

Table 1: Properties of components:

Component	Density at 30 °C	Molecular Weight	Boiling Point	R.I at 30 °C
A	729 kg/m ³	58.08 g	56.2 °C	1.3545
B	879 kg/m ³	78.11 g	81.1 °C	1.4951

Calibration Curve

Table 2: Experimental data for the calibration curve:

Three RI readings are taken for every sample and computed the average.

V _A :V _B	R.I (1)	R.I (2)	R.I (3)
Pure A	1.351791	1.351891	1.351691
9:1	1.364765	1.364765	1.364066
8:2	1.38243	1.382929	1.383827
7:3	1.400394	1.399296	1.400593
6:4	1.416661	1.415763	1.417459
5:5	1.437419	1.43732	1.440513
4:6	1.443108	1.445004	1.443607
3:7	1.454685	1.4472	1.454884
2:8	1.471052	1.471551	1.471351
1:9	1.484525	1.483427	1.484425
Pure B	1.491711	1.492709	1.49201

T-X_A-Y_A data

Table 4: Experimental data of liquid and vapour phase at various composition:

		Vapour Phase			Liquid Phase		
S. NO	Temperature °C	R.I(1)	R.I(2)	R.I(3)	R.I(1)	R.I(2)	R.I(3)
1	58.2	1.376541	1.375044	1.375344	1.382729	1.381831	1.385324
2	59.9	1.395104	1.396002	1.395803	1.403787	1.407579	1.408178
3	60.8	1.404485	1.399895	1.400693	1.434326	1.436621	1.436222
4	63.0	1.407679	1.414266	1.414665	1.444006	1.441611	1.443507
5	65.2	1.431531	1.431831	1.429635	1.449495	1.450194	1.450793
6	68.1	1.442809	1.445703	1.446701	1.473048	1.473747	1.472649