

Partition of compounds from water and from air into amides

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Supplementary Tables

Table S1.													
Data for N,N-dimethylformamide, DMF													
Solute	Ref	logKs	logSs	logSw	logPs	LogKw	logPs	E	S	A	B	V	L
Argon	1	-0.86				-1.47	0.61	0.000	0.00	0.00	0.00	0.1900	-0.688
Hydrogen	1	-1.35				-1.72	0.37	0.000	0.00	0.00	0.00	0.1086	-1.200
Carbon monoxide	1	-1.06				-1.62	0.56	0.000	0.00	0.00	0.04	0.2220	-0.836

Carbon dioxide	33	0.70				-0.08	0.78	0.000	0.28	0.05	0.10	0.2809	0.058
Sulphur dioxide	52	2.66				1.53	1.13	0.370	0.66	0.28	0.10	0.3465	0.778
SF6	33	-0.61				-2.23	1.62	-0.600	-0.20	0.00	0.00	0.4643	-0.120
Hydrogen sulfide	52	1.61				0.49	1.12	0.310	0.32	0.10	0.08	0.2721	0.706
Methane	1	-0.52				-1.46	0.94	0.000	0.00	0.00	0.00	0.2495	-0.323
Ethane	1	0.22				-1.34	1.56	0.000	0.00	0.00	0.00	0.3904	0.492
Propane	43	0.68				-1.44	2.12	0.000	0.00	0.00	0.00	0.5313	1.050
n-Butane	1	1.08				-1.52	2.60	0.000	0.00	0.00	0.00	0.6722	1.615
Isobutane	35	0.97				-1.70	2.67	0.000	0.00	0.00	0.00	0.6722	1.409
n-Pentane	32	1.60				-1.70	3.30	0.000	0.00	0.00	0.00	0.8131	2.162
2-Methylbutane	1	1.39				-1.75	3.14	0.000	0.00	0.00	0.00	0.8131	2.013
n-Hexane	32,47	1.97				-1.82	3.79	0.000	0.00	0.00	0.00	0.9540	2.668
2,2-Dimethylbutane	45	1.71				-1.84	3.55	0.000	0.00	0.00	0.00	0.9540	2.352
2-Methylpentane	32	1.84				-1.84	3.68	0.000	0.00	0.00	0.00	0.9540	2.503
n-Heptane	32	2.35				-1.96	4.31	0.000	0.00	0.00	0.00	1.0949	3.173
2,4-Dimethylpentane	32	2.06				-2.08	4.14	0.000	0.00	0.00	0.00	1.0949	2.809
Octane	32	2.74				-2.11	4.85	0.000	0.00	0.00	0.00	1.2358	3.677
2,5-Dimethylhexane	32	2.45				-2.02	4.47	0.000	0.00	0.00	0.00	1.2358	3.308
2,2,4-Trimethylpentane	4	2.33				-2.12	4.45	0.000	0.00	0.00	0.00	1.2358	3.106
2,3,4-Trimethylpentane	32	2.58				-1.88	4.46	0.000	0.00	0.00	0.00	1.2358	3.481
Nonane	32	3.14				-2.15	5.29	0.000	0.00	0.00	0.00	1.3767	4.182
Decane	38	3.62				-2.32	5.94	0.000	0.00	0.00	0.00	1.5176	4.686
Undecane	38	4.08				-2.38	6.46	0.000	0.00	0.00	0.00	1.6585	5.191
Dodecane	38	4.51				-2.50	7.01	0.000	0.00	0.00	0.00	1.7994	5.696
Cyclopentane	45	2.00				-0.88	2.88	0.263	0.10	0.00	0.00	0.7045	2.477
Methylcyclopentane	45	2.21				-1.17	3.38	0.225	0.10	0.00	0.00	0.8454	2.907
Cyclohexane	32, 47	2.31				-0.90	3.21	0.305	0.10	0.00	0.00	0.8454	2.964
Methylcyclohexane	38	2.57				-1.25	3.82	0.244	0.06	0.00	0.00	0.9863	3.319
Ethylcyclohexane	32	2.97				-1.58	4.55	0.263	0.10	0.00	0.00	1.1272	3.877
Cycloheptane	40	2.78				-0.58	3.36	0.350	0.10	0.00	0.00	0.9863	3.704
Cyclooctane	40	3.22				-0.63	3.85	0.409	0.10	0.00	0.00	1.1272	4.329
Ethene	33	0.33				-0.94	1.27	0.107	0.10	0.00	0.07	0.3474	0.289
Propene	36	0.95				-0.97	1.92	0.103	0.08	0.00	0.07	0.4883	0.946

But-1-ene	1	1.30				-1.01	2.31	0.100	0.08	0.00	0.07	0.6292	1.529
trans-But-2-ene	34	1.55				-0.98	2.53	0.126	0.08	0.00	0.05	0.6292	1.664
Isobutene	35	1.45				-0.86	2.31	0.120	0.08	0.00	0.08	0.6292	1.579
Pent-1-ene	1	1.70				-1.23	2.93	0.093	0.08	0.00	0.07	0.7701	2.047
Pent-2-ene (trans)	47	1.80				-1.06	2.86	0.126	0.08	0.00	0.07	0.7701	2.187
3-Methylbut-1-ene	1	1.53				-1.34	2.87	0.063	0.06	0.00	0.05	0.7701	1.933
2-Methylbut-2-ene	47	1.88				-1.02	2.90	0.120	0.09	0.00	0.07	0.7701	2.097
Hex-1-ene	47	2.21				-1.16	3.37	0.078	0.08	0.00	0.07	0.9110	2.572
2-Methylpent-2-ene	47	2.29				-1.08	3.37	0.156	0.08	0.00	0.07	0.9110	2.687
Hept-1-ene	40	2.46				-1.22	3.68	0.092	0.08	0.00	0.07	1.0519	3.063
Oct-1-ene	40	2.85				-1.41	4.26	0.094	0.08	0.00	0.07	1.1928	3.568
Dec-1-ene	48	3.75				-1.64	5.39	0.093	0.08	0.00	0.07	1.4746	4.533
Dodec-1-ene	38,40	4.58				-1.87	6.45	0.089	0.08	0.00	0.07	1.7564	5.515
Buta-1,3-diene	1	1.68				-0.45	2.13	0.320	0.23	0.00	0.10	0.5862	1.543
2-Methylbuta-1,3-diene	47	2.11				-0.50	2.61	0.313	0.23	0.00	0.10	0.7271	2.101
2,3-Dimethylbutadiene	38, 47	2.59				-0.29	2.88	0.352	0.23	0.00	0.14	0.8680	2.690
cis-Penta-1,3-diene(Z)	1	2.27				-0.36	2.63	0.345	0.23	0.00	0.10	0.7271	2.256
trans-Penta-1,3-diene(E)	1	2.23				-0.36	2.59	0.345	0.23	0.00	0.10	0.7271	2.296
Penta-1,4-diene	38	1.92				-0.69	2.61	0.185	0.14	0.00	0.10	0.7271	2.024
Cyclopentene	38	2.15				-0.41	2.56	0.335	0.22	0.00	0.08	0.6605	2.273
Cyclohexene	47	2.68				-0.27	2.95	0.395	0.28	0.00	0.09	0.8024	2.952
Cycloheptene	38	3.10				-0.57	3.67	0.414	0.22	0.00	0.10	0.9433	3.626
Cyclooctene	38	3.50				-0.60	4.10	0.460	0.24	0.00	0.10	1.0842	4.119
Cyclopentadiene	47	2.50				0.16	2.34	0.417	0.35	0.00	0.12	0.6185	2.222
Ethyne	33	1.28				0.00	1.28	0.190	0.47	0.12	0.05	0.3044	0.070
Propyne	49	1.83				0.35	1.48	0.183	0.25	0.12	0.14	0.4453	1.025
But-1-yne	49	2.14				0.12	2.02	0.178	0.25	0.12	0.10	0.5862	1.520
Pent-1-yne	47	2.54				-0.01	2.55	0.172	0.23	0.12	0.12	0.7271	2.010
Hex-1-yne	40	2.88				-0.21	3.09	0.166	0.22	0.10	0.12	0.8680	2.510
Hept-1-yn	40	3.17				-0.44	3.61	0.160	0.23	0.09	0.10	1.0089	3.000
Oct-1-yne	40	3.65				-0.52	4.17	0.155	0.22	0.09	0.10	1.1498	3.521
Vinylacetylene	49	2.43				-0.03	2.46	0.327	0.26	0.18	0.01	0.5432	1.467
Difluoromethane	55	1.24				0.24	1.01	-0.320	0.49	0.06	0.05	0.2849	0.040

Trifluoromethane	55	0.63				-0.51	1.14	-0.430	0.18	0.11	0.03	0.3026	-0.274
Tetrafluoromethane	55	-1.14				-2.31	1.16	-0.550	-0.25	0.00	0.00	0.3203	-0.819
Trichlorofluoromethane	55	1.85				-0.45	2.30	0.207	0.24	0.00	0.07	0.6344	1.950
Dichlorofluoromethane	55	0.99				-1.13	2.12	0.027	0.12	0.00	0.00	0.5297	1.124
Chlorotrifluoromethane	55	-0.06				-1.67	1.61	-0.247	-0.05	0.00	0.00	0.4250	0.209
1,1-Difluoroethane	55	1.55				0.09	1.46	-0.250	0.50	0.04	0.05	0.4258	0.517
1,1,1,2-Tetrafluoroethane	55	1.62				-0.41	2.02	-0.410	0.41	0.06	0.02	0.4612	0.530
Pentafluoroethane	55	1.13				-1.06	2.19	-0.510	0.00	0.11	0.06	0.4789	0.100
1-Chloro-1,1-difluoroethane	55	1.53				-0.45	1.98	-0.080	0.24	0.06	0.06	0.5482	1.081
1-Chloro-1,2,2,2-tetrafluoroethane	55	1.79				-0.57	2.36	-0.310	0.32	0.09	0.01	0.5860	0.933
1,2-Dichlorotetrafluoroethane	55	1.17				-1.65	2.82	-0.190	0.05	0.00	0.00	0.7060	1.427
Chloropentafluoroethane	55	1.13				-2.12	3.24	-0.360	-0.12	0.00	0.00	0.6013	0.543
1-Chloro-2,2-difluoroethene	55	1.46				-0.38	1.84	-0.340	0.28	0.15	0.00	0.5052	0.723
Fluoroethane	46	1.43				-0.30	1.73	0.052	0.34	0.00	0.05	0.4081	0.751
Chloromethane	1	1.74				0.40	1.34	0.249	0.43	0.00	0.08	0.3719	1.163
Chloroethane	44	2.01				0.46	1.55	0.227	0.40	0.00	0.10	0.5128	1.678
2-Chloro-2-methylpropane	50	2.31				-0.80	3.11	0.142	0.30	0.00	0.03	0.7946	2.273
Bromoethane	43	2.36				0.54	1.82	0.366	0.40	0.00	0.12	0.5654	2.120
2-Bromo-2-methylpropane	50	2.63				-0.62	3.25	0.305	0.29	0.00	0.07	0.8472	2.609
Iodomethane	1	2.56				0.65	1.91	0.676	0.43	0.00	0.12	0.5077	2.106
Iodoethane	43	2.73				0.54	2.19	0.640	0.40	0.00	0.14	0.6486	2.573
Dimethylether	1	1.56				1.40	0.16	0.000	0.27	0.00	0.41	0.4491	1.285
Diethylether	54	2.06				1.28	0.78	0.041	0.25	0.00	0.45	0.7309	2.015
Di-n-propylether	54	2.65				0.90	1.75	0.008	0.25	0.00	0.45	1.0127	2.954
Di-isopropylether	54	2.34				1.09	1.25	-0.063	0.17	0.00	0.57	1.0127	2.501
Methyl t-butyl ether	54	2.33				1.45	0.88	0.024	0.22	0.00	0.55	0.8718	2.372
Methyl t-pentyl ether	54	2.77				1.31	1.46	0.050	0.25	0.00	0.54	1.0127	2.799
Ethyl t-butyl ether	54	2.43				1.18	1.25	0.000	0.16	0.00	0.57	1.0127	2.652
Dioxane	1	3.72				3.70	0.02	0.329	0.75	0.00	0.64	0.6810	2.892
2-Methylpropanal	39	3.00				2.10	0.90	0.144	0.62	0.00	0.45	0.6879	2.120
Propanone	38	2.95				2.83	0.12	0.179	0.70	0.04	0.49	0.5470	1.696
Butanone	1	3.36				2.72	0.64	0.166	0.70	0.00	0.51	0.6879	2.287

Octan-2-one	42	4.57				2.11	2.46	0.108	0.68	0.00	0.51	1.2515	4.257
Methyl acetate	38	2.86				2.30	0.56	0.142	0.64	0.00	0.45	0.6057	1.911
Ethyl acetate	37, 38	3.18				2.16	1.02	0.106	0.62	0.00	0.45	0.7466	2.314
Acetonitrile	1	3.41				2.85	0.56	0.237	0.90	0.07	0.32	0.4042	1.739
Propionitrile	44	3.67				2.82	0.85	0.162	0.90	0.02	0.36	0.5450	2.082
Methylamine	1	1.95				3.34	-1.39	0.250	0.35	0.16	0.58	0.3493	1.300
Dimethylamine	1	2.11				3.15	-1.04	0.189	0.30	0.08	0.66	0.4902	1.600
Trimethylamine	1	1.77				2.35	-0.58	0.140	0.20	0.00	0.67	0.6311	1.620
Triethylamine	1	2.62				2.36	0.26	0.101	0.15	0.00	0.79	1.0538	3.040
Nitromethane	1	4.07				2.95	1.12	0.313	0.95	0.06	0.31	0.4237	1.892
N,N-Dimethylformamide	1	4.72				5.73	-1.01	0.367	1.31	0.00	0.74	0.6468	3.173
Water	1	4.07				4.64	-0.57	0.000	0.45	0.82	0.35	0.1673	0.260
Methanol	38	3.40				3.74	-0.34	0.278	0.44	0.43	0.47	0.3082	0.970
Ethanol	1	3.73				3.67	0.06	0.246	0.42	0.37	0.48	0.4491	1.485
Propan-1-ol	1	4.08				3.56	0.52	0.236	0.42	0.37	0.48	0.5900	2.031
Butan-2-ol	1	4.16				3.39	0.77	0.217	0.36	0.33	0.56	0.7309	2.338
2,2,2-Trifluoroethanol	1	5.08				3.16	1.92	0.015	0.60	0.57	0.25	0.5022	1.224
Carbon disulfide	1	2.20				-0.15	2.35	0.876	0.26	0.00	0.03	0.4905	2.370
Tetramethyltin	51	2.25				-1.53	3.78	0.324	0.11	0.00	0.10	1.0431	2.651
Tetraethyltin	51	4.10				-1.62	5.72	0.464	0.18	0.00	0.13	1.6067	4.923
Benzene	1	3.26				0.63	2.63	0.610	0.52	0.00	0.14	0.7164	2.786
Toluene	1	3.64				0.65	2.99	0.601	0.52	0.00	0.14	0.8573	3.325
Biphenyl	41	6.84				1.95	4.89	1.360	0.99	0.00	0.26	1.3242	6.014
Naphthalene	41	5.83				1.76	4.07	1.340	0.92	0.00	0.20	1.0854	5.161
Fluorobenzene	41	3.48				0.59	2.89	0.477	0.57	0.00	0.10	0.7341	2.788
Chlorobenzene	41	4.15				0.82	3.33	0.718	0.65	0.00	0.07	0.8388	3.657
o-Dichlorobenzene	41	5.00				1.00	4.00	0.872	0.78	0.00	0.04	0.9612	4.518
Bromobenzene	41	4.55				1.07	3.48	0.882	0.73	0.00	0.09	0.8914	4.041
Iodobenzene	41	5.20				1.28	3.92	1.188	0.82	0.00	0.12	0.9746	4.502
Anthracene	56	8.47	-1.00	-6.43	5.44	3.03	5.44	2.290	1.34	0.00	0.28	1.4544	7.568
Pyrene	57	9.67	0.02	-6.15	6.17	3.50	6.17	2.808	1.71	0.00	0.28	1.5846	8.833
Fluoranthene	57	9.65	0.29	-5.92	6.21	3.44	6.21	2.377	1.55	0.00	0.24	1.5846	8.827
trans-Stilbene	58	8.49	-0.09	-5.80	5.71	2.78	5.71	1.450	1.04	0.00	0.34	1.5630	7.525

Benzoic acid	59	7.42	0.73	-1.59	2.32	5.10	2.32	0.730	0.90	0.59	0.40	0.9317	4.657
3,4-Dimethylbenzoic acid	67	8.52	0.08	-3.64	3.72	4.80	3.72	0.730	0.88	0.59	0.40	1.2135	5.296
4-Dimethylaminobenzoic acid	67	10.11	0.04	-3.27	3.31	6.80	3.31	1.080	1.26	0.54	0.63	1.3133	6.426
2-Chlorobenzoic acid	67	8.16	0.68	-1.98	2.66	5.50	2.66	0.840	1.01	0.68	0.40	1.0541	4.840
4-Bromobenzoic acid	67	9.04	-0.03	-4.21	4.18	4.86	4.18	1.000	1.01	0.63	0.26	1.1067	5.399
4-Iodobenzoic acid	67	10.23	-0.14	-4.55	4.41	5.82	4.41	1.310	1.27	0.63	0.30	1.1899	6.351
4-Nitrobenzoic acid	67	9.39	-0.54	-2.98	2.44	6.95	2.44	0.990	1.52	0.68	0.40	1.1059	5.770
3,5-Dinitrobenzoic acid	67	10.83	0.11	-2.42	2.53	8.30	2.53	1.250	1.63	0.70	0.59	1.2801	6.984
3-Nitro-4-chlorobenzoic acid	67	10.36	0.15	-3.00	3.15	7.21	3.15	1.250	1.47	0.70	0.44	1.2283	6.685
Methyl 4-dimethylaminobenzoate	67	8.73	0.35	-3.24	3.59	5.14	3.59	1.080	1.49	0.00	0.61	1.4542	6.990
Methyl 3,4-dichlorobenzoate	67	6.74	0.57	-3.41	3.99	2.75	3.99	1.015	1.02	0.00	0.35	1.3174	6.018
Methyl 4-bromobenzoate	67	6.78	0.23	-3.43	3.66	3.12	3.66	1.005	1.07	0.00	0.39	1.2476	5.800
Methyl 4-iodobenzoate	67	7.85	-0.22	-4.33	4.12	3.73	4.12	1.270	1.25	0.00	0.40	1.3308	6.685
Methyl 3-nitrobenzoate	67	7.92	0.36	-2.58	2.94	4.98	2.94	0.994	1.46	0.00	0.57	1.2468	6.100
Methyl 4-nitrobenzoate	67	7.95	0.24	-2.80	3.04	4.91	3.04	0.994	1.45	0.00	0.56	1.2468	6.097
Methyl 3,5-dinitrobenzoate	67	9.78	0.27	-2.97	3.24	6.54	3.24	1.255	1.82	0.00	0.70	1.4210	7.373
Methyl 3-nitro-4-chlorobenzoate	67	8.48	0.33	-3.10	3.43	5.05	3.43	1.102	1.48	0.00	0.58	1.3692	6.709
Xylitol	64	11.30	-0.21	0.62	-0.83	12.13	-0.83	1.040	1.77	0.54	1.43	1.1066	6.087
Ibuprofen	66	9.59	0.13	-3.76	3.89	5.70	3.89	0.730	0.70	0.56	0.79	1.7771	7.184
Diclofenac	60	14.69	0.29	-5.13	5.42	9.27	5.42	1.810	1.85	0.55	0.77	2.0250	11.025
2-Hydroxybenzoic acid	60	7.97	0.66	-1.92	2.58	5.39	2.58	0.900	0.85	0.73	0.37	0.9904	4.732
4-Hydroxybenzoic acid	61	8.67	0.42	-1.47	1.89	6.78	1.89	0.930	0.90	0.81	0.56	0.9904	4.867
4-Hydroxyacetanilide	63	12.69	0.76	-1.03	1.79	10.90	1.79	1.060	1.63	1.04	0.86	1.1724	6.430
Niflumic acid	65	13.97	0.56	-4.00	4.56	9.41	4.56	1.540	1.71	0.75	0.79	1.7922	9.277
Piroxicam	65	15.37	-0.68	-4.46	3.79	11.58	3.79	2.560	2.71	0.00	1.21	2.2500	12.210
Temazepam	62	14.68	0.08	-3.47	3.55	11.13	3.55	2.240	2.08	0.15	1.40	2.1326	11.533
Eicosane	68	9.96	0.28	-12.99	13.27	-3.31	13.27	0.000	0.00	0.00	0.00	2.9266	9.731
Heneicosane	68	10.54	0.23	-13.76	13.99	-3.45	13.99	0.000	0.00	0.00	0.00	3.0675	10.236
Docosane	68	11.00	0.04	-14.53	14.57	-3.57	14.57	0.000	0.00	0.00	0.00	3.2084	10.740
Tricosane	68	11.60	-0.05	-15.37	15.32	-3.72	15.32	0.000	0.00	0.00	0.00	3.3493	11.252
Tetracosane	68	12.05	-0.25	-16.14	15.89	-3.84	15.89	0.000	0.00	0.00	0.00	3.4902	11.758
Pentacosane	68	12.51	-0.47	-16.93	16.46	-3.95	16.46	0.000	0.00	0.00	0.00	3.6311	12.264
Hexacosane	68	13.04	-0.59	-17.73	17.14	-4.10	17.14	0.000	0.00	0.00	0.00	3.7720	12.770

Heptacosane	68	13.53	-0.77	-18.51	17.74	-4.21	17.74	0.000	0.00	0.00	0.00	3.9129	13.276
Octacosane	68	13.96	-1.00	-19.30	18.30	-4.34	18.30	0.000	0.00	0.00	0.00	4.0538	13.780
		N = 169					Max	2.808	2.71	1.04	1.43	4.0538	13.780
							Min	-0.600	-0.120	0.00	0.00	0.1673	0.260

Table S2.												
Data for N,N-Dimethylacetamide ,DMA												
Solute	logKs	Ref	logSs	logSw	logPs	LogKw	E	S	A	B	V	L
Argon	-0.87	33			0.60	-1.47	0.000	0.00	0.00	0.00	0.1900	-0.688
Carbon monoxide	-0.99	71			0.63	-1.62	0.000	0.00	0.00	0.04	0.2220	-0.836
Hydrogen sulfide	1.65	52			1.16	0.49	0.310	0.32	0.10	0.08	0.2721	0.706
Sulfur dioxide	2.58	52			1.05	1.53	0.370	0.66	0.28	0.10	0.3465	0.778
SF6	-0.56	33			1.68	-2.23	-0.600	-0.20	0.00	0.00	0.4643	-0.120
Ethane	0.35	44			1.69	-1.34	0.000	0.00	0.00	0.00	0.3904	0.492
Propane	0.80	44			2.24	-1.44	0.000	0.00	0.00	0.00	0.5313	1.050
n-Butane	1.28	44			2.80	-1.52	0.000	0.00	0.00	0.00	0.6722	1.615
n-Pentane	1.70	44			3.40	-1.70	0.000	0.00	0.00	0.00	0.8131	2.162
2-Methylbutane	1.45	69			3.20	-1.75	0.000	0.00	0.00	0.00	0.8131	2.013
n-Hexane	2.10	44			3.92	-1.82	0.000	0.00	0.00	0.00	0.9540	2.668
2-Methylpentane	1.94	32			3.78	-1.84	0.000	0.00	0.00	0.00	0.9540	2.503
n-Heptane	2.55	72			4.51	-1.96	0.000	0.00	0.00	0.00	1.0949	3.173
2,4-Dimethylpentane	2.17	32			4.25	-2.08	0.000	0.00	0.00	0.00	1.0949	2.809
Octane	2.89	32, 70			5.00	-2.11	0.000	0.00	0.00	0.00	1.2358	3.677
2,5-Dimethylhexane	2.58	32			4.60	-2.02	0.000	0.00	0.00	0.00	1.2358	3.308
2,3,4-Trimethylpentane	2.70	32			4.58	-1.88	0.000	0.00	0.00	0.00	1.2358	3.481
Nonane	3.30	32			5.45	-2.15	0.000	0.00	0.00	0.00	1.3767	4.182
Cyclohexane	2.49	72			3.39	-0.90	0.305	0.10	0.00	0.00	0.8454	2.964
Methylcyclohexane	2.70	72			3.95	-1.25	0.244	0.06	0.00	0.00	0.9863	3.319
Ethylcyclohexane	3.08	32			4.66	-1.58	0.263	0.10	0.00	0.00	1.1272	3.877

Ethene	0.33	33			1.27	-0.94	0.107	0.10	0.00	0.07	0.3474	0.289
trans-But-2-ene	1.59	34			2.57	-0.98	0.126	0.08	0.00	0.05	0.6292	1.664
Pent-1-ene	1.72	69			2.95	-1.23	0.093	0.08	0.00	0.07	0.7701	2.047
3-Methylbut-1-ene	1.56	69			2.90	-1.34	0.063	0.06	0.00	0.05	0.7701	1.933
2-Methylbut-2-ene	1.89	69			2.91	-1.02	0.120	0.09	0.00	0.07	0.7701	2.097
Buta-1,3-diene	1.88	34			2.33	-0.45	0.320	0.23	0.00	0.10	0.5862	1.543
2-Methylbuta-1,3-diene	2.12	69			2.62	-0.50	0.313	0.23	0.00	0.10	0.7271	2.101
cis-Penta-1,3-diene(Z)	2.29	69			2.65	-0.36	0.345	0.23	0.00	0.10	0.7271	2.256
trans-Penta-1,3-diene(E)	2.25	69			2.61	-0.36	0.345	0.23	0.00	0.10	0.7271	2.296
Cyclohexene	2.55	72			2.82	-0.27	0.395	0.28	0.00	0.09	0.8024	2.952
Dichloromethane	3.18	72			2.22	0.96	0.387	0.57	0.10	0.05	0.4943	2.019
Trichloromethane	3.80	72			3.01	0.79	0.425	0.49	0.15	0.02	0.6167	2.480
Tetrachloromethane	3.31	72			3.37	-0.06	0.458	0.38	0.00	0.00	0.7391	2.823
Chloroethane	2.15	44			1.69	0.46	0.227	0.40	0.00	0.10	0.5128	1.678
1,2-Dichloroethane	3.67	72			2.36	1.31	0.416	0.64	0.10	0.11	0.6352	2.573
2-Chloro-2-methylpropane	2.27	50			3.07	-0.80	0.142	0.30	0.00	0.03	0.7946	2.273
Trichloroethene	3.52	72			3.20	0.32	0.524	0.37	0.08	0.03	0.7146	2.997
Bromoethane	2.52	44			1.98	0.54	0.366	0.40	0.00	0.12	0.5654	2.120
2-Bromo-2-methylpropane	2.58	50			3.20	-0.62	0.305	0.29	0.00	0.07	0.8472	2.609
Iodomethane	2.66	15			2.01	0.65	0.676	0.43	0.00	0.12	0.5077	2.106
Iodoethane	2.91	44			2.37	0.54	0.640	0.40	0.00	0.14	0.6486	2.573
Diethylether	2.06	72			0.78	1.28	0.041	0.25	0.00	0.45	0.7309	2.015
Di-isopropylether	2.50	72			1.41	1.09	-0.063	0.17	0.00	0.57	1.0127	2.501
Methyl t-butyl ether	2.41	72			0.96	1.45	0.024	0.22	0.00	0.55	0.8718	2.372
Methyl t-pentyl ether	2.87	72			1.56	1.31	0.050	0.25	0.00	0.54	1.0127	2.799
Ethyl t-butyl ether	2.59	72			1.41	1.18	0.000	0.16	0.00	0.57	1.0127	2.652
Isopropyl t-butyl ether	2.75	72			2.01	0.74	-0.120	0.10	0.00	0.54	1.1536	2.947
Tetrahydrofuran	2.90	72			0.34	2.56	0.289	0.52	0.00	0.48	0.6223	2.636
Dioxane	3.66	70			-0.04	3.70	0.329	0.75	0.00	0.64	0.6810	2.892
Furan	2.73	72			2.07	0.66	0.369	0.51	0.00	0.13	0.5363	1.913
Acetaldehyde	2.36	72			-0.21	2.57	0.208	0.67	0.00	0.45	0.4061	1.230
2-Methylpropanal	2.96	72			0.86	2.10	0.144	0.62	0.00	0.45	0.6879	2.120

Propanone	2.89	72			0.06	2.83	0.179	0.70	0.04	0.49	0.5470	1.696
Butanone	3.28	70			0.56	2.72	0.166	0.70	0.00	0.51	0.6879	2.287
4-Methylpentan-2-one	3.84	72			1.60	2.24	0.111	0.65	0.00	0.51	0.9697	3.089
Methyl formate	2.50	72			0.46	2.04	0.192	0.68	0.00	0.38	0.4648	1.285
Methyl acetate	2.76	72			0.46	2.30	0.142	0.64	0.00	0.45	0.6057	1.911
Ethyl acetate	3.05	72			0.89	2.16	0.106	0.62	0.00	0.45	0.7466	2.314
Propyl acetate	3.46	72			1.41	2.05	0.092	0.60	0.00	0.45	0.8875	2.819
Butyl acetate	3.84	72			1.90	1.94	0.071	0.60	0.00	0.45	1.0284	3.353
Acetonitrile	3.52	72			0.67	2.85	0.237	0.90	0.07	0.32	0.4042	1.739
Propionitrile	3.66	15			0.84	2.82	0.162	0.90	0.02	0.36	0.5450	2.082
Nitromethane	4.02	70			1.07	2.95	0.313	0.95	0.06	0.31	0.4237	1.892
N,N-Dimethylacetamide	4.96	15			-1.08	6.04	0.363	1.38	0.00	0.80	0.7877	3.639
Methanol	3.58	72			-0.16	3.74	0.278	0.44	0.43	0.47	0.3082	0.970
Ethanol	3.82	70, 72			0.15	3.67	0.246	0.42	0.37	0.48	0.4491	1.485
Propan-2-ol	3.88	72			0.40	3.48	0.212	0.36	0.33	0.56	0.5900	1.764
Butan-1-ol	4.57	72			1.11	3.46	0.224	0.42	0.37	0.48	0.7309	2.601
2-Methylpropan-1-ol	4.43	72			1.13	3.30	0.217	0.39	0.37	0.48	0.7309	2.413
Butan-2-ol	4.32	15			0.93	3.39	0.217	0.36	0.33	0.56	0.7309	2.338
Allyl alcohol	3.44	72			-0.25	3.69	0.342	0.46	0.38	0.48	0.5470	1.951
2,2,2-Trifluoroethanol	4.99	15			1.83	3.16	0.015	0.60	0.57	0.25	0.5022	1.224
Benzene	3.27	72			2.64	0.63	0.610	0.52	0.00	0.14	0.7164	2.786
Toluene	3.65	70, 72			3.00	0.65	0.601	0.52	0.00	0.14	0.8573	3.325
Ethylbenzene	4.00	72			3.42	0.58	0.613	0.51	0.00	0.15	0.9982	3.778
Chlorobenzene	3.67	72			2.85	0.82	0.718	0.65	0.00	0.07	0.8388	3.657
Pyridine	4.22	72			0.78	3.44	0.631	0.84	0.00	0.52	0.6753	3.022
Phenanthrene	8.37	73	0.40	-5.17	5.57	2.80	2.055	1.29	0.00	0.29	1.4544	7.632
Anthracene	8.45	56	-1.01	-6.43	5.42	3.03	2.290	1.34	0.00	0.28	1.4544	7.568
Pyrene	9.78	57	0.13	-6.15	6.28	3.50	2.808	1.71	0.00	0.28	1.5846	8.833
Fluorene	7.60	73	0.16	-4.99	5.15	2.45	1.588	1.06	0.00	0.25	1.3565	6.922
Fluoranthene	9.70	57	0.34	-5.92	6.26	3.44	2.377	1.55	0.00	0.24	1.5846	8.827
Dibenzofuran	7.29	73	0.42	-4.44	4.86	2.43	1.407	1.13	0.00	0.17	1.2743	6.716
Carbazole	10.27	73	0.18	-4.97	5.15	5.12	1.787	2.12	0.09	0.10	1.3154	8.002

Dibenzothiophene	8.45	73	0.27	-5.21	5.48	2.97	1.959	1.20	0.00	0.20	1.3791	7.588
Benzil	9.24	74	0.32	-4.05	4.37	4.87	1.445	1.59	0.00	0.62	1.6374	7.611
1-Chloroanthraquinone	10.92	74	-0.65	-5.54	4.89	6.03	1.900	1.79	0.00	0.57	1.6512	9.171
Benzoic acid	7.41	59	0.72	-1.59	2.31	5.10	0.730	0.90	0.59	0.40	0.9317	4.657
4-Hydroxybenzoic acid	8.65	61	0.35	-1.47	1.87	6.78	0.930	0.90	0.81	0.56	0.9904	4.867
Octadecane	8.84	75	0.51	-11.37	11.88	-3.04	0.000	0.00	0.00	0.00	2.6448	8.722
Nonadecane	9.43	75	0.46	-12.18	12.64	-3.21	0.000	0.00	0.00	0.00	2.7857	9.226
Eicosane	9.98	75	0.30	-12.99	13.29	-3.31	0.000	0.00	0.00	0.00	2.9266	9.731
Heneicosane	10.48	75	0.17	-13.76	13.93	-3.45	0.000	0.00	0.00	0.00	3.0675	10.236
Docosane	10.97	75	0.01	-14.53	14.54	-3.57	0.000	0.00	0.00	0.00	3.2084	10.740
Tricosane	11.54	75	-0.11	-15.37	15.26	-3.72	0.000	0.00	0.00	0.00	3.3493	11.252
Tetracosane	12.00	75	-0.30	-16.14	15.84	-3.84	0.000	0.00	0.00	0.00	3.4902	11.758
Pentacosane	12.55	75	-0.43	-16.93	16.50	-3.95	0.000	0.00	0.00	0.00	3.6311	12.264
Hexacosane	12.93	75	-0.70	-17.73	17.03	-4.10	0.000	0.00	0.00	0.00	3.7720	12.770
Heptacosane	13.47	75	-0.83	-18.51	17.68	-4.21	0.000	0.00	0.00	0.00	3.9129	13.276
Octacosane	13.85	75	-1.12	-19.30	18.19	-4.34	0.000	0.00	0.00	0.00	4.0538	13.780
	N = 101					Max	2.808	2.12	0.81	0.80	4.0538	13.780
						Min	-0.600	-0.20	0.00	0.00	0.1900	-0.836
Not used												
Methyl 4-hydroxybenzoate	9.30	61	0.62	-1.83	2.45	6.85	0.900	1.37	0.69	0.45	1.1313	5.716

Table S3												
Data for N-Methyl-2-pyrrolidone, NMP												
Solute	logKs	Ref	logSs	logSw	logPs	LogKw	E	S	A	B	V	L
Argon	-0.99	33			0.48	-1.47	0.000	0.00	0.00	0.00	0.1900	-0.688
Hydrogen	-1.45	76			0.27	-1.72	0.000	0.00	0.00	0.00	0.1086	-1.200
Nitrogen	-1.25	77			0.55	-1.80	0.000	0.00	0.00	0.00	0.2222	-0.978
Carbon dioxide	0.63	78			0.71	-0.08	0.000	0.28	0.05	0.10	0.2809	0.058

Hydrogen sulfide	1.65	78,81			1.16	0.49	0.310	0.32	0.10	0.08	0.2721	0.706
COS	1.03	81			1.33	-0.30	0.487	0.28	0.00	0.00	0.3857	1.137
Ammonia	1.34	79			-1.86	3.19	0.139	0.39	0.16	0.56	0.2084	0.319
Methane	-0.60	33,78			0.86	-1.46	0.000	0.00	0.00	0.00	0.2495	-0.323
Ethane	0.23	78			1.57	-1.34	0.000	0.00	0.00	0.00	0.3904	0.492
Propane	0.65	78			2.09	-1.44	0.000	0.00	0.00	0.00	0.5313	1.050
n-Butane	1.14	78			2.66	-1.52	0.000	0.00	0.00	0.00	0.6722	1.615
Isobutane	0.88	78			2.58	-1.70	0.000	0.00	0.00	0.00	0.6722	1.409
n-Pentane	1.59	82, 83			3.29	-1.70	0.000	0.00	0.00	0.00	0.8131	2.162
2-Methylbutane	1.32	69			3.07	-1.75	0.000	0.00	0.00	0.00	0.8131	2.013
n-Hexane	1.99	32, 82, 84			3.81	-1.82	0.000	0.00	0.00	0.00	0.9540	2.668
2-Methylpentane	1.86	32			3.70	-1.84	0.000	0.00	0.00	0.00	0.9540	2.503
2,2-Dimethylbutane	1.56	83			3.40	-1.84	0.000	0.00	0.00	0.00	0.9540	2.352
n-Heptane	2.34	82			4.30	-1.96	0.000	0.00	0.00	0.00	1.0949	3.173
2,2-Dimethylpentane	1.95	83			4.06	-2.11	0.000	0.00	0.00	0.00	1.0949	2.796
2,4-Dimethylpentane	2.04	32, 83			4.12	-2.08	0.000	0.00	0.00	0.00	1.0949	2.809
2,2,3-Trimethylbutane	2.04	83			3.96	-1.92	0.000	0.00	0.00	0.00	1.0949	2.918
Octane	2.77	82			4.88	-2.11	0.000	0.00	0.00	0.00	1.2358	3.677
2,5-Dimethylhexane	2.50	32			4.52	-2.02	0.000	0.00	0.00	0.00	1.2358	3.308
2,2,4-Trimethylpentane	2.29	15			4.41	-2.12	0.000	0.00	0.00	0.00	1.2358	3.106
2,3,4-Trimethylpentane	2.63	32			4.51	-1.88	0.000	0.00	0.00	0.00	1.2358	3.481
Nonane	3.14	32, 82			5.29	-2.15	0.000	0.00	0.00	0.00	1.3767	4.182
Decane	3.61	82			5.93	-2.32	0.000	0.00	0.00	0.00	1.5176	4.686
Cyclopentane	1.98	84			2.86	-0.88	0.263	0.10	0.00	0.00	0.7045	2.477
Methylcyclopentane	2.19	80			3.36	-1.17	0.225	0.10	0.00	0.00	0.8454	2.907
Cyclohexane	2.38	32, 80, 84			3.28	-0.90	0.305	0.10	0.00	0.00	0.8454	2.964
Methylcyclohexane	2.63	80			3.88	-1.25	0.244	0.06	0.00	0.00	0.9863	3.319
Ethylcyclohexane	3.07	32			4.65	-1.58	0.263	0.10	0.00	0.00	1.1272	3.877
Propylcyclohexane	3.35	15			4.67	-1.32	0.257	0.23	0.00	0.00	1.2681	4.313

Butylcyclohexane	3.73	15			5.17	-1.44	0.255	0.23	0.00	0.00	1.4090	4.806
Ethene	0.29	33, 78			1.23	-0.94	0.107	0.10	0.00	0.07	0.3474	0.289
Propene	0.91	78			1.88	-0.97	0.103	0.08	0.00	0.07	0.4883	0.946
2-Methylpropene	1.32	86			2.18	-0.86	0.120	0.08	0.00	0.08	0.6292	1.579
Pent-1-ene	1.65	69			2.88	-1.23	0.093	0.08	0.00	0.07	0.7701	2.047
Hex-1-ene	2.06	83, 85			3.22	-1.16	0.078	0.08	0.00	0.07	0.9110	2.572
Hept-1-ene	2.53	82, 83			3.75	-1.22	0.092	0.08	0.00	0.07	1.0519	3.063
Oct-1-ene	2.91	82, 85			4.32	-1.41	0.094	0.08	0.00	0.07	1.1928	3.568
3-Methylbut-1-ene	1.49	69			2.83	-1.34	0.063	0.06	0.00	0.05	0.7701	1.933
2-Methylbut-2-ene	1.82	69			2.84	-1.02	0.120	0.09	0.00	0.07	0.7701	2.097
2-Methylpent-2-ene	2.24	84			3.32	-1.08	0.156	0.08	0.00	0.07	0.9110	2.687
Buta-1,3-diene	1.73	78, 86			2.18	-0.45	0.320	0.23	0.00	0.10	0.5862	1.543
2-Methylbuta-1,3-diene	2.10	69			2.60	-0.50	0.313	0.23	0.00	0.10	0.7271	2.101
cis-Penta-1,3-diene(Z)	2.28	69			2.64	-0.36	0.345	0.23	0.00	0.10	0.7271	2.256
trans-Penta-1,3-diene(E)	2.23	69, 83			2.59	-0.36	0.345	0.23	0.00	0.10	0.7271	2.296
trans-Hexa-1,3-diene(E)	2.69	83			3.24	-0.55	0.346	0.23	0.00	0.10	0.8680	2.700
Hexa-1,5-diene	2.37	84			3.14	-0.77	0.191	0.15	0.00	0.10	0.8680	2.398
Cyclopentene	2.08	83, 84			2.49	-0.41	0.335	0.22	0.00	0.08	0.6605	2.273
Cyclohexene	2.71	84			2.98	-0.27	0.395	0.28	0.00	0.09	0.8024	2.952
Cycloheptene	3.09	82			3.66	-0.57	0.414	0.22	0.00	0.10	0.9433	3.626
Cyclooctene	3.60	82			4.20	-0.60	0.460	0.24	0.00	0.10	1.0842	4.119
Cyclopentadiene	2.44	84			2.28	0.16	0.417	0.35	0.00	0.12	0.6185	2.222
Cyclohexa-1,3-diene	2.76	83			2.57	0.19	0.515	0.38	0.00	0.12	0.7594	2.859
Heptyne	3.04	87			3.48	-0.44	0.160	0.23	0.09	0.10	1.0089	3.000
Octyne	3.57	87			4.09	-0.52	0.155	0.22	0.09	0.10	1.1498	3.521
Fluoroethane	1.36	46			1.66	-0.30	0.052	0.34	0.00	0.05	0.4081	0.751
Dichloromethane	3.10	82			2.14	0.96	0.387	0.57	0.10	0.05	0.4943	2.019
Trichloromethane	3.84	82			3.05	0.79	0.425	0.49	0.15	0.02	0.6167	2.480
Tetrachloromethane	3.05	82			3.11	-0.06	0.458	0.38	0.00	0.00	0.7391	2.823

2-Chloro-2-methylpropane	2.18	50			2.98	-0.80	0.142	0.30	0.00	0.03	0.7946	2.273
2-Bromo-2-methylpropane	2.52	50			3.14	-0.62	0.305	0.29	0.00	0.07	0.8472	2.609
Iodomethane	2.76	15			2.11	0.65	0.676	0.43	0.00	0.12	0.5077	2.106
Difluoromethane	1.24	55			1.01	0.24	-0.320	0.49	0.06	0.05	0.2849	0.040
Trifluoromethane	0.99	55			1.50	-0.51	-0.430	0.18	0.11	0.03	0.3026	-0.274
Tetrafluoromethane	-1.32	55			0.98	-2.31	-0.550	-0.25	0.00	0.00	0.3203	-0.819
Trichlorofluoromethane	1.88	55			2.33	-0.45	0.207	0.24	0.00	0.07	0.6344	1.950
Dichlorofluoromethane	0.98	55			2.11	-1.13	0.027	0.12	0.00	0.00	0.5297	1.124
Chlorotrifluoromethane	-0.17	55			1.50	-1.67	-0.247	-0.05	0.00	0.00	0.4250	0.209
1,1-Difluoroethane	1.48	55			1.39	0.09	-0.250	0.50	0.04	0.05	0.4258	0.517
1,1,1,2-Tetrafluoroethane	1.44	55			1.85	-0.41	-0.410	0.41	0.06	0.02	0.4612	0.530
1-Chloro-1,1-difluoroethane	1.56	55			2.01	-0.45	-0.080	0.24	0.06	0.06	0.5482	1.081
1-Chloro-1,2,2,2-tetrafluoroethane	1.75	55			2.32	-0.57	-0.310	0.32	0.09	0.01	0.5860	0.933
1,2-Dichlorotetrafluoroethane	1.09	55			2.74	-1.65	-0.190	0.05	0.00	0.00	0.7060	1.427
Chloropentafluoroethane	-0.05	55			2.07	-2.12	-0.360	-0.12	0.00	0.00	0.6013	0.543
1,1,1,2,3,3,3-Heptafluoropropane	0.44	55			1.91	-1.47	-0.557	-0.09	0.07	0.08	0.6552	0.688
1-Chloro-2,2-difluoroethene	1.66	55			2.04	-0.38	-0.340	0.28	0.15	0.00	0.5052	0.723
Diethylether	2.03	84			0.75	1.28	0.041	0.25	0.00	0.45	0.7309	2.015
Tetrahydrofuran	2.96	84			0.40	2.56	0.289	0.52	0.00	0.48	0.6223	2.636
Dioxane	3.66	70			-0.04	3.70	0.329	0.75	0.00	0.64	0.6810	2.892
Butanal	3.05	85			0.72	2.33	0.187	0.65	0.00	0.45	0.6879	2.2700
2-Methylpropanal	2.78	85			0.68	2.10	0.144	0.62	0.00	0.45	0.6879	2.120
Pentanal	3.42	85			1.20	2.22	0.163	0.65	0.00	0.45	0.8288	2.851
Z-But-2-en-1-al (desc for trans)	3.66	15			0.56	3.10	0.387	0.75	0.00	0.43	0.6449	2.532
Crotonaldehyde	3.66	85			0.56	3.10	0.387	0.75	0.00	0.43	0.6449	2.532
Propanone	2.91	84			0.08	2.83	0.179	0.70	0.04	0.49	0.5470	1.696
Butanone	3.25	70, 84			0.53	2.72	0.166	0.70	0.00	0.51	0.6879	2.287
Pentan-2-one	3.47	85			0.89	2.58	0.143	0.68	0.00	0.51	0.8288	2.755
Pentan-3-one	3.49	85			0.99	2.50	0.154	0.66	0.00	0.51	0.8288	2.811
Methyl formate	2.72	85			0.68	2.04	0.192	0.68	0.00	0.38	0.4648	1.285
Methyl acetate	2.72	15			0.42	2.30	0.142	0.64	0.00	0.45	0.6057	1.911
Propyl acetate	3.39	85			1.34	2.05	0.092	0.60	0.00	0.45	0.8875	2.819

[illegible]

4-Methylbenzoic acid		86									
Benzoic acid		86									

Table S4.										
Data for N-Formylmorpholine, NFM										
Solute	logKs	Ref	logPs	LogKw	E	S	A	B	V	L
Carbon dioxide	0.55	90	0.63	-0.08	0.000	0.28	0.05	0.10	0.2809	0.058
Hydrogen sulfide	1.33	90	0.84	0.49	0.310	0.32	0.10	0.08	0.2721	0.706
Methane	-0.88	90	0.58	-1.46	0.000	0.00	0.00	0.00	0.2495	-0.323
Ethane	-0.14	91	1.19	-1.34	0.000	0.00	0.00	0.00	0.3904	0.492
n-Pentane	1.11	85	2.81	-1.70	0.000	0.00	0.00	0.00	0.8131	2.162
n-Hexane	1.49	85	3.31	-1.82	0.000	0.00	0.00	0.00	0.9540	2.668
n-Heptane	1.88	85	3.84	-1.96	0.000	0.00	0.00	0.00	1.0949	3.173
n-Octane	2.27	85	4.38	-2.11	0.000	0.00	0.00	0.00	1.2358	3.677
2,2,4-Trimethylpentane	1.79	85	3.91	-2.12	0.000	0.00	0.00	0.00	1.2358	3.106
n-Decane	3.04	85	5.36	-2.32	0.000	0.00	0.00	0.00	1.5176	4.686
Cyclopentane	1.63	85	2.51	-0.88	0.263	0.10	0.00	0.00	0.7045	2.477
Methylcyclopentane	1.81	85	2.98	-1.17	0.225	0.10	0.00	0.00	0.8454	2.907
Cyclohexane	1.98	85	2.88	-0.90	0.305	0.10	0.00	0.00	0.8454	2.964
Methylcyclohexane	2.16	85	3.41	-1.25	0.244	0.06	0.00	0.00	0.9863	3.319
Ethylcyclohexane	2.58	85	4.16	-1.58	0.263	0.10	0.00	0.00	1.1272	3.877
cis-1,4-Dimethylcyclohexane	2.47	85	3.78	-1.31	0.204	0.20	0.00	0.00	1.1272	3.736
trans-1,4-Dimethylcyclohexane	2.35	85	3.75	-1.40	0.191	0.17	0.00	0.00	1.1272	3.639
cis-1,2-Dimethylcyclohexane	2.59	85	3.76	-1.17	0.281	0.24	0.00	0.00	1.1272	3.847
trans-1,2-Dimethylcyclohexane	2.42	85	3.72	-1.30	0.227	0.20	0.00	0.00	1.1272	3.728
Pent-1-ene	1.35	84	2.58	-1.23	0.093	0.08	0.00	0.07	0.77	2.047
Hex-1-ene	1.73	85	2.89	-1.16	0.078	0.08	0.00	0.07	0.9110	2.572
Hept-1-ene	2.12	84	3.34	-1.22	0.092	0.08	0.00	0.07	1.0519	3.063
Oct-1-ene	2.49	85	3.90	-1.41	0.094	0.08	0.00	0.07	1.1928	3.568
Cyclopentene	1.85	84	2.26	-0.41	0.335	0.22	0.00	0.08	0.6605	2.273
Cyclohexene	2.35	84	2.62	-0.27	0.395	0.28	0.00	0.09	0.8024	2.952

Tetrahydrofuran	2.71	84	0.15	2.56	0.289	0.52	0.00	0.48	0.6223	2.636
Butanal	2.89	85	0.56	2.33	0.187	0.65	0.00	0.45	0.6879	2.2700
2-Methylpropanal	2.66	85	0.56	2.10	0.144	0.62	0.00	0.45	0.6879	2.120
Pentanal	3.29	85	1.07	2.22	0.163	0.65	0.00	0.45	0.8288	2.851
Crotonaldehyde	3.44	85	0.34	3.10	0.387	0.75	0.00	0.43	0.6449	2.532
Propanone	2.71	85	-0.12	2.83	0.179	0.70	0.04	0.49	0.5470	1.696
Butanone	3.02	85	0.30	2.72	0.166	0.70	0.00	0.51	0.6879	2.287
Pentan-2-one	3.31	85	0.73	2.58	0.143	0.68	0.00	0.51	0.8288	2.755
Pentan-3-one	3.26	85	0.76	2.50	0.154	0.66	0.00	0.51	0.8288	2.811
4-Methylpentan-2-one	3.38	85	1.14	2.24	0.111	0.65	0.00	0.51	0.9697	3.089
Methyl acetate	2.66	85	0.36	2.30	0.142	0.64	0.00	0.45	0.6057	1.911
Ethyl acetate	2.88	85	0.72	2.16	0.106	0.62	0.00	0.45	0.7466	2.314
Propyl acetate	3.24	85	1.19	2.05	0.092	0.60	0.00	0.45	0.8875	2.819
Vinyl acetate	2.92	85	0.93	1.99	0.223	0.55	0.00	0.43	0.7036	2.152
Ethyl propanoate	3.15	85	1.18	1.97	0.087	0.58	0.00	0.45	0.8875	2.807
Ethyl butanoate	3.38	85	1.55	1.83	0.068	0.58	0.00	0.45	1.0284	3.271
Methanol	3.13	85	-0.61	3.74	0.278	0.44	0.43	0.47	0.3082	0.970
Ethanol	3.29	85	-0.38	3.67	0.246	0.42	0.37	0.48	0.4491	1.485
Propan-1-ol	3.69	85	0.13	3.56	0.236	0.42	0.37	0.48	0.5900	2.031
Propan-2-ol	3.32	85	-0.16	3.48	0.212	0.36	0.33	0.56	0.5900	1.764
tert-Butanol	3.26	85	-0.02	3.28	0.180	0.30	0.31	0.60	0.7309	1.963
Benzene	2.95	85	2.32	0.63	0.610	0.52	0.00	0.14	0.7164	2.786
Toluene	3.31	85	2.66	0.65	0.601	0.52	0.00	0.14	0.8573	3.325
Ethylbenzene	3.67	85	3.09	0.58	0.613	0.51	0.00	0.15	0.9982	3.778
o-Xylene	3.86	85	3.20	0.66	0.663	0.56	0.00	0.16	0.9982	3.939
m-Xylene	3.69	85	3.08	0.61	0.623	0.52	0.00	0.16	0.9982	3.839
p-Xylene	3.65	85	3.06	0.59	0.613	0.52	0.00	0.16	0.9982	3.839
Isopropylbenzene	3.87	85	3.65	0.22	0.602	0.49	0.00	0.16	1.1391	4.084
Thiophene	3.22	85	2.18	1.04	0.687	0.57	0.00	0.15	0.6411	2.819
N-Formylmorpholine	6.18	$\gamma=1$	-0.72	6.90	0.561	1.38	0.00	0.99	0.8787	4.250
	N = 55			Max	0.687	1.38	0.43	0.99	1.5176	4.686

				Min	0.000	0.00	0.00	0.00	0.3082	0.492
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Table S5										
Data for N,N-Diethylacetamide, DEA										
Solute	logKs	Ref	LogPs	LogKw	E	S	A	B	V	L
n-Pentane	1.82	92	3.52	-1.70	0.000	0.00	0.00	0.00	0.8131	2.162
n-Hexane	2.28	92	4.10	-1.82	0.000	0.00	0.00	0.00	0.9540	2.668
n-Heptane	2.74	92	4.70	-1.96	0.000	0.00	0.00	0.00	1.0949	3.173
Octane	3.19	92	5.30	-2.11	0.000	0.00	0.00	0.00	1.2358	3.677
Cyclohexane	2.60	92	3.50	-0.90	0.305	0.10	0.00	0.00	0.8454	2.964
Pent-1-ene	1.92	92	3.15	-1.23	0.093	0.08	0.00	0.07	0.7701	2.047
Hex-1-ene	2.39	92	3.55	-1.16	0.078	0.08	0.00	0.07	0.9110	2.572
Oct-1-ene	3.30	92	4.71	-1.41	0.094	0.08	0.00	0.07	1.1928	3.568
Cyclohexene	2.82	92	3.09	-0.27	0.395	0.28	0.00	0.09	0.8024	2.952
Dichloromethane	3.14	92	2.18	0.96	0.387	0.57	0.10	0.05	0.4943	2.019
Trichloromethane	3.80	92	3.01	0.79	0.425	0.49	0.15	0.02	0.6167	2.480
Diethylether	2.16	92	0.88	1.28	0.041	0.25	0.00	0.45	0.7309	2.015
Di-isopropylether	2.57	92	1.48	1.09	-0.063	0.17	0.00	0.57	1.0127	2.501
Methyl t-butyl ether	2.49	92	1.04	1.45	0.024	0.22	0.00	0.55	0.8718	2.372
Methyl t-pentyl ether	2.96	92	1.65	1.31	0.050	0.25	0.00	0.54	1.0127	2.799
Ethyl t-butyl ether	2.68	92	1.50	1.18	0.000	0.16	0.00	0.57	1.0127	2.652
Tetrahydrofuran	2.91	92	0.35	2.56	0.289	0.52	0.00	0.48	0.6223	2.636
Acetaldehyde	2.24	92	-0.33	2.57	0.208	0.67	0.00	0.45	0.4061	1.230
Propanone	2.80	92	-0.03	2.83	0.179	0.70	0.04	0.49	0.5470	1.696
Butanone	3.22	92	0.50	2.72	0.166	0.70	0.00	0.51	0.6879	2.287
Pentan-2-one	3.60	92	1.02	2.58	0.143	0.68	0.00	0.51	0.8288	2.755
Vinyl acetate	3.08	92	1.09	1.99	0.223	0.55	0.00	0.43	0.7036	2.152
Methanol	3.46	92	-0.28	3.74	0.278	0.44	0.43	0.47	0.3082	0.970
Ethanol	3.71	92	0.04	3.67	0.246	0.42	0.37	0.48	0.4491	1.485
Propan-2-ol	3.81	92	0.33	3.48	0.212	0.36	0.33	0.56	0.5900	1.764
Benzene	3.22	92	2.59	0.63	0.610	0.52	0.00	0.14	0.7164	2.786
Toluene	3.64	92	2.99	0.65	0.601	0.52	0.00	0.14	0.8573	3.325

	N = 27			Max	0.610	0.70	0.43	0.57	1.2358	3.677
				Min	-0.063	0.00	0.00	0.00	0.3082	0.970

Table S6										
Data for N,N-Dibutylformamide, DBF										
Solute	LogKs	Ref	logPs	LogKw	E	S	A	B	V	L
n-Pentane	1.90	72	3.60	-1.70	0.000	0.00	0.00	0.00	0.8131	2.162
n-Hexane	2.38	72	4.20	-1.82	0.000	0.00	0.00	0.00	0.9540	2.668
n-Heptane	2.86	72	4.82	-1.96	0.000	0.00	0.00	0.00	1.0949	3.173
Cyclohexane	2.69	72	3.59	-0.90	0.305	0.10	0.00	0.00	0.8454	2.964
Methylcyclohexane	2.97	72	4.22	-1.25	0.244	0.06	0.00	0.00	0.9863	3.319
Cyclohexene	2.85	72	3.12	-0.27	0.395	0.28	0.00	0.09	0.8024	2.952
Dichloromethane	2.87	72	1.91	0.96	0.387	0.57	0.10	0.05	0.4943	2.019
Trichloromethane	3.54	72	2.75	0.79	0.425	0.49	0.15	0.02	0.6167	2.480
Tetrachloromethane	3.01	72	3.07	-0.06	0.458	0.38	0.00	0.00	0.7391	2.823
1,2-Dichloroethane	3.39	72	2.08	1.31	0.416	0.64	0.10	0.11	0.6352	2.573
Trichloroethene	3.39	72	3.07	0.32	0.524	0.37	0.08	0.03	0.7146	2.997
Diethylether	2.11	72	0.83	1.28	0.041	0.25	0.00	0.45	0.7309	2.015
Di-isopropylether	2.55	72	1.46	1.09	-0.063	0.17	0.00	0.57	1.0127	2.501
Methyl t-butyl ether	2.45	72	1.00	1.45	0.024	0.22	0.00	0.55	0.8718	2.372
Methyl t-pentyl ether	3.01	72	1.70	1.31	0.050	0.25	0.00	0.54	1.0127	2.799
Ethyl t-butyl ether	2.64	72	1.46	1.18	0.000	0.16	0.00	0.57	1.0127	2.652
Isopropyl t-butyl ether	2.84	72	2.10	0.74	-0.120	0.10	0.00	0.54	1.1536	2.947
Tetrahydrofuran	2.85	72	0.29	2.56	0.289	0.52	0.00	0.48	0.6223	2.636
Dioxane	3.36	72	-0.34	3.70	0.329	0.75	0.00	0.64	0.6810	2.892
Furan	2.40	72	1.74	0.66	0.369	0.51	0.00	0.13	0.5363	1.913
Acetaldehyde	2.04	72	-0.53	2.57	0.208	0.67	0.00	0.45	0.4061	1.230
2-Methylpropanal	2.77	72	0.67	2.10	0.144	0.62	0.00	0.45	0.6879	2.120
Propanone	2.60	72	-0.23	2.83	0.179	0.70	0.04	0.49	0.5470	1.696
Butanone	3.08	72	0.36	2.72	0.166	0.70	0.00	0.51	0.6879	2.287
4-Methylpentan-2-one	3.69	72	1.45	2.24	0.111	0.65	0.00	0.51	0.9697	3.089

Methyl formate	2.18	72	0.14	2.04	0.192	0.68	0.00	0.38	0.4648	1.285
Methyl acetate	2.55	72	0.25	2.30	0.142	0.64	0.00	0.45	0.6057	1.911
Ethyl acetate	2.90	72	0.74	2.16	0.106	0.62	0.00	0.45	0.7466	2.314
Propyl acetate	3.34	72	1.29	2.05	0.092	0.60	0.00	0.45	0.8875	2.819
Butyl acetate	3.84	72	1.90	1.94	0.071	0.60	0.00	0.45	1.0284	3.353
Acetonitrile	2.99	72	0.14	2.85	0.237	0.90	0.07	0.32	0.4042	1.739
Methanol	3.01	72	-0.73	3.74	0.278	0.44	0.43	0.47	0.3082	0.970
Ethanol	3.32	72	-0.35	3.67	0.246	0.42	0.37	0.48	0.4491	1.485
Propan-2-ol	3.45	72	-0.03	3.48	0.212	0.36	0.33	0.56	0.5900	1.764
Butan-1-ol	4.33	72	0.87	3.46	0.224	0.42	0.37	0.48	0.7309	2.601
2-Methylpropan-1-ol	4.22	72	0.92	3.30	0.217	0.39	0.37	0.48	0.7309	2.413
Allyl alcohol	3.97	72	0.28	3.69	0.342	0.46	0.38	0.48	0.5470	1.951
Benzene	3.12	72	2.49	0.63	0.610	0.52	0.00	0.14	0.7164	2.786
Toluene	3.60	72	2.95	0.65	0.601	0.52	0.00	0.14	0.8573	3.325
Ethylbenzene	3.99	72	3.41	0.58	0.613	0.51	0.00	0.15	0.9982	3.778
Pyridine	3.90	72	0.46	3.44	0.631	0.84	0.00	0.52	0.6753	3.022
	N = 43			Max	0.718	0.90	0.43	0.64	1.1536	3.778
				Min	-0.120	0.00	0.00	0.00	0.3082	0.970
Not used										
Chlorobenzene	3.24	72	2.42	0.82	0.718	0.65	0.00	0.07	0.8388	3.657
Water	3.15	72	-1.57	4.72	0.000	0.62	0.59	0.46	0.1673	0.245

Table S7										
Data for N-methyl-2-piperidone, NMPip										
	LogKs	Ref	LogPs	LogKw	E	S	A	B	V	L
n-Pentane	1.58	93	3.29	-1.70	0.000	0.00	0.00	0.00	0.8131	2.162
n-Hexane	2.04	93	3.86	-1.82	0.000	0.00	0.00	0.00	0.9540	2.668
n-Heptane	2.50	93	4.46	-1.96	0.000	0.00	0.00	0.00	1.0949	3.173
n-Octane	2.95	93	5.06	-2.11	0.000	0.00	0.00	0.00	1.2358	3.677

[illegible]

	N = 36			Max	0.610	0.90	0.43	0.57	1.2358	3.677
				Min	-0.120	0.00	0.00	0.00	0.3082	0.970

Table S8												
Data for N-Methylformamide, NMF												
	logKs	Ref	logPs	LogKw	logSs	logSw	E	S	A	B	V	L
Argon	-0.97	33	0.49	-1.47			0.000	0.00	0.00	0.00	0.1900	-0.688
Oxygen	-0.82	96	0.69	-1.51			0.000	0.00	0.00	0.00	0.183	-0.723
SF6	-0.75	33	1.48	-2.23			-0.600	-0.20	0.00	0.00	0.4643	-0.120
n-Pentane	1.32	32,69, 95	3.02	-1.70			0.000	0.00	0.00	0.00	0.8131	2.162
2-Methylbutane	1.15	69, 95	2.90	-1.75			0.000	0.00	0.00	0.00	0.8131	2.013
n-Hexane	1.71	32, 95	3.53	-1.82			0.000	0.00	0.00	0.00	0.9540	2.668
2-Methylpentane	1.64	32	3.48	-1.84			0.000	0.00	0.00	0.00	0.9540	2.503
n-Heptane	2.07	32,95	4.03	-1.96			0.000	0.00	0.00	0.00	1.0949	3.173
2,4-Dimethylpentane	1.82	32	3.90	-2.08			0.000	0.00	0.00	0.00	1.0949	2.809
Octane	2.43	32, 95	4.54	-2.11			0.000	0.00	0.00	0.00	1.2358	3.677
2,5-Dimethylhexane	2.17	32	4.19	-2.02			0.000	0.00	0.00	0.00	1.2358	3.308
2,3,4-Trimethylpentane	2.36	32	4.24	-1.88			0.000	0.00	0.00	0.00	1.2358	3.481
Nonane	2.80	32	4.95	-2.15			0.000	0.00	0.00	0.00	1.3767	4.182
Methylcyclopentane	1.96	95	3.13	-1.17			0.225	0.10	0.00	0.00	0.8454	2.907
Cyclohexane	2.13	32, 95	3.03	-0.90			0.305	0.10	0.00	0.00	0.8454	2.964
Methylcyclohexane	2.33	95	3.58	-1.25			0.244	0.06	0.00	0.00	0.9863	3.319
Ethylcyclohexane	2.73	32	4.31	-1.58			0.263	0.10	0.00	0.00	1.1272	3.877
Ethene	0.15	33	1.09	-0.94			0.107	0.10	0.00	0.07	0.3474	0.289
Pent-1-ene	1.45	69, 95	2.68	-1.23			0.093	0.08	0.00	0.07	0.7701	2.047
3-Methylbut-1-ene	1.28	69	2.62	-1.34			0.063	0.06	0.00	0.05	0.7701	1.933
2-Methylbut-2-ene	1.59	69	2.61	-1.02			0.120	0.09	0.00	0.07	0.7701	2.097
Hex-1-ene	1.87	95	3.03	-1.16			0.078	0.08	0.00	0.07	0.9110	2.572
Oct-1-ene	2.64	95	4.05	-1.41			0.094	0.08	0.00	0.07	1.1928	3.568
2-Methylbuta-1,3-diene	1.79	69	2.29	-0.50			0.313	0.23	0.00	0.10	0.7271	2.101
cis-Penta-1,3-diene(Z)	1.96	69	2.32	-0.36			0.345	0.23	0.00	0.10	0.7271	2.256

trans-Penta-1,3-diene(E)	1.90	69	2.26	-0.36			0.345	0.23	0.00	0.10	0.7271	2.296
Cyclohexene	2.39	95	2.66	-0.27			0.395	0.28	0.00	0.09	0.8024	2.952
Diethylether	1.95	95	0.67	1.28			0.041	0.25	0.00	0.45	0.7309	2.015
Di-isopropylether	2.23	95	1.14	1.09			-0.063	0.17	0.00	0.57	1.0127	2.501
Methyl t-butyl ether	2.26	95	0.81	1.45			0.024	0.22	0.00	0.55	0.8718	2.372
Methyl t-pentyl ether	2.65	95	1.34	1.31			0.050	0.25	0.00	0.54	1.0127	2.799
Ethyl t-butyl ether	2.35	95	1.17	1.18			0.000	0.16	0.00	0.57	1.0127	2.652
1,4-Dioxane	3.56	70	-0.14	3.70			0.329	0.75	0.00	0.64	0.6810	2.892
Propanone	2.80	95	-0.03	2.83			0.179	0.70	0.04	0.49	0.5470	1.696
Butanone	3.13	95	0.41	2.72			0.166	0.70	0.00	0.51	0.6879	2.287
Pentan-2-one	3.44	95	0.86	2.58			0.143	0.68	0.00	0.51	0.8288	2.755
NMF	6.04	$\gamma=1$	-0.53	6.57			0.405	1.36	0.40	0.55	0.5059	2.863
Water	3.87	97	-0.85	4.72			0.000	0.62	0.59	0.46	0.1673	0.245
Methanol	3.33	95, 97	-0.41	3.74			0.278	0.44	0.43	0.47	0.3082	0.970
Ethanol	3.56	95	-0.11	3.67			0.246	0.42	0.37	0.48	0.4491	1.485
Benzene	2.81	95	2.18	0.63			0.610	0.52	0.00	0.14	0.7164	2.786
Toluene	3.18	95	2.53	0.65			0.601	0.52	0.00	0.14	0.8573	3.325
Ethylbenzene	3.53	95	2.95	0.58			0.613	0.51	0.00	0.15	0.9982	3.778
o-Xylene	3.68	95	3.02	0.66			0.663	0.56	0.00	0.16	0.9982	3.939
m-Xylene	3.53	95	2.92	0.61			0.623	0.52	0.00	0.16	0.9982	3.839
p-Xylene	3.52	95	2.93	0.59			0.613	0.52	0.00	0.16	0.9982	3.839
Anthracene	7.62	74	4.59	3.03	-1.84	-6.43	2.290	1.34	0.00	0.28	1.4544	7.568
Pyrene	8.69	74	5.19	3.50	-0.96	-6.15	2.808	1.71	0.00	0.28	1.5846	8.833
Acenaphthene	6.23	74	3.92	2.31	-0.62	-4.54	1.604	1.05	0.00	0.22	1.2586	6.469
Benzoic acid	7.35	59	2.25	5.10	0.66	-1.59	0.730	0.90	0.59	0.40	0.9317	4.657
Methyl 4-hydroxybenzoate	9.27	61	2.42	6.85	0.59	-1.83	0.900	1.37	0.69	0.45	1.1313	5.716
4-Hydroxybenzoic acid	8.55	61	1.68	6.78	0.21	-1.47	0.930	0.90	0.81	0.56	0.9904	4.867
	N = 52					Max	2.808	1.710	0.81	0.64	1.5846	8.833
						Min	-0.600	0.160	0.00	0.14	0.1673	0.245

Table S9										
Data for N-Methylacetamide, NMA										
	logKs	Ref	logPs	LogKw	E	S	A	B	V	L
Helium	-1.80	97	0.23	-2.03	0.000	0.00	0.00	0.00	0.0680	-1.741
Argon	-0.86	98	0.61	-1.47	0.000	0.00	0.00	0.00	0.1900	-0.688
Nitrogen	-1.12	77	0.68	-1.80	0.000	0.00	0.00	0.00	0.2222	-0.978
Ethane	0.19	99	1.53	-1.34	0.000	0.00	0.00	0.00	0.3904	0.492
n-Pentane	1.59	69, 72	3.29	-1.70	0.000	0.00	0.00	0.00	0.8131	2.162
2-Methylbutane	1.49	69	3.24	-1.75	0.000	0.00	0.00	0.00	0.8131	2.013
n-Hexane	2.01	72	3.83	-1.82	0.000	0.00	0.00	0.00	0.9540	2.668
n-Heptane	2.45	72	4.41	-1.96	0.000	0.00	0.00	0.00	1.0949	3.173
Cyclohexane	2.39	72	3.29	-0.90	0.305	0.10	0.00	0.00	0.8454	2.964
Methylcyclohexane	2.63	72	3.88	-1.25	0.244	0.06	0.00	0.00	0.9863	3.319
Pent-1-ene	1.63	69	2.86	-1.23	0.093	0.08	0.00	0.07	0.7701	2.047
3-Methylbut-1-ene	1.57	69	2.91	-1.34	0.063	0.06	0.00	0.05	0.7701	1.933
2-Methylbut-2-ene	1.86	69	2.88	-1.02	0.120	0.09	0.00	0.07	0.7701	2.097
2-Methylbuta-1,3-diene	2.01	69	2.51	-0.50	0.313	0.23	0.00	0.10	0.7271	2.101
cis-Penta-1,3-diene(Z)	2.12	69	2.48	-0.36	0.345	0.23	0.00	0.10	0.7271	2.256
trans-Penta-1,3-diene(E)	2.19	69	2.55	-0.36	0.345	0.23	0.00	0.10	0.7271	2.296
Cyclohexene	2.58	72	2.85	-0.27	0.395	0.28	0.00	0.09	0.8024	2.952
Dichloromethane	2.74	72	1.78	0.96	0.387	0.57	0.10	0.05	0.4943	2.019
Trichloromethane	3.35	72	2.56	0.79	0.425	0.49	0.15	0.02	0.6167	2.480
Tetrachloromethane	2.86	72	2.92	-0.06	0.458	0.38	0.00	0.00	0.7391	2.823
1,2-Dichloroethane	3.26	72	1.95	1.31	0.416	0.64	0.10	0.11	0.6352	2.573
Trichloroethene	3.19	72	2.87	0.32	0.524	0.37	0.08	0.03	0.7146	2.997
Diethylether	2.03	72	0.75	1.28	0.041	0.25	0.00	0.45	0.7309	2.015
Di-isopropylether	2.38	72	1.29	1.09	-0.063	0.17	0.00	0.57	1.0127	2.501
Methyl t-butyl ether	2.29	72	0.84	1.45	0.024	0.22	0.00	0.55	0.8718	2.372
Methyl t-pentyl ether	2.75	72	1.44	1.31	0.050	0.25	0.00	0.54	1.0127	2.799
Ethyl t-butyl ether	2.49	72	1.31	1.18	0.000	0.16	0.00	0.57	1.0127	2.652
Isopropyl t-butyl ether	2.65	72	1.91	0.74	-0.120	0.10	0.00	0.54	1.1536	2.947
Tetrahydrofuran	2.84	72	0.28	2.56	0.289	0.52	0.00	0.48	0.6223	2.636

Dioxane	3.42	72	-0.28	3.70	0.329	0.75	0.00	0.64	0.6810	2.892
Furan	2.37	72	1.71	0.66	0.369	0.51	0.00	0.13	0.5363	1.913
Acetaldehyde	2.09	72	-0.48	2.57	0.208	0.67	0.00	0.45	0.4061	1.230
2-Methylpropanal	2.70	72	0.60	2.10	0.144	0.62	0.00	0.45	0.6879	2.120
Propanone	2.69	72	-0.14	2.83	0.179	0.70	0.04	0.49	0.5470	1.696
Butanone	3.07	72	0.35	2.72	0.166	0.70	0.00	0.51	0.6879	2.287
4-Methylpentan-2-one	3.53	72	1.29	2.24	0.111	0.65	0.00	0.51	0.9697	3.089
Methyl formate	2.31	72	0.27	2.04	0.192	0.68	0.00	0.38	0.4648	1.285
Methyl acetate	2.65	72	0.35	2.30	0.142	0.64	0.00	0.45	0.6057	1.911
Ethyl acetate	2.96	72	0.80	2.16	0.106	0.62	0.00	0.45	0.7466	2.314
Propyl acetate	3.33	72	1.28	2.05	0.092	0.60	0.00	0.45	0.8875	2.819
Butyl acetate	3.77	72	1.83	1.94	0.071	0.60	0.00	0.45	1.0284	3.353
Acetonitrile	3.10	72	0.25	2.85	0.237	0.90	0.07	0.32	0.4042	1.739
N-Methylacetamide	6.31	$\gamma=1$	-0.57	6.88	0.350	1.28	0.40	0.71	0.6468	2.974
Water	4.25	72	-0.47	4.72	0.000	0.62	0.59	0.46	0.1673	0.245
Methanol	3.46	72	-0.28	3.74	0.278	0.44	0.43	0.47	0.3082	0.970
Ethanol	3.65	72	-0.02	3.67	0.246	0.42	0.37	0.48	0.4491	1.485
Propan-2-ol	3.75	72	0.27	3.48	0.212	0.36	0.33	0.56	0.5900	1.764
Butan-1-ol	4.47	72	1.01	3.46	0.224	0.42	0.37	0.48	0.7309	2.601
2-Methylpropan-1-ol	4.33	72	1.03	3.30	0.217	0.39	0.37	0.48	0.7309	2.413
Allyl alcohol	4.30	72	0.61	3.69	0.342	0.46	0.38	0.48	0.5470	1.951
Benzene	2.84	72	2.21	0.63	0.610	0.52	0.00	0.14	0.7164	2.786
Toluene	3.35	72	2.70	0.65	0.601	0.52	0.00	0.14	0.8573	3.325
Ethylbenzene	3.70	72	3.12	0.58	0.613	0.51	0.00	0.15	0.9982	3.778
Chlorobenzene	3.79	72	2.97	0.82	0.718	0.65	0.00	0.07	0.8388	3.657
Pyridine	3.92	72	0.48	3.44	0.631	0.84	0.00	0.52	0.6753	3.022
	N = 55			Max	0.72	1.28	0.59	0.71	1.1536	3.778
				Min	-0.12	0.00	0.00	0.00	0.0680	-1.741

Table S10										
Data for N-Ethylformamide, NEF										
Solute	logKs	Ref	LogPs	LogKw	E	S	A	B	V	L
n-Pentane	1.55	101	3.25	-1.70	0.000	0.00	0.00	0.00	0.8131	2.162
n-Hexane	1.97	101	3.79	-1.82	0.000	0.00	0.00	0.00	0.9540	2.668
n-Heptane	2.38	101	4.34	-1.96	0.000	0.00	0.00	0.00	1.0949	3.173
Octane	2.78	101	4.89	-2.11	0.000	0.00	0.00	0.00	1.2358	3.677
Cyclohexane	2.36	101	3.26	-0.90	0.305	0.10	0.00	0.00	0.8454	2.964
Pent-1-ene	1.66	101	2.89	-1.23	0.093	0.08	0.00	0.07	0.7701	2.047
Hex-1-ene	2.09	101	3.25	-1.16	0.078	0.08	0.00	0.07	0.9110	2.572
Oct-1-ene	2.91	101	4.32	-1.41	0.094	0.08	0.00	0.07	1.1928	3.568
Cyclohexene	2.58	101	2.85	-0.27	0.395	0.28	0.00	0.09	0.8024	2.952
Dichloromethane	2.71	101	1.75	0.96	0.387	0.57	0.10	0.05	0.4943	2.019
Trichloromethane	3.23	101	2.44	0.79	0.425	0.49	0.15	0.02	0.6167	2.480
Diethylether	2.04	101	0.76	1.28	0.041	0.25	0.00	0.45	0.7309	2.015
Di-isopropylether	2.37	101	1.28	1.09	-0.063	0.17	0.00	0.57	1.0127	2.501
Methyl t-butyl ether	2.35	101	0.90	1.45	0.024	0.22	0.00	0.55	0.8718	2.372
Methyl t-pentyl ether	2.78	101	1.47	1.31	0.050	0.25	0.00	0.54	1.0127	2.799
Ethyl t-butyl ether	2.48	101	1.30	1.18	0.000	0.16	0.00	0.57	1.0127	2.652
Tetrahydrofuran	2.88	101	0.32	2.56	0.289	0.52	0.00	0.48	0.6223	2.636
Propanone	2.73	101	-0.10	2.83	0.179	0.70	0.04	0.49	0.5470	1.696
Butanone	3.11	101	0.39	2.72	0.166	0.70	0.00	0.51	0.6879	2.287
Pentan-2-one	3.44	101	0.86	2.58	0.143	0.68	0.00	0.51	0.8288	2.755
Vinyl acetate	2.87	101	0.88	1.99	0.223	0.55	0.00	0.43	0.7036	2.152
Methanol	3.31	101	-0.43	3.74	0.278	0.44	0.43	0.47	0.3082	0.970
Ethanol	3.59	101	-0.08	3.67	0.246	0.42	0.37	0.48	0.4491	1.485
Propan-2-ol	3.69	101	0.21	3.48	0.212	0.36	0.33	0.56	0.5900	1.764
Benzene	2.89	101	2.26	0.63	0.610	0.52	0.00	0.14	0.7164	2.786
Toluene	3.29	101	2.64	0.65	0.601	0.52	0.00	0.14	0.8573	3.325
	N = 26			Max	0.610	0.70	0.43	0.57	1.2358	3.677
				Min	-0.063	0.00	0.00	0.00	0.3082	0.970

Table S11										
Data for N-Ethylacetamide, NEA										
Solute	logKs	Ref	LogPs	LogKw	E	S	A	B	V	L
n-Pentane	1.72	69, 92	3.42	-1.70	0.000	0.00	0.00	0.00	0.8131	2.162
2-Methylbutane	1.63	69	3.38	-1.75	0.000	0.00	0.00	0.00	0.8131	2.013
n-Hexane	2.14	92	3.96	-1.82	0.000	0.00	0.00	0.00	0.9540	2.668
n-Heptane	2.57	92	4.53	-1.96	0.000	0.00	0.00	0.00	1.0949	3.173
Octane	3.00	92	5.11	-2.11	0.000	0.00	0.00	0.00	1.2358	3.677
Cyclohexane	2.50	92	3.40	-0.90	0.305	0.10	0.00	0.00	0.8454	2.964
3-Methylbut-1-ene	1.66	69	3.00	-1.34	0.063	0.06	0.00	0.05	0.7701	1.933
2-Methylbut-2-ene	1.97	69	2.99	-1.02	0.120	0.09	0.00	0.07	0.7701	2.097
2-Methylbuta-1,3-diene	2.06	69	2.56	-0.50	0.313	0.23	0.00	0.10	0.7271	2.101
cis-Penta-1,3-diene(Z)	2.17	69	2.53	-0.36	0.345	0.23	0.00	0.10	0.7271	2.256
trans-Penta-1,3-diene(E)	2.22	69	2.58	-0.36	0.345	0.23	0.00	0.10	0.7271	2.296
Pent-1-ene	1.80	69, 92	3.03	-1.23	0.093	0.08	0.00	0.07	0.7701	2.047
Hex-1-ene	2.23	92	3.39	-1.16	0.078	0.08	0.00	0.07	0.9110	2.572
Oct-1-ene	3.10	92	4.51	-1.41	0.094	0.08	0.00	0.07	1.1928	3.568
Cyclohexene	2.69	92	2.96	-0.27	0.395	0.28	0.00	0.09	0.8024	2.952
Dichloromethane	2.73	92	1.77	0.96	0.387	0.57	0.10	0.05	0.4943	2.019
Trichloromethane	3.35	92	2.56	0.79	0.425	0.49	0.15	0.02	0.6167	2.480
Diethylether	2.07	92	0.79	1.28	0.041	0.25	0.00	0.45	0.7309	2.015
Di-isopropylether	2.44	92	1.35	1.09	-0.063	0.17	0.00	0.57	1.0127	2.501
Methyl t-butyl ether	2.39	92	0.94	1.45	0.024	0.22	0.00	0.55	0.8718	2.372
Methyl t-pentyl ether	2.83	92	1.52	1.31	0.050	0.25	0.00	0.54	1.0127	2.799
Ethyl t-butyl ether	2.56	92	1.38	1.18	0.000	0.16	0.00	0.57	1.0127	2.652
Tetrahydrofuran	2.85	92	0.29	2.56	0.289	0.52	0.00	0.48	0.6223	2.636
Acetaldehyde	2.00	92	-0.57	2.57	0.208	0.67	0.00	0.45	0.4061	1.230
Propanone	2.61	92	-0.22	2.83	0.179	0.70	0.04	0.49	0.5470	1.696
Butanone	3.02	92	0.30	2.72	0.166	0.70	0.00	0.51	0.6879	2.287
Pentan-2-one	3.38	92	0.80	2.58	0.143	0.68	0.00	0.51	0.8288	2.755
Vinyl acetate	2.81	92	0.82	1.99	0.223	0.55	0.00	0.43	0.7036	2.152

Methanol	3.37	92	-0.37	3.74	0.278	0.44	0.43	0.47	0.3082	0.970
Ethanol	3.63	92	-0.04	3.67	0.246	0.42	0.37	0.48	0.4491	1.485
Propan-2-ol	3.73	92	0.25	3.48	0.212	0.36	0.33	0.56	0.5900	1.764
Benzene	2.93	92	2.30	0.63	0.610	0.52	0.00	0.14	0.7164	2.786
Toluene	3.35	92	2.70	0.65	0.601	0.52	0.00	0.14	0.8573	3.325
	N = 33			Max	0.610	0.70	0.43	0.57	1.2358	3.677
				Min	-0.063	0.00	0.00	0.00	0.3082	0.970

Table S12												
Data for formamide, F												
	LogKs	Ref	LogPs	LogKw	logSs	logSw	E	S	A	B	V	L
Propane	-0.14	104	1.30	-1.44			0.000	0.00	0.00	0.00	0.5313	1.050
n-Butane	0.09	104	1.61	-1.52			0.000	0.00	0.00	0.00	0.6722	1.615
n-Pentane	0.32	104	2.02	-1.70			0.000	0.00	0.00	0.00	0.8131	2.162
n-Hexane	0.39	102	2.21	-1.82			0.000	0.00	0.00	0.00	0.9540	2.668
n-Heptane	0.66	102	2.62	-1.96			0.000	0.00	0.00	0.00	1.0949	3.173
Octane	0.93	102	3.04	-2.11			0.000	0.00	0.00	0.00	1.2358	3.677
Nonane	1.22	102	3.37	-2.15			0.000	0.00	0.00	0.00	1.3767	4.182
Cyclohexane	0.99	102	1.89	-0.90			0.305	0.10	0.00	0.00	0.8454	2.964
Methylcyclohexane	1.04	102	2.29	-1.25			0.244	0.06	0.00	0.00	0.9863	3.319
Ethylcyclohexane	1.33	102	2.91	-1.58			0.263	0.10	0.00	0.00	1.1272	3.877
Propylcyclohexane	1.40	104	2.72	-1.32			0.257	0.23	0.00	0.00	1.2681	4.313
Hex-1-ene	0.67	103	1.83	-1.16			0.078	0.08	0.00	0.07	0.9110	2.572
Hept-1-ene	0.91	103	2.13	-1.22			0.092	0.08	0.00	0.07	1.0519	3.063
Oct-1-ene	1.16	103	2.57	-1.41			0.094	0.08	0.00	0.07	1.1928	3.568
cis-Hex-2-ene	0.78	103	1.93	-1.15			0.143	0.08	0.00	0.07	0.9110	2.684
2,2,4-Trimethylpent-1-ene	0.95	103	2.42	-1.47			0.090	0.07	0.00	0.07	1.1928	3.289
Cyclohexene	1.37	103	1.64	-0.27			0.395	0.28	0.00	0.09	0.8024	2.952
Dichloromethane	1.96	103	1.00	0.96			0.387	0.57	0.10	0.05	0.4943	2.019
Trichloromethane	2.13	103	1.34	0.79			0.425	0.49	0.15	0.02	0.6167	2.480

Tetrachloromethane	1.59	103	1.65	-0.06			0.458	0.38	0.00	0.00	0.7391	2.823
Diethylether	1.49	103, 104	0.21	1.28			0.041	0.25	0.00	0.45	0.7309	2.015
Tetrahydrofuran	2.69	103	0.13	2.56			0.289	0.52	0.00	0.48	0.6223	2.636
Propanal	2.39	104	-0.13	2.52			0.196	0.65	0.00	0.45	0.5470	1.815
Butanal	2.58	104	0.25	2.33			0.187	0.65	0.00	0.45	0.6879	2.270
Pentanal	2.76	104	0.54	2.22			0.163	0.65	0.00	0.45	0.8288	2.851
Hexanal	2.95	104	0.89	2.06			0.146	0.65	0.00	0.45	0.9697	3.357
Octanal	3.16	104	1.48	1.68			0.137	0.65	0.00	0.45	1.2515	4.361
Nonanal	3.20	104	1.68	1.52			0.150	0.65	0.00	0.45	1.3924	4.834
Propanone	2.73	103, 104	-0.10	2.83			0.179	0.70	0.04	0.49	0.5470	1.696
Butanone	2.90	103, 104	0.18	2.72			0.166	0.70	0.00	0.51	0.6879	2.287
Pentan-2-one	3.02	104	0.44	2.58			0.143	0.68	0.00	0.51	0.8288	2.755
Hexan-2-one	3.27	104	0.86	2.41			0.136	0.68	0.00	0.51	0.9697	3.286
Heptan-2-one	3.48	104	1.25	2.23			0.123	0.68	0.00	0.51	1.1106	3.760
Octan-2-one	3.71	104	1.60	2.11			0.108	0.68	0.00	0.51	1.2515	4.257
Nonan-2-one	3.98	104	2.15	1.83			0.113	0.68	0.00	0.51	1.3924	4.735
Methyl isobutyl ketone	3.07	104	0.83	2.24			0.111	0.65	0.00	0.51	0.9697	3.089
Methyl isopentyl ketone	3.31	104	0.94	2.37			0.114	0.65	0.00	0.52	1.1106	3.835
Methyl isohexyl ketone	3.49	104	1.29	2.20			0.110	0.65	0.00	0.52	1.2515	4.093
Methyl isoheptyl ketone	3.73	104	1.65	2.08			0.100	0.65	0.00	0.52	1.3924	4.575
Methyl formate	2.26	103	0.22	2.04			0.192	0.68	0.00	0.38	0.4648	1.285
Methyl acetate	2.40	104	0.10	2.30			0.142	0.64	0.00	0.45	0.6057	1.911
Ethyl acetate	2.61	103, 104	0.45	2.16			0.106	0.62	0.00	0.45	0.7466	2.314
Propyl acetate	2.73	104	0.68	2.05			0.092	0.60	0.00	0.45	0.8875	2.819
Butyl acetate	2.98	104	1.04	1.94			0.071	0.60	0.00	0.45	1.0284	3.353
Pentyl acetate	3.17	104	1.33	1.84			0.067	0.60	0.00	0.45	1.1693	3.844
Hexyl acetate	3.37	104	1.71	1.66			0.056	0.60	0.00	0.45	1.3102	4.290
Heptyl acetate	3.55	104	2.03	1.52			0.050	0.60	0.00	0.45	1.4511	4.796
Acetonitrile	3.20	105	0.35	2.85			0.237	0.90	0.07	0.32	0.4042	1.739
Nitromethane	3.48	105	0.53	2.95			0.313	0.95	0.06	0.31	0.4237	1.892
Formamide	7.30	$\gamma=1$	-0.17	7.47			0.468	1.31	0.64	0.57	0.3650	2.447
Water	4.16	105	-0.48	4.64			0.000	0.45	0.82	0.35	0.1673	0.260

Methanol	3.30	104	-0.44	3.74			0.278	0.44	0.43	0.47	0.3082	0.970
Propan-1-ol	3.55	104	-0.01	3.56			0.236	0.42	0.37	0.48	0.5900	2.031
Butan-1-ol	3.83	104	0.37	3.46			0.224	0.42	0.37	0.48	0.7309	2.601
Pentan-1-ol	4.14	104	0.79	3.35			0.219	0.42	0.37	0.48	0.8718	3.106
Hexan-1-ol	4.43	104	1.20	3.23			0.210	0.42	0.37	0.48	1.0127	3.610
Heptan-1-ol	4.68	104	1.59	3.09			0.211	0.42	0.37	0.48	1.1536	4.115
Octan-1-ol	4.76	104	1.76	3.00			0.199	0.42	0.37	0.48	1.2945	4.619
Nonan-1-ol	5.29	104	2.44	2.85			0.193	0.42	0.37	0.48	1.4354	5.120
Benzene	1.97	102	1.34	0.63			0.610	0.52	0.00	0.14	0.7164	2.786
Toluene	2.20	102	1.55	0.65			0.601	0.52	0.00	0.14	0.8573	3.325
Ethylbenzene	2.39	102	1.81	0.58			0.613	0.51	0.00	0.15	0.9982	3.778
Propylbenzene	2.56	102	2.17	0.39			0.604	0.50	0.00	0.15	1.1391	4.230
Isopropylbenzene	2.48	102	2.26	0.22			0.602	0.49	0.00	0.16	1.1391	4.084
o-Xylene	2.60	102	1.94	0.66			0.663	0.56	0.00	0.16	0.9982	3.939
m-Xylene	2.41	102	1.80	0.61			0.623	0.52	0.00	0.16	0.9982	3.839
p-Xylene	2.40	102	1.81	0.59			0.613	0.52	0.00	0.16	0.9982	3.839
Ibuprofen	8.01	66	2.31	5.70	-1.45	-3.76	0.730	0.70	0.56	0.79	1.7771	7.184
Diclofenac	13.04	60	3.77	9.27	-1.36	-5.13	1.810	1.85	0.55	0.77	2.0250	11.025
2-Hydroxybenzoic acid	7.31	60	1.92	5.39	0.00	-1.92	0.900	0.85	0.73	0.37	0.9904	4.732
Niflumic acid	11.83	65	2.42	9.41	-1.58	-4.00	1.540	1.71	0.75	0.79	1.7922	9.277
Piroxicam	14.14	65	2.56	11.58	-1.90	-4.46	2.560	2.71	0.00	1.21	2.2500	12.210
Methyl 4-hydroxybenzoate	8.89	61	2.04	6.85	0.21	-1.83	0.900	1.37	0.69	0.45	1.1313	5.716
	N = 73					Max	2.560	2.710	0.82	1.21	2.2500	12.210
						Min	0.000	0.250	0.00	0.14	0.1673	0.260