

Glycerol Eutectics as Sustainable Solvent Systems

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Supplementary Information

Physical Properties - Choline Chloride :Glycerol

Table S1 Raw data for Glycerol with 5% choline chloride

T/(°C)	20	25	30	35	40	45	50	55
η / (cP)	998	654	450	314	222	163	120	90
σ / ($\mu\text{S} / \text{cm}$)	106.4	143.3	190.1	252	320	394	479	568
γ / (mN/m)	63.7	62.8	62.0	61.3	60.5	59.8	59.3	58.7

Table S2: Raw data for Glycerol with 10% choline chloride

T/(°C)	20	25	30	35	40	45	50	55
η / (cP)	790	503	349	247	180	132	98	74
σ / ($\mu\text{S} / \text{cm}$)	243	297	374	483	601	759	980	1245
γ / (mN/m)	61.6	61.0	60.3	59.5	59.0	58.4	57.9	57.5

Table S3: Raw data for Glycerol with 15% choline chloride

T/(°C)	20	25	30	35	40	45	50	55
η / (cP)	548	380	270	194	140	107	80	60
σ / ($\mu\text{S} / \text{cm}$)	470	555	666	798	963	1114	1403	1788
γ / (mN/m)	60.8	60.2	59.7	59.1	58.7	58.1	57.6	57.3

Table S4: Raw data for Glycerol with 20% choline chloride

T/(°C)	20	25	30	35	40	45	50	55
η / (cP)	503	350	246	178	132	98	86	57
σ / ($\mu\text{S} / \text{cm}$)	580	739	930	1140	1362	1609	1923	2250
γ / (mN/m)	57.4	57.0	56.6	56.1	55.7	55.2	54.8	54.4

Table S5: Raw data for Glycerol with 25% choline chloride

T/(°C)	20	25	30	35	40	45	50	55
η / (cP)	450	320	229	169	126	95	73	58
σ / (μS / cm)	850	1030	1244	1490	1835	2140	2480	2930
γ/ (mN/m)	50.8	50.3	49.9	49.3	48.9	48.4	48.0	47.6

Table S6: Raw data for Glycerol with 30% choline chloride

T/(°C)	20	25	30	35	40	45	50	55
η / (cP)	401	295	213	160	120	91	71	55
σ / (μS / cm)	964	1165	1410	1750	2080	2430	2800	3260
γ/ (mN/m)	48.5	48.0	47.5	47.1	46.7	46.4	46.0	45.6

Table S7: Raw data for Glycerol with 33% choline chloride

T/(°C)	20	25	30	35	40	45	50	55
η / (cP)	376	259	188	140	104	82	64	52
σ / (μS / cm)	1047	1298	1636	1947	2320	2710	3110	3560
γ/ (mN/m)	55.8	55.4	55.0	54.7	54.2	53.8	53.4	53.0

Esterification Data

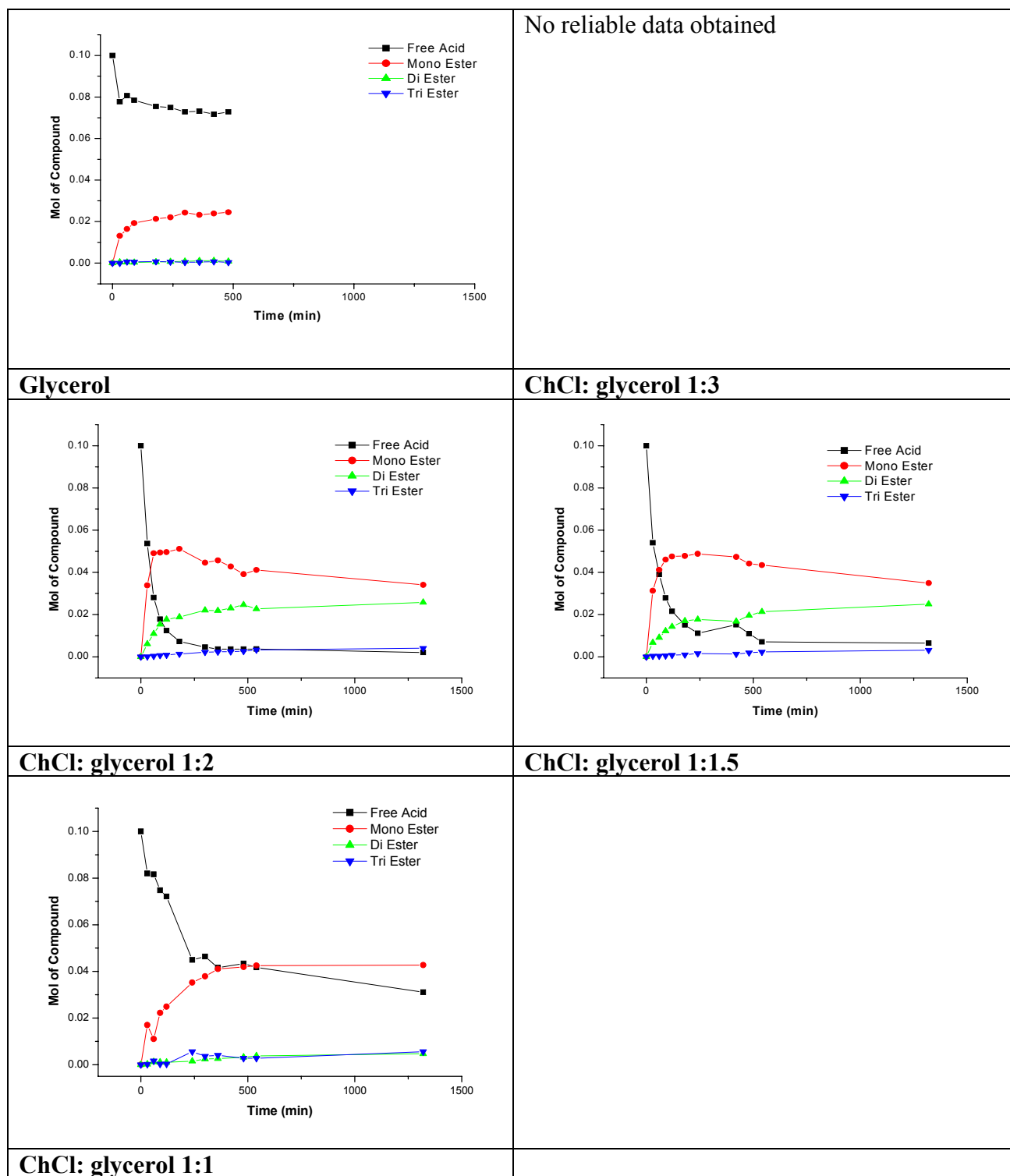


Figure S1: Esterification Data of 0.1 moles of Lauric Acid in Various ChCl: Glycerol DES Mixtures

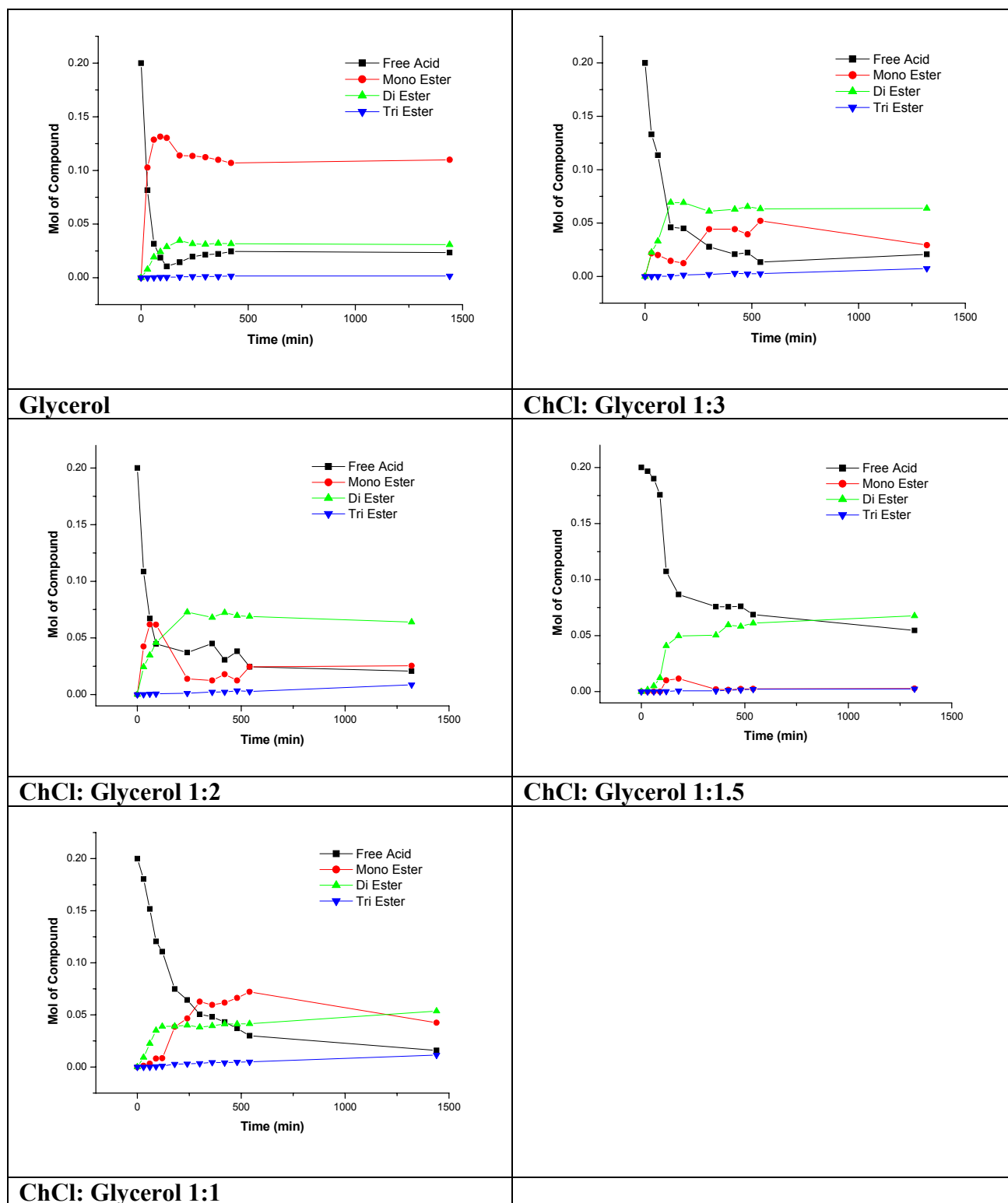


Figure S2: Esterification Data of 0.2 M Lauric Acid in Various ChCl: Glycerol DES Mixtures

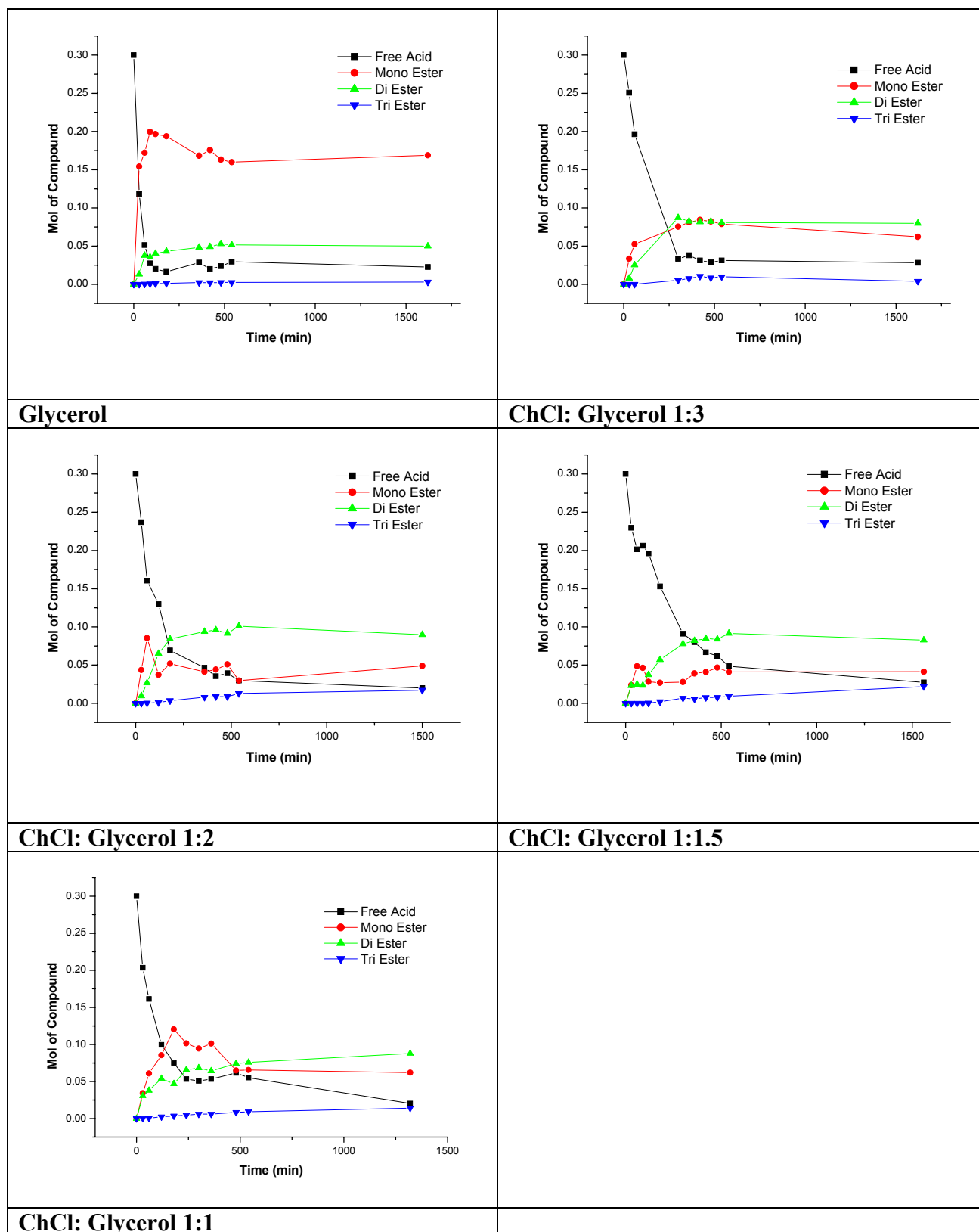


Figure S3: Esterification Data of 0.3 M Lauric Acid in Various ChCl: Glycerol DES Mixtures

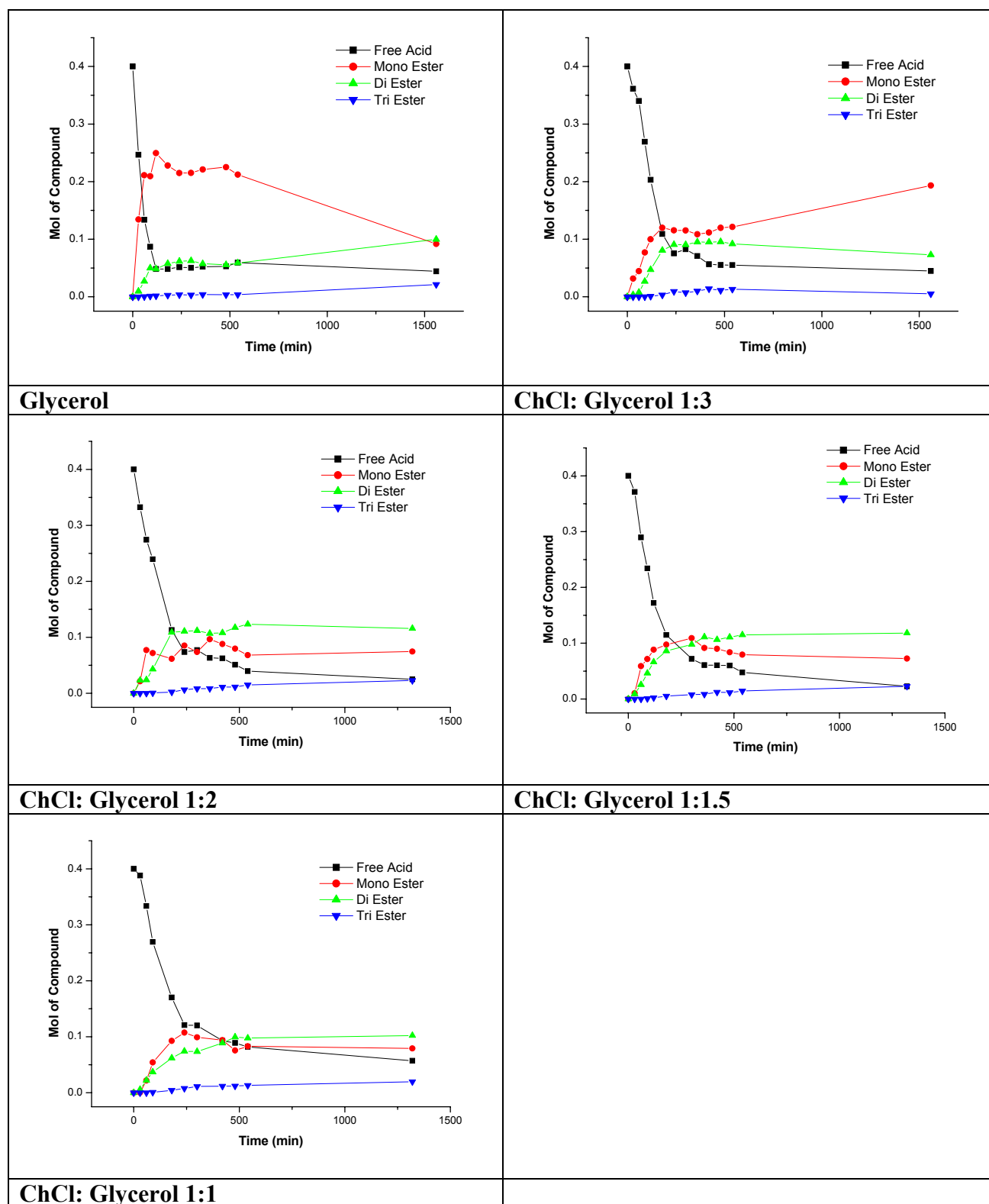


Figure S4: Esterification Data of 0.4 M Lauric Acid in Various ChCl: Glycerol DES Mixtures

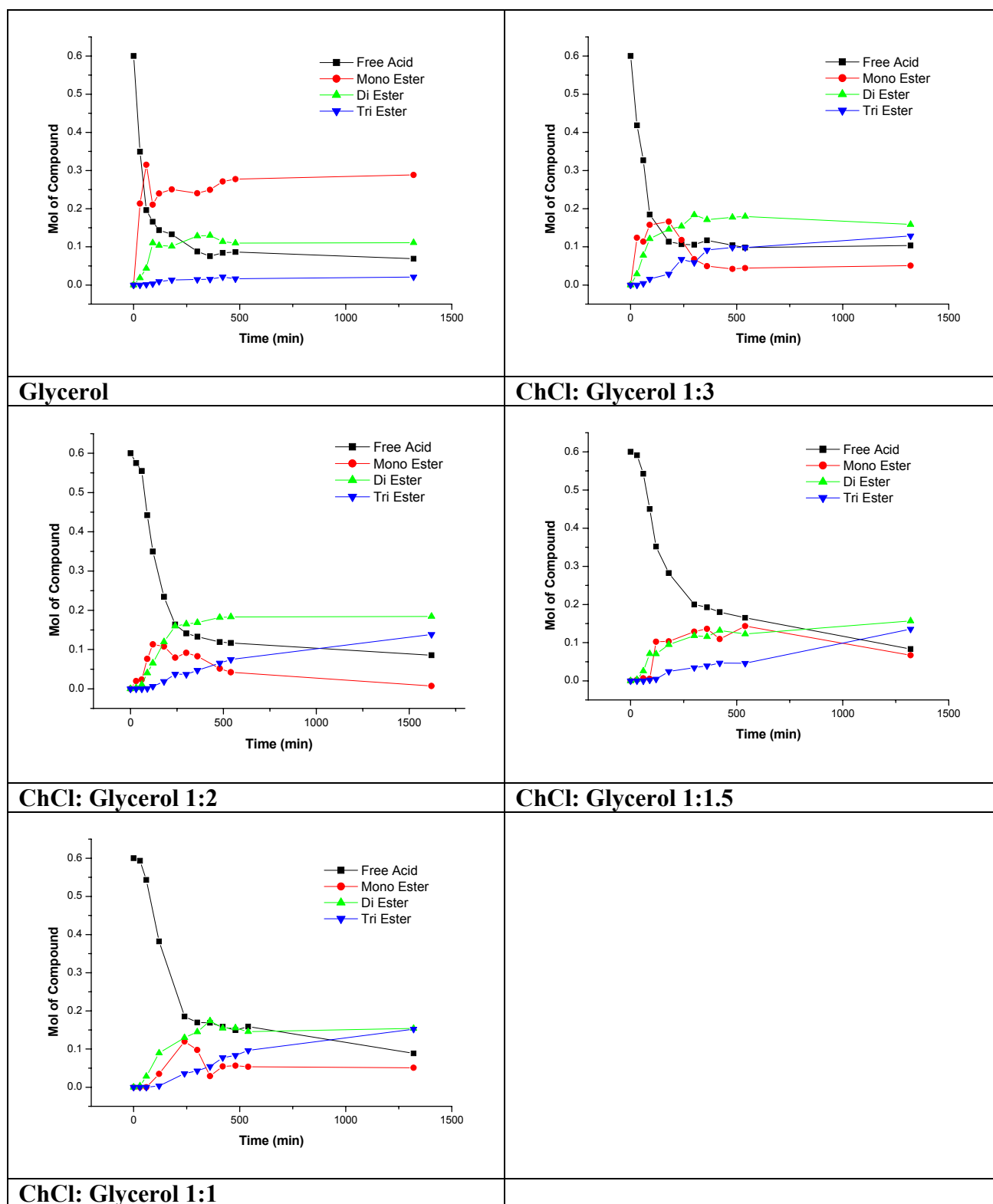


Figure S5: Esterification Data of 0.6 M Lauric Acid in Various ChCl: Glycerol DES Mixtures