

Determining Distribution Coefficient K

Different concentrations of acetic acid in water (prepared as detailed in procedure) was contacted with kerosene, 25 mL of each phase. A 5 mL sample of aqueous phase was titrated with 0.3 M NaOH. Amount required for titration provided below:

Conc. AA [M]	0.5	0.4	0.3	0.2	0.1
Volume 0.3 M NaOH added [mL]	6.9	5.5	4.1	2.9	1.4

Pump calibration

The amount of water expelled in one minute was recorded below for both pumps #1 and #2:

Pump speed [%]	25	30	35	40	45	50
Pump 1 water collected [mL]	671	802	962	1040	1240	1270
Pump 2 water collected [mL]	628	784	909	1010	1230	1250

Effect of flow rate on contactor

The contactor, operating at 3000 RPM and variable flow rates, had inlet streams of DI water and ?? M AA in kerosene (assumed 0.1 M). Samples were taken of the aqueous phase exit stream and 50 mL of said sample was titrated with 0.1 M NaOH. Volumes required to neutralize are given below:

Pump Speeds [%]	30	35	40	45	50
Volume 0.1 M NaOH added [mL]	3.7	3.3	2.9	3.0	3.7

Effect of rotor speed on contactor

Contacting 0.1 M AA in kerosene with DI water at 30% flow rates and specified RPM. Aqueous exit stream sample of 5 mL was titrated with 0.1 M NaOH, volume required to neutralize given below.

RPM	3500	3000	2500	2000	1500	1000
Volume of 0.1 M NaOH [mL]	6.3	5.1	4.2	5.0	4.0	4.1