Supporting Information (SI)

A Novel Approach for Rapid Preparation of Monophasic Microemulsions That Facilitates Penetration of Woody Biomass

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Table S1 Phase behavior scanning for C_{SDS} = 20 mg/mL H_2O.[a]

Dodecane addition (mL)	Pentanol addition (mL)	Water to oil ratio (WOR) (mL:mL)	Surfactant to alcohol ratio (SAR) (g:mL)	Winsor type	Series no.
0.1	0.1	1:0.02	1:1	Winsor-I	
	0.2		1:2	Winsor-IV	
0.2		1:0.04		Winsor-IV	SOW-A1
0.3		1:0.06		Winsor-IV	
0.4		1:0.08		Winsor-I	
	0.3		1:3	Winsor-II	
0.5		1:0.10		Winsor-II	
0.6		1:0.12		Winsor-II	
0.7		1:0.14		Winsor-II	
0.8		1:0.16		Winsor-II	
0.9		1:0.18		Winsor-III (Stop sign)	

[a] initial water volume = 5 mL; C_{NaCl} = 20 mg/mL H_2O.

Table S2 Phase behavior scanning for C_{SDS} = 40 mg/mL H_2O.[a]

Dodecane addition (mL)	Pentanol addition (mL)	Water to oil ratio (WOR) (mL:mL)	Surfactant to alcohol ratio (SAR) (g:mL)	Winsor type	Series no.
0.1	0.1	1:0.02	1:0.5	Winsor-IV	SOW-B1
0.2		1:0.04		Winsor-I	
	0.2		1:1.0	Winsor-IV	SOW-B2
0.3		1:0.06		Winsor-I	
	0.3		1:1.5	Winsor-II	
0.4		1:0.08		Winsor-IV	
0.5		1:0.10		Winsor-IV	SOW-B3
0.6		1:0.12		Winsor-IV	SOW-B4
0.7		1:0.14		Winsor-IV	SOW-B5
0.8		1:0.16		Winsor-I	
	0.4		1:2.0	Winsor-II	
0.9		1:0.18		Winsor-II	
1.0		1:0.20		Winsor-II	
1.1		1:0.22		Winsor-IV	SOW-B6
1.2		1:0.24		Winsor-I	
	0.5		1:2.5	Winsor-II	
1.3		1:0.26		Winsor-II	
1.4		1:0.28		Winsor-II	
1.5		1:0.30		Winsor-II	
1.6		1:0.32		Winsor-III (Stop sign)	

[a] initial water volume = 5 mL; C_{NaCl} = 20 mg/mL H_2O.

Table S3 Phase behavior scanning for C_{SDS} = 60 mg/mL H_2O.[a]

Dodecane addition (mL)	Pentanol addition (mL)	Water to oil ratio (WOR) (mL:mL)	Surfactant to alcohol ratio (SAR) (g:mL)	Winsor type	Series no.
0.1	0.1	1:0.02	1:0.3	Winsor-I	
	0.2		1:0.7	Winsor-IV	SOW-C1
0.2		1:0.04		Winsor-IV	
0.3		1:0.06		Winsor-I	
	0.3		1:1.0	Winsor-IV	
0.4		1:0.08		Winsor-IV	SOW-C2
0.5		1:0.10		Winsor-IV	SOW-C3
0.6		1:0.12		Winsor-IV	SOW-C4
0.7		1:0.14		Winsor-I	
	0.4		1:1.3	Winsor-IV	SOW-C5
0.8		1:0.16		Winsor-IV	
0.9		1:0.18		Winsor-IV	
1.0		1:0.20		Winsor-IV	
1.1		1:0.22		Winsor-I	
	0.5		1:1.7	Winsor-IV	SOW-C6
1.2		1:0.24		Winsor-IV	
1.3		1:0.26		Winsor-IV	SOW-C7
1.4		1:0.28		Winsor-IV	
1.5		1:0.30		Winsor-IV	SOW-C8
1.6		1:0.32		Winsor-I	
	0.6		1:2.0	Winsor-II	
1.7		1:0.34		Winsor-II	
1.8		1:0.36		Winsor-IV	
1.9		1:0.38		Winsor-IV	SOW-C9
2.0		1:0.40		Winsor-IV	
2.1		1:0.42		Winsor-I	
	0.7		1:2.3	Winsor-II	
2.2		1:0.44		Winsor-II	
2.3		1:0.46		Winsor-II	
2.4		1:0.48		Winsor-II	
2.5		1:0.50		Winsor-II	
2.6		1:0.52		Winsor-III (Stop sign)	

[a] initial water volume = 5 mL; C_{NaCl} = 20 mg/mL H_2O.

Table S4 Phase behavior scanning for C_{SDS} = 80 mg/mL H_2O.[a]

Dodecane addition (mL)	Pentanol addition (mL)	Water to oil ratio (WOR) (mL:mL)	Surfactant to alcohol ratio (SAR) (g:mL)	Winsor type	Series no.
0.1	0.1	1:0.02	1:0.25	Winsor-I	
	0.2		1:0.50	Winsor-IV	
0.2		1:0.04		Winsor-I	
	0.3		1:0.75	Winsor-IV	
0.3		1:0.06		Winsor-IV	
0.4		1:0.08		Winsor-IV	
0.5		1:0.10		Winsor-I	
	0.4		1:1.0	Winsor-IV	SOW-D1
0.6		1:0.12		Winsor-IV	SOW-D2
0.7		1:0.14		Winsor-IV	SOW-D3
0.8		1:0.16		Winsor-IV	SOW-D4
0.9		1:0.18		Winsor-IV	SOW-D5
1.0		1:0.20		Winsor-I	
	0.5		1:1.25	Winsor-IV	SOW-D6
1.1		1:0.22		Winsor-IV	SOW-D7
1.2		1:0.24		Winsor-IV	
1.3		1:0.26		Winsor-IV	
1.4		1:0.28		Winsor-IV	
1.5		1:0.30		Winsor-I	
	0.6		1:1.50	Winsor-IV	
1.6		1:0.32		Winsor-IV	
1.7		1:0.34		Winsor-IV	SOW-D8
1.8		1:0.36		Winsor-IV	
1.9		1:0.38		Winsor-IV	
2.0		1:0.40		Winsor-I	
	0.7		1:1.75	Winsor-IV	
2.1		1:0.42		Winsor-IV	
2.2		1:0.44		Winsor-IV	SOW-D9
2.3		1:0.46		Winsor-IV	
2.4		1:0.48		Winsor-IV	
2.5		1:0.50		Winsor-I	
	0.8		1:2.0	Winsor-II	
2.6		1:0.52		Winsor-II	
2.7		1:0.54		Winsor-II	
2.8		1:0.56		Winsor-IV	
2.9		1:0.58		Winsor-IV	
3.0		1:0.60		Winsor-I	
	0.9		1:2.25	Winsor-II	

3.1		1:0.62		Winsor-II	
3.2		1:0.64		Winsor-II	
3.3		1:0.66		Winsor-II	
3.4		1:0.68		Winsor-II	
3.5		1:0.70		Winsor-II	
3.6		1:0.72		Winsor-III (Stop sign)	

[a] initial water volume = 5 mL; C_{NaCl} = 20 mg/mL H_2O.