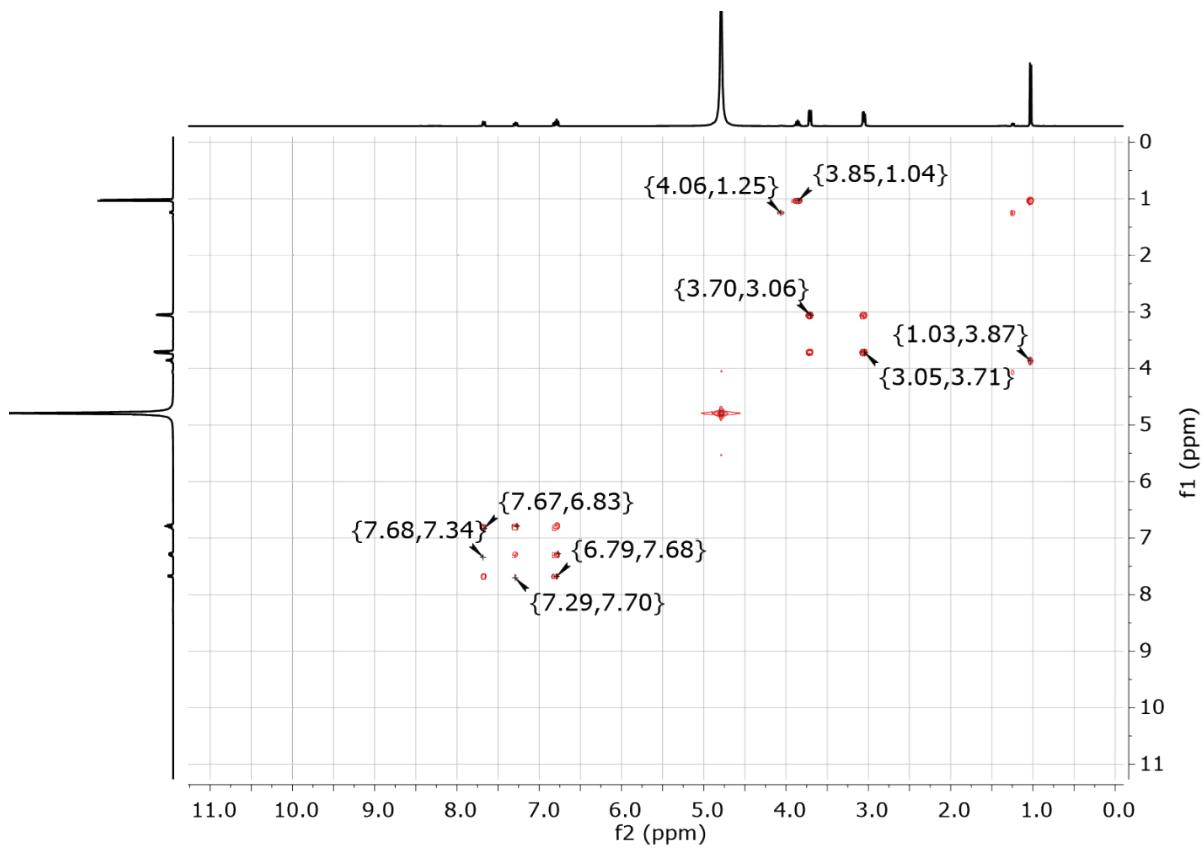
**Figure S17.**  $^1\text{H}$ - $^{13}\text{C}$  HSQC contour map of nanoemulsion with PIL 2-HDEAMa in  $\text{D}_2\text{O}$



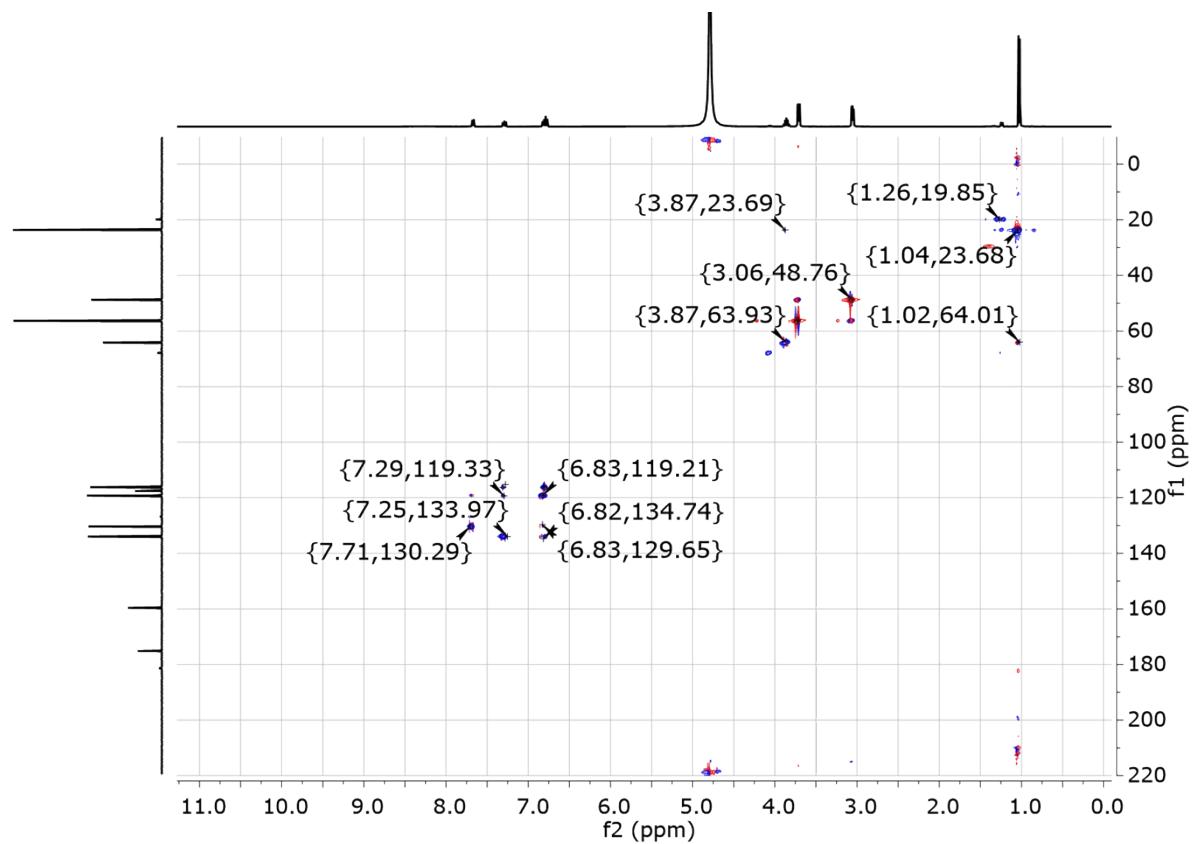
**Figure S18.**  $^1\text{H}$ -NMR (400 MHz) spectra of nanoemulsion with PIL 2-HDEASa in  $\text{D}_2\text{O}$



**Figure S19.**  $^{13}\text{C}$ -NMR (100 MHz) spectra of nanoemulsion with PIL 2-HDEASa in  $\text{D}_2\text{O}$



**Figure S20.**  $^1\text{H}$ - $^1\text{H}$  COSY contour map of nanoemulsion with PIL 2-HDEASa in  $\text{D}_2\text{O}$



**Figure S21.**  $^1\text{H}$ - $^{13}\text{C}$  HSQC contour map of nanoemulsion with PIL 2-HDEASa in  $\text{D}_2\text{O}$