

Table S1. Dry particle diameter (d_{dry}) and calculated supersaturation (SS_{calc}) for the particle sizes used in the ammonium sulphate calibration of the supersaturation of the CCN counter.

d_{dry} nm	SS_{calc} %
30	0.9836
33	0.8472
35	0.7727
36	0.7395
38	0.6796
40	0.6274
41	0.6037
45	0.5222
50	0.4434
55	0.3824
60	0.3342
63	0.3098
65	0.2952
67	0.2817
70	0.2632
71	0.2575
72	0.2520
77	0.2272
80	0.2142
85	0.1950
88	0.1849
90	0.1786
92	0.1726
100	0.1518

Table S2. Experimentally determined critical supersaturations. All dry particle diameters have been corrected for evaporation losses.

a)

4-oxopimelic acid		pimelic acid		oxosuccinic acid	
D₀ / nm	SS / %	d₀ / nm	SS / %	d₀ / nm	SS / %
39.14	1.1953	40.30	1.0107	37.86	0.9329
44.18	1.0009	43.36	1.0104	39.86	0.8447
47.21	0.9070	45.40	0.9248	42.87	0.7724
49.22	0.8717	48.44	0.8758	44.87	0.6966
54.25	0.7329	49.25	0.8249	49.88	0.5797
57.27	0.6844	54.29	0.8443	54.89	0.4969
59.28	0.6438	59.31	0.6335	59.89	0.4611
61.29	0.6199	64.33	0.5505	64.90	0.3986
64.31	0.6395	69.35	0.5359	69.90	0.3465
69.33	0.5185	73.66	0.4828	74.91	0.4179
74.34	0.4816	79.39	0.4313	79.91	0.2655
79.36	0.4506	83.73	0.3897	84.91	0.2634
89.39	0.3555	89.41	0.3491	89.91	0.2462
99.42	0.3031				
109.44	0.2643				
119.46	0.2396				
129.48	0.2159				

b)

2-oxoglutaric acid		3-oxoglutaric acid		glutaric acid	
d₀ / nm	SS / %	d₀ / nm	SS / %	d₀ / nm	SS / %
34.54	1.1432	37.77	1.1690	37.70	1.1109
35.00	1.0716	37.52	1.1641	39.95	1.0510
35.55	1.1453	39.77	1.0980	43.60	0.9418
36.55	1.0036	41.78	1.0086	49.20	0.7937
39.57	0.9136	44.56	0.8901	50.00	0.7890
39.53	0.9410	44.79	0.8865	54.55	0.6727
41.58	0.8342	44.78	0.9047	55.10	0.6541
44.58	0.7301	44.79	0.9439	55.80	0.8928
44.11	0.7551	46.69	0.8435	59.45	0.6342
46.60	0.7112	46.79	0.8611	59.90	0.6158
49.61	0.6357	49.70	0.8087	61.95	0.5993
54.62	0.5556	49.80	0.7557	65.10	0.5761
54.62	0.5416	52.79	0.7037	65.15	0.5420
59.61	0.4910	52.80	0.7127	70.35	0.5230
59.64	0.4780	55.81	0.5560	70.50	0.4604
64.65	0.4130	55.72	0.6112	70.60	0.4881
74.67	0.3373	56.80	0.6312	75.55	0.5024
69.67	0.3841	59.61	0.5680	75.60	0.4254
79.65	0.2875	59.81	0.5568	75.60	0.5536
79.68	0.2933	59.81	0.5385	86.00	0.3589
89.70	0.2584	60.81	0.5667	96.15	0.3088
99.71	0.2237	64.82	0.5367	96.20	0.2927
99.68	0.2222	69.82	0.4434	106.40	0.2503
109.72	0.1908	74.83	0.4013		
		79.83	0.3553		
		79.83	0.3530		
		79.83	0.3475		
		84.84	0.3281		
		84.66	0.3239		
		84.83	0.3595		
		89.84	0.3183		
		94.84	0.2908		
		99.85	0.2669		
		109.85	0.2195		

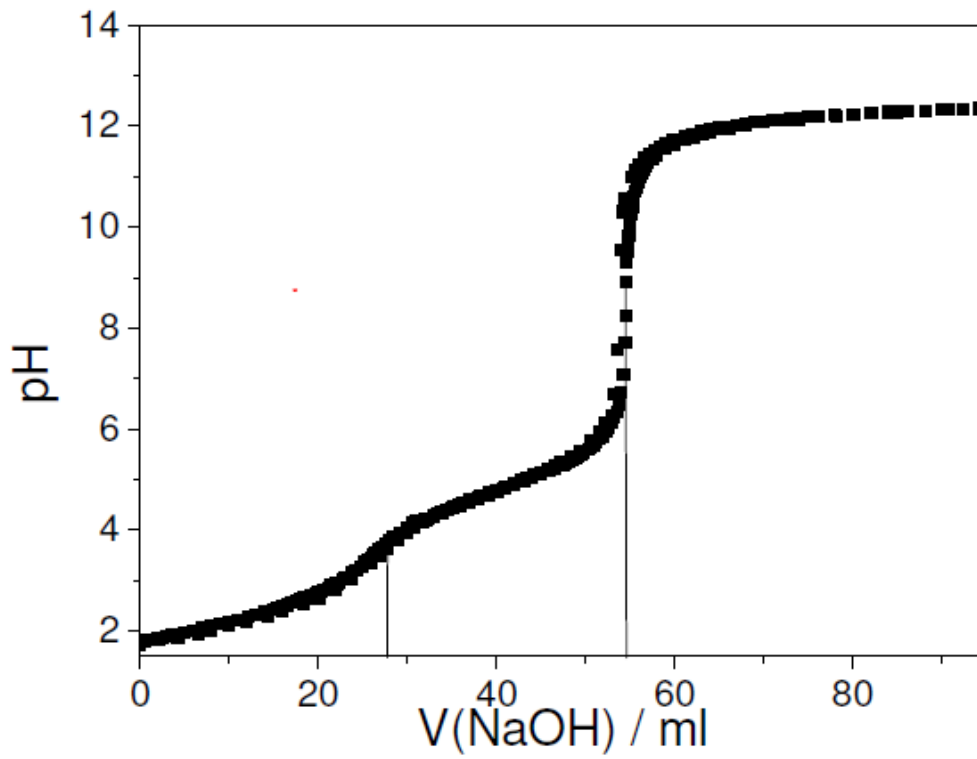


Fig. S1. Titration curve for 2-oxoglutaric acid. 20 ml of a 0.01062 M aqueous solution of 2-oxoglutaric acid was titrated with a 0.07869 M aqueous solution of NaOH.

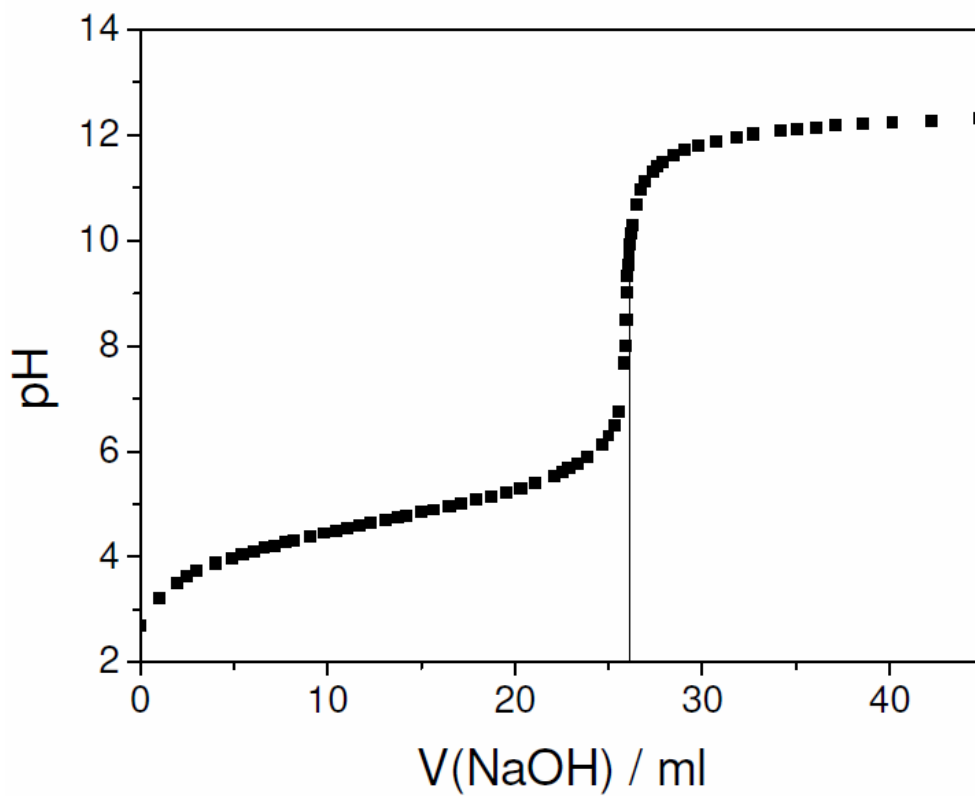


Fig. S2. Titration curve for 4-oxopimelic acid. 20 ml of a 0.01048 M aqueous solution of 4-oxopimelic acid was titrated with a 0.07869 M aqueous solution of NaOH.