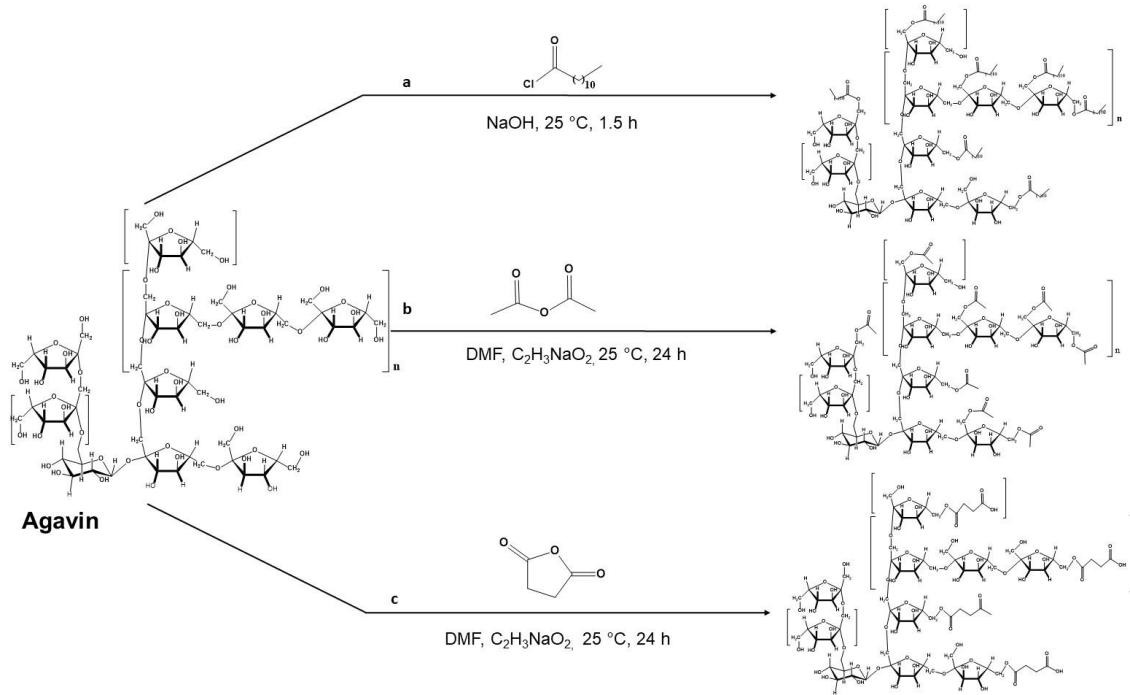
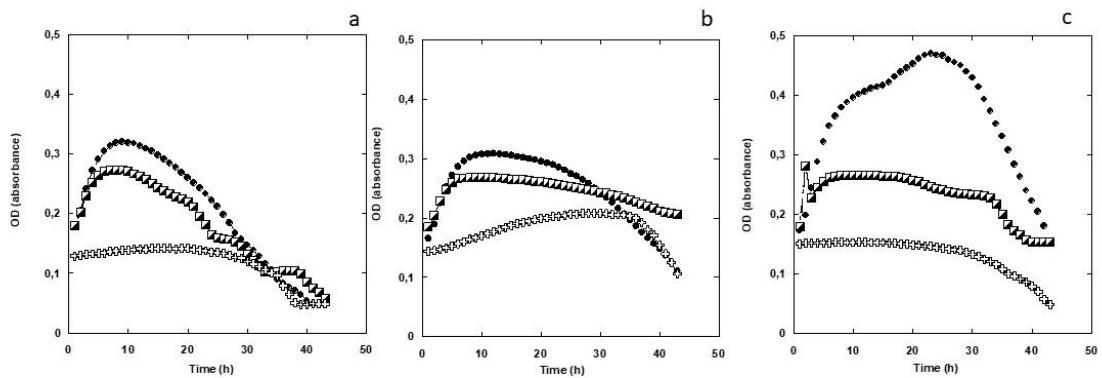


### Supplementary Materials:



**Figure S1.** Proposed reaction mechanism of Agavin for the lauroylation (a), acetylation (b), and succinylation (c) reactions.



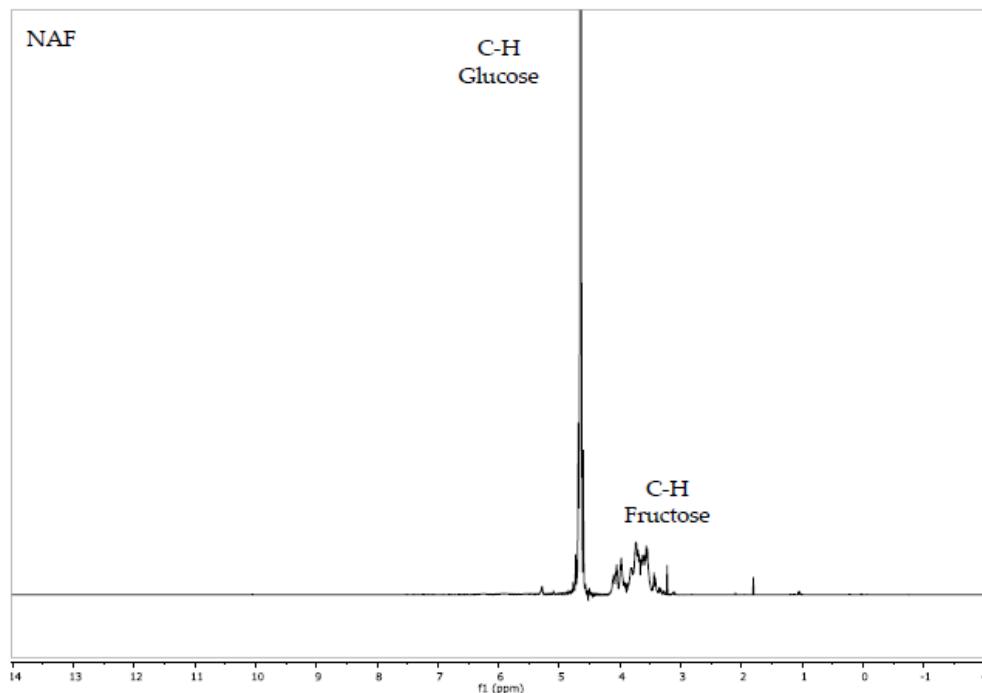
**Figure S2.** Growth curves of NAF (a), HPAF (b), and HDPAF (C) unmodified (●), acetylated, (□) and succinylated (▲).

Table S1. Absorbance during gastric and intestinal simulation in succinylated fructans.

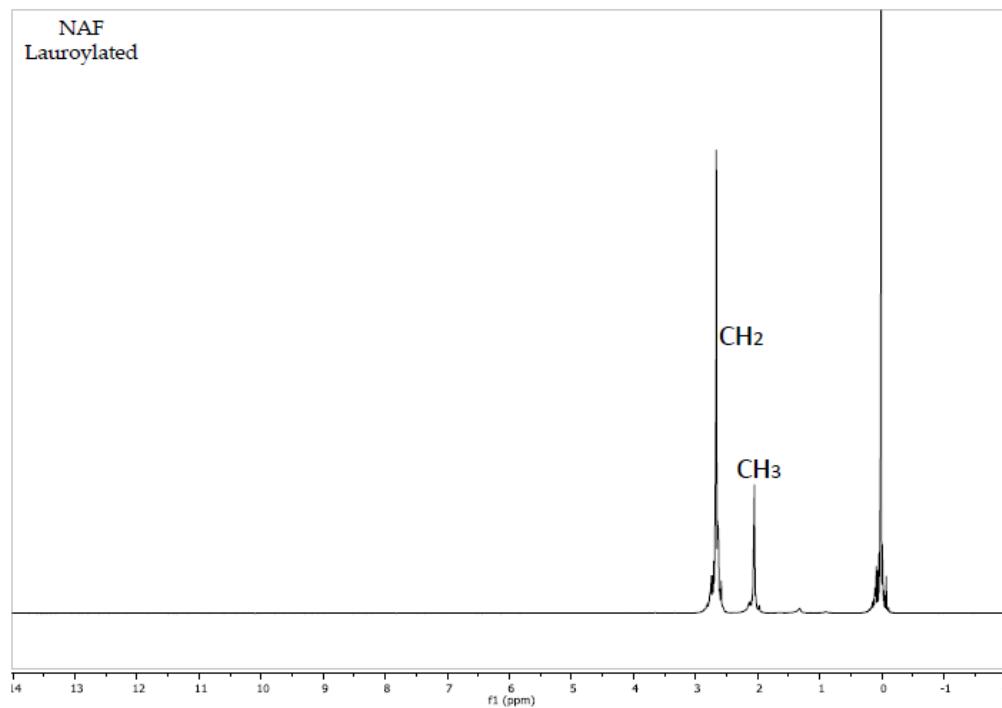
Fructans succinylated	Phase	Abs
NAF	Gastric	0.006 ± 0.01 <sup>a</sup>
HPAF		0.003 ± 0.01 <sup>a</sup>
HDPAF		0.002 ± 0.01 <sup>a</sup>
	Intestinal	
NAF		0.022 ± 0.06 <sup>b</sup>
HPAF		0.013 ± 0.01 <sup>b</sup>
HDPAF		0.016 ± 0.01 <sup>b</sup>

Values are given as mean ± SD (n = 3). Different letters denote significant differences (P < 0.05).

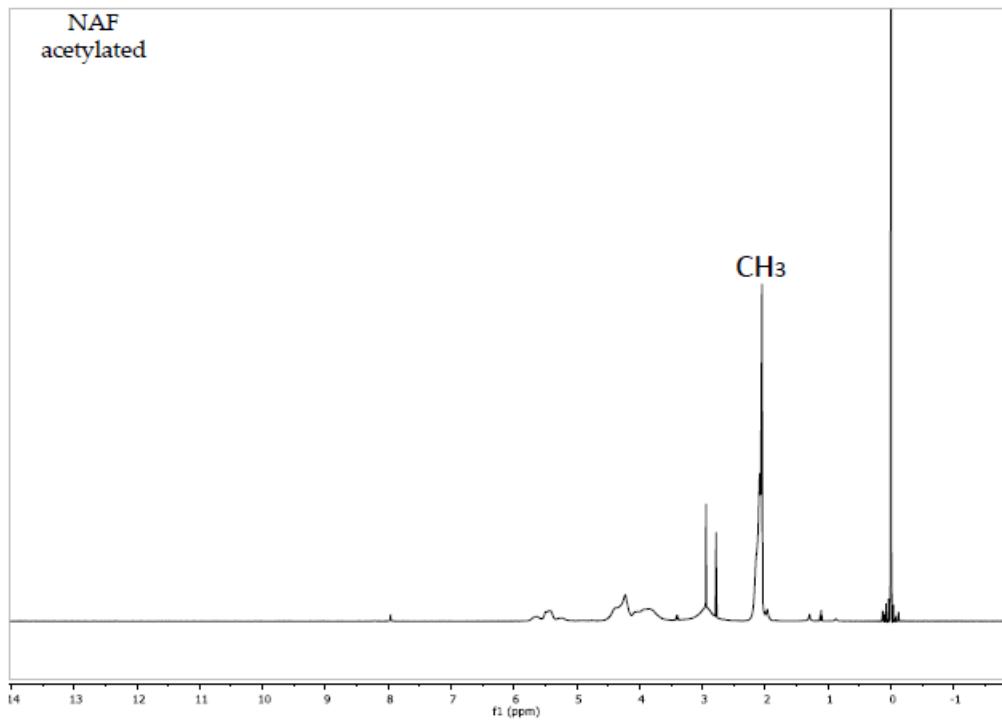
Figure S3. Full <sup>1</sup>H NMR spectra



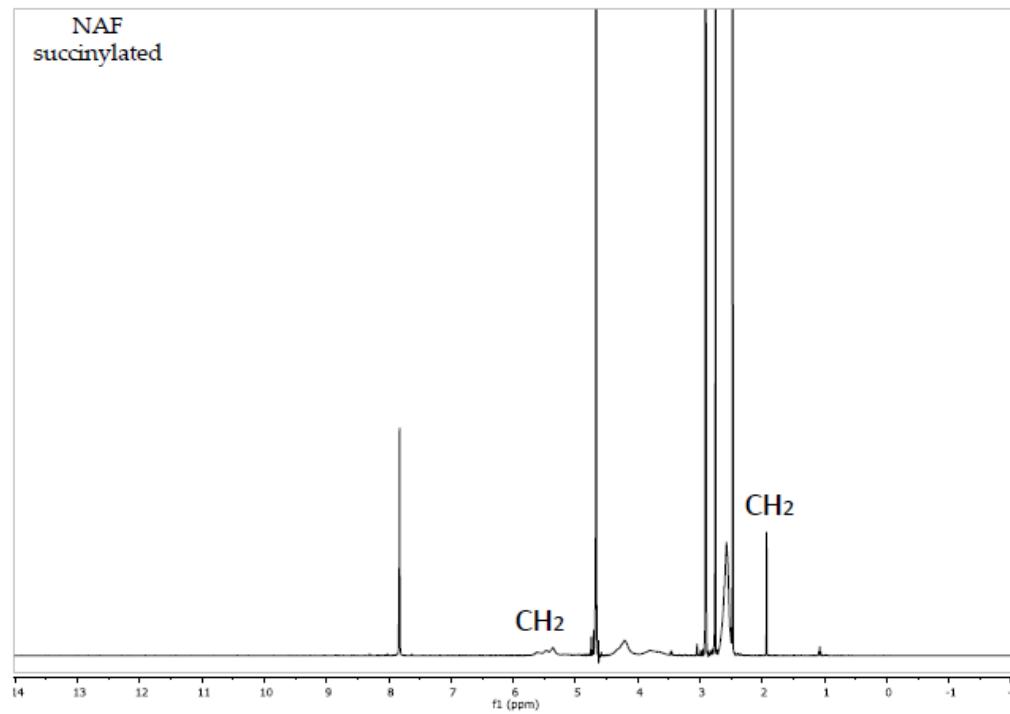
NAF  
Lauroylated



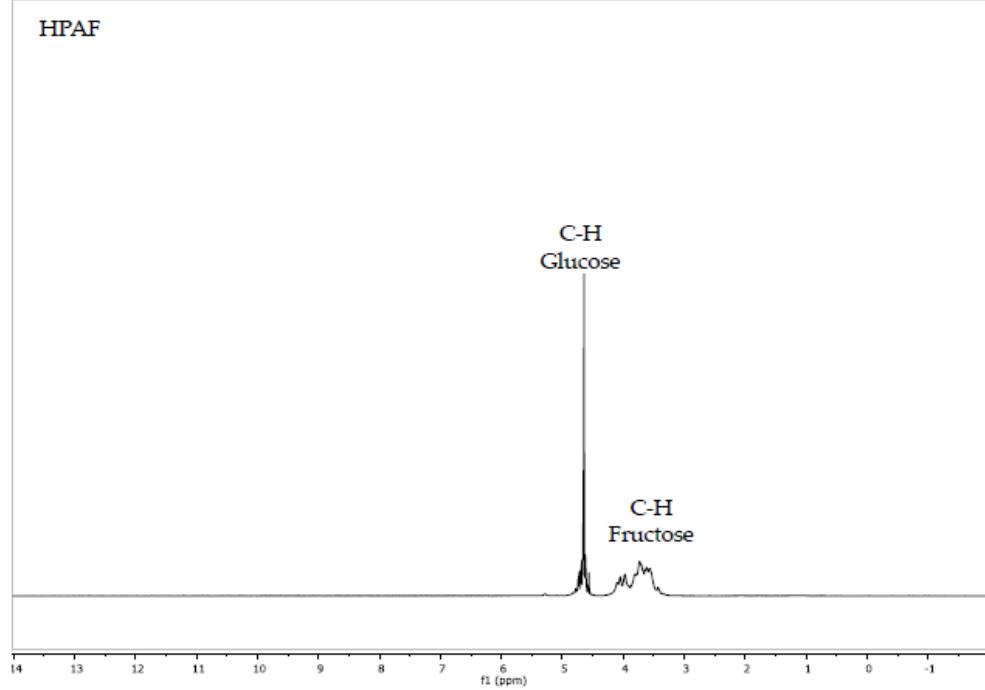
NAF  
acetylated



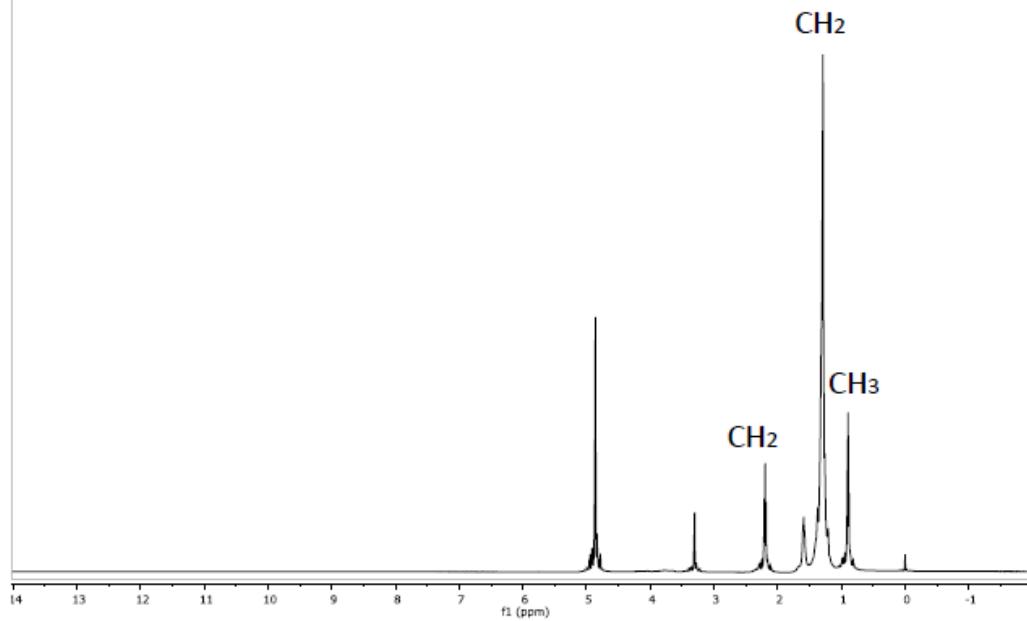
NAF  
succinylated



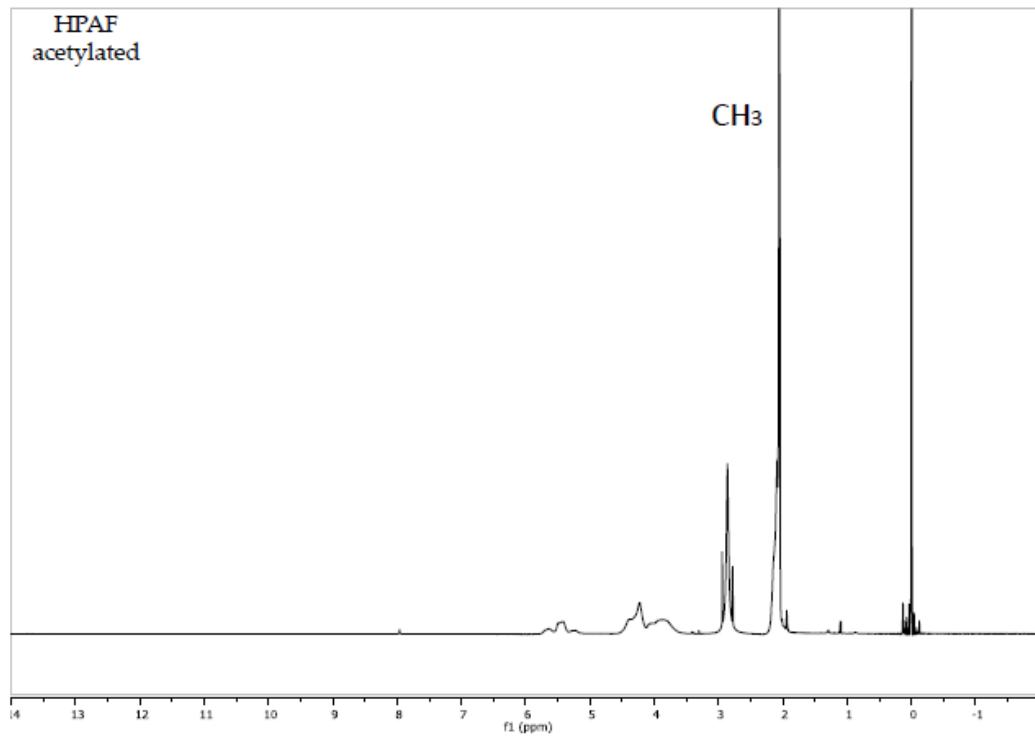
HPAF

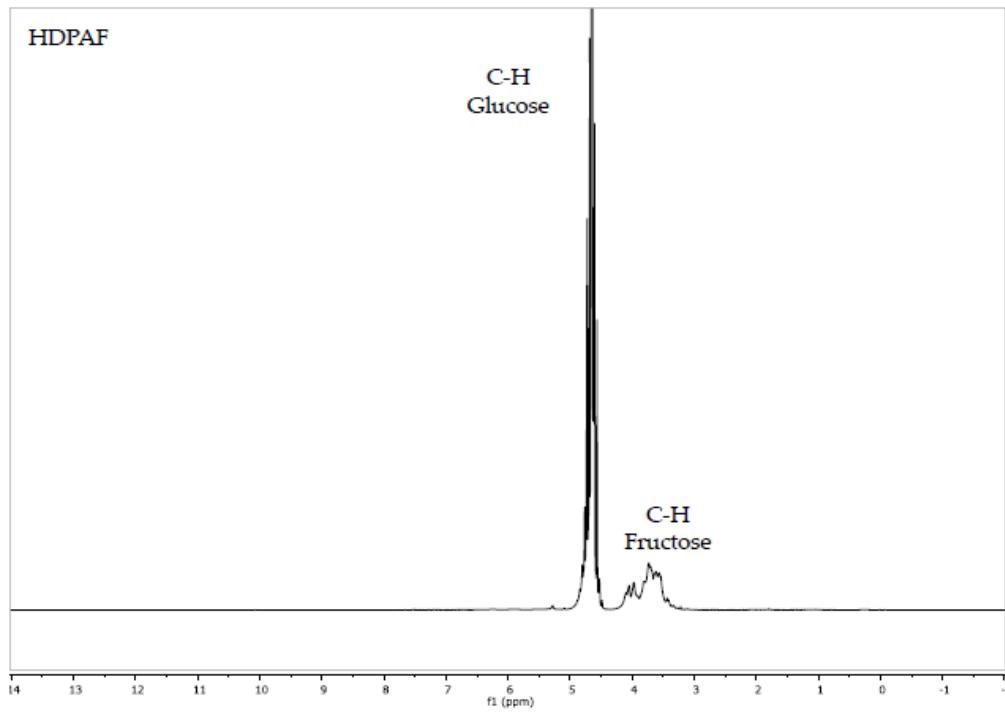
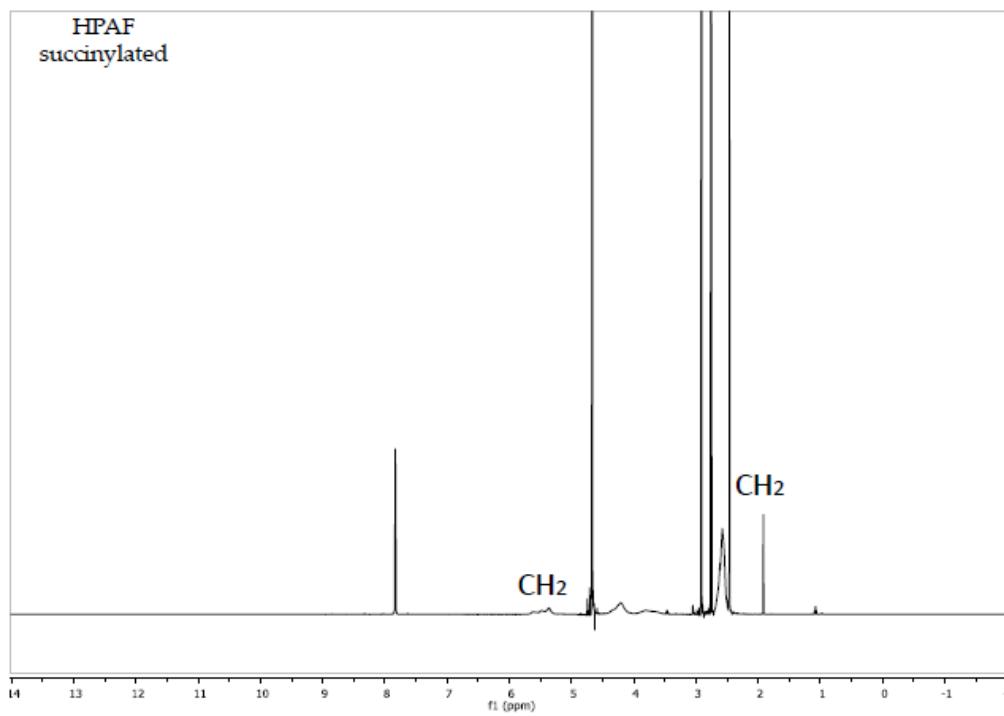


HPAF  
Lauroylated

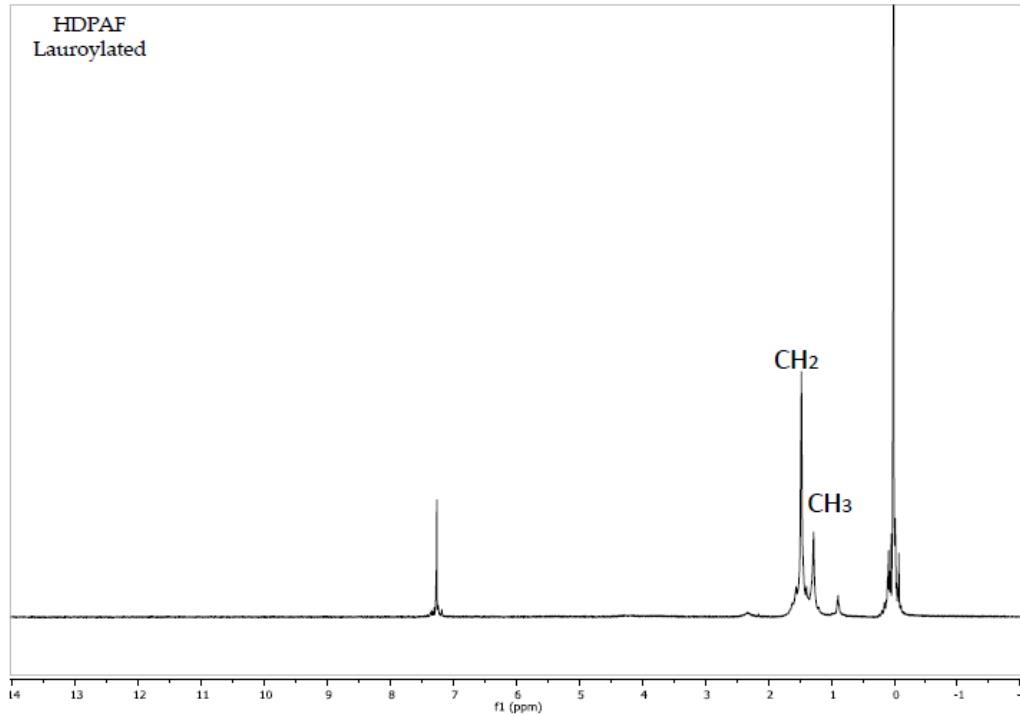


HPAF  
acetylated

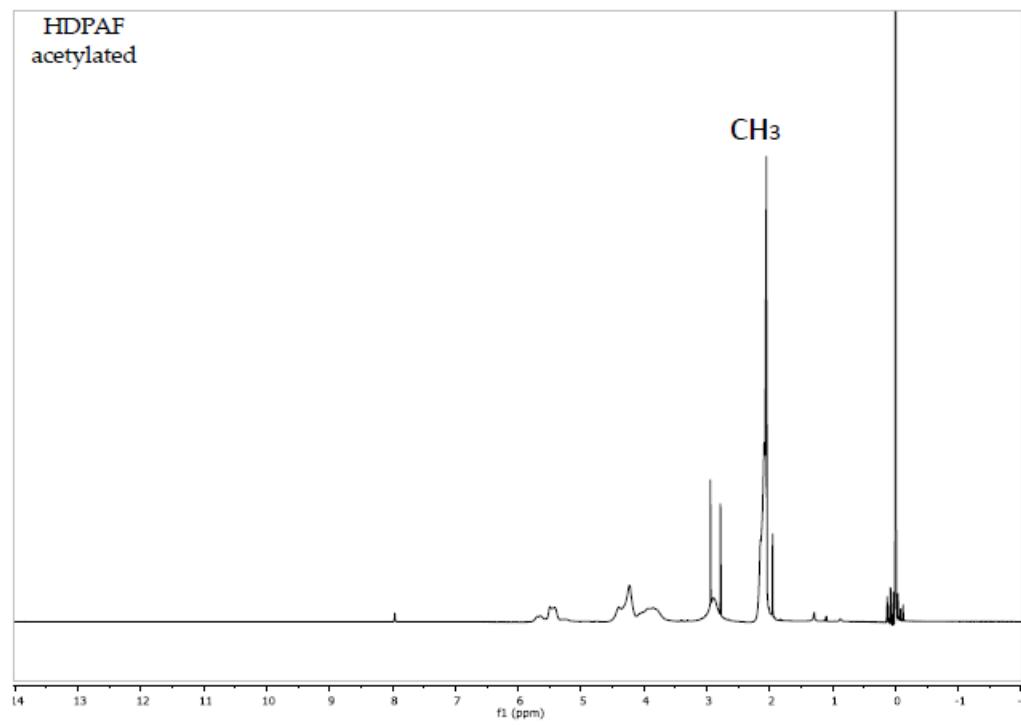




**HDPAF**  
Lauroylated



**HDPAF**  
acetylated



HDPAF  
succinylated

