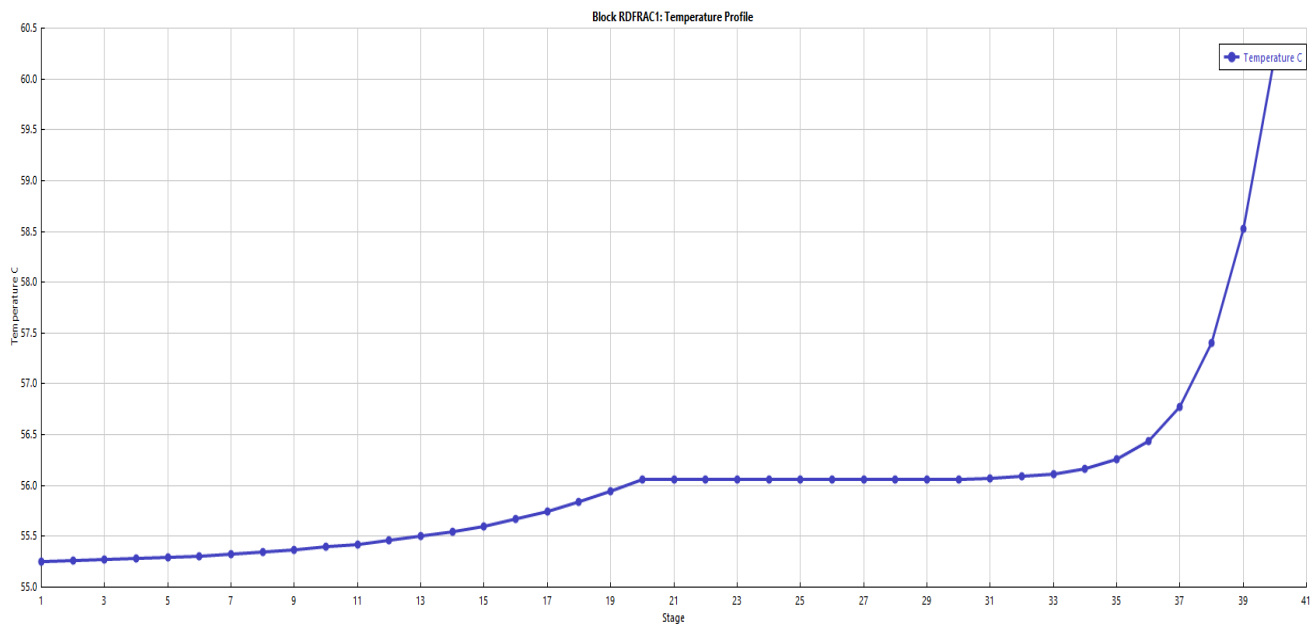
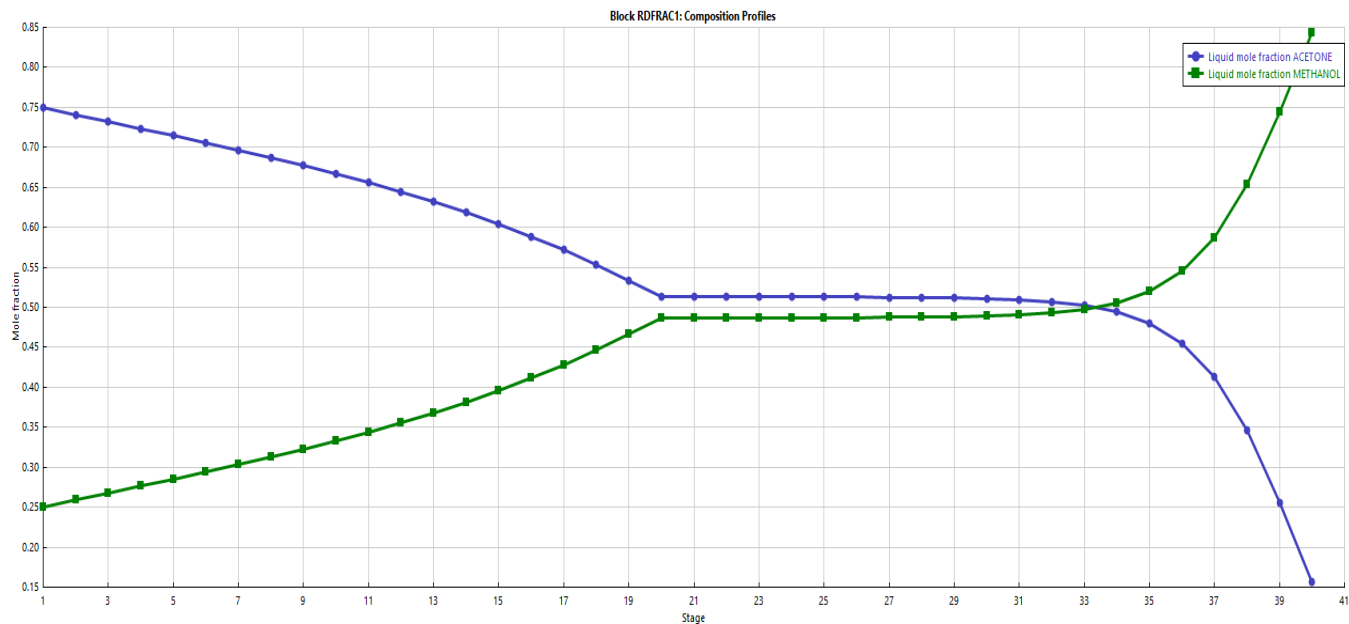


Graphs for RDFRAC1

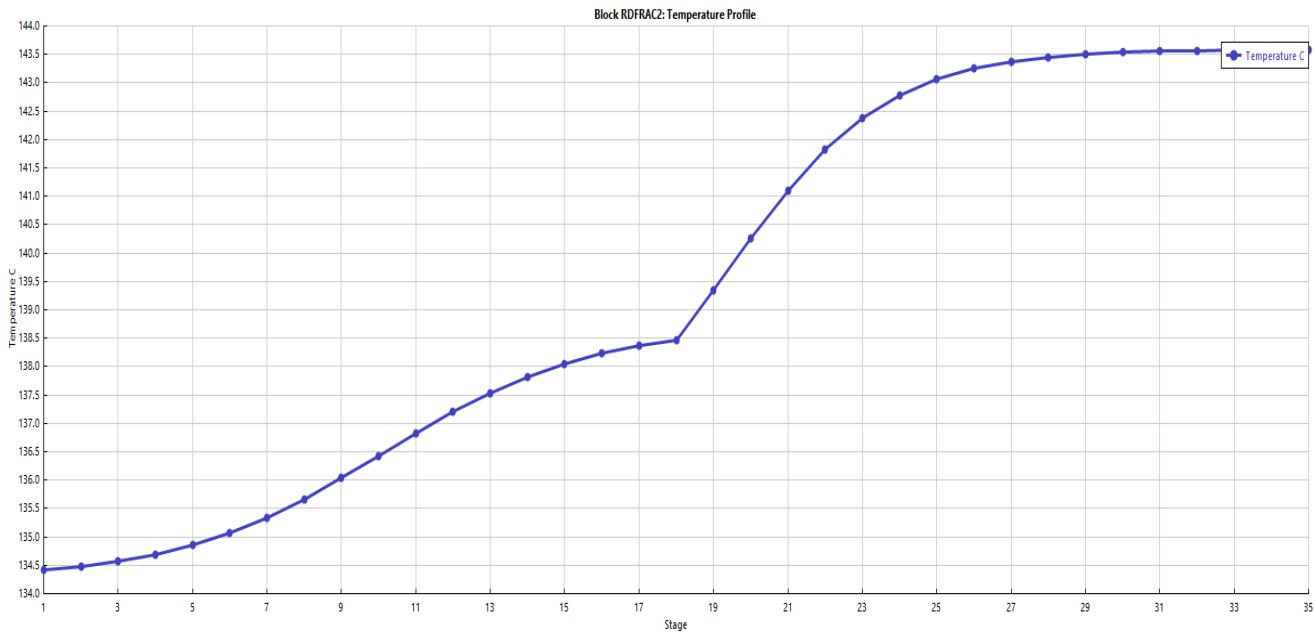


Temperature Profile

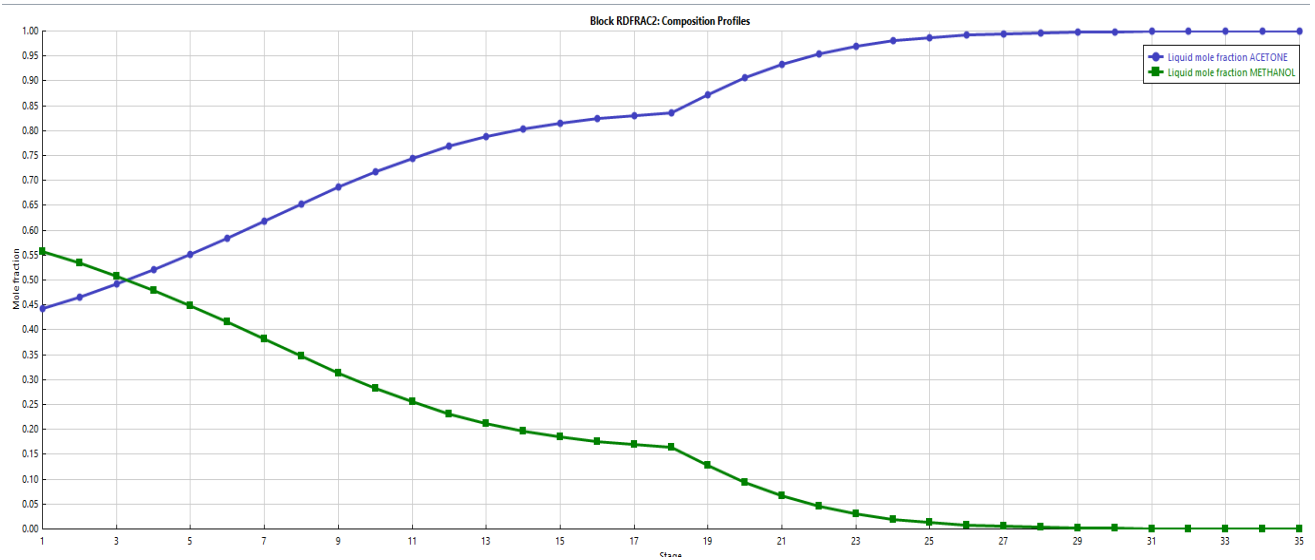


Composition Profile

Graph for RDFRAC2



Temperature Profile



Composition Profile

Optimum Stages for RDFRAC 1

Summary

	Value	Units
► Number of Trayed/Packed stages	38	
► Total height		meter
► Total head loss (Hot liquid height)		meter
► Total pressure drop		bar
► Number of sections	1	
► Number of diameters	1	
► Pressure drop across sump		bar

Sections

	Start Stage	End Stage	Diameter		Section Height		Internals Type	Tray Type or Packing Type	Section Pressure Drop		% Approach to Flood	Limiting Stage	
► CS-1	2	38	2.93218	meter	22.5552	meter	TRAY	SIEVE	0.338615	bar	83.9096	2	View

Optimum Stages for RDFRAC 2

Summary

	Value	Units
► Number of Trayed/Packed stages	33	
► Total height		meter
► Total head loss (Hot liquid height)		meter
► Total pressure drop		bar
► Number of sections	1	
► Number of diameters	1	
► Pressure drop across sump		bar

Sections

	Start Stage	End Stage	Diameter		Section Height		Internals Type	Tray Type or Packing Type	Section Pressure Drop		% Approach to Flood	Limiting Stage	
► CS-1	3	33	2.01061	meter	18.8976	meter	TRAY	SIEVE	0.195325	bar	80.0008	33	View

ASSUMPTION :-

Feed Flow Rate = 540 Kmole/Hr

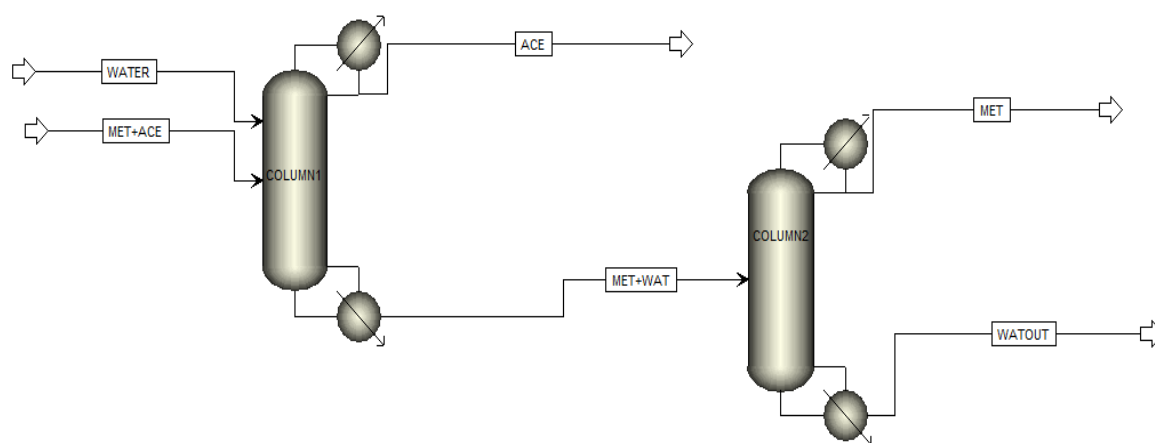
RDFRAC 1 :- Reflux Ratio = 2.8 ; Distillate Rate = 400 Kmole/Hr

RDFRAC 2 :- Reflux Ratio = 4.2 ; Distillate Rate = 80 Kmole/Hr

2

Extraction-Water

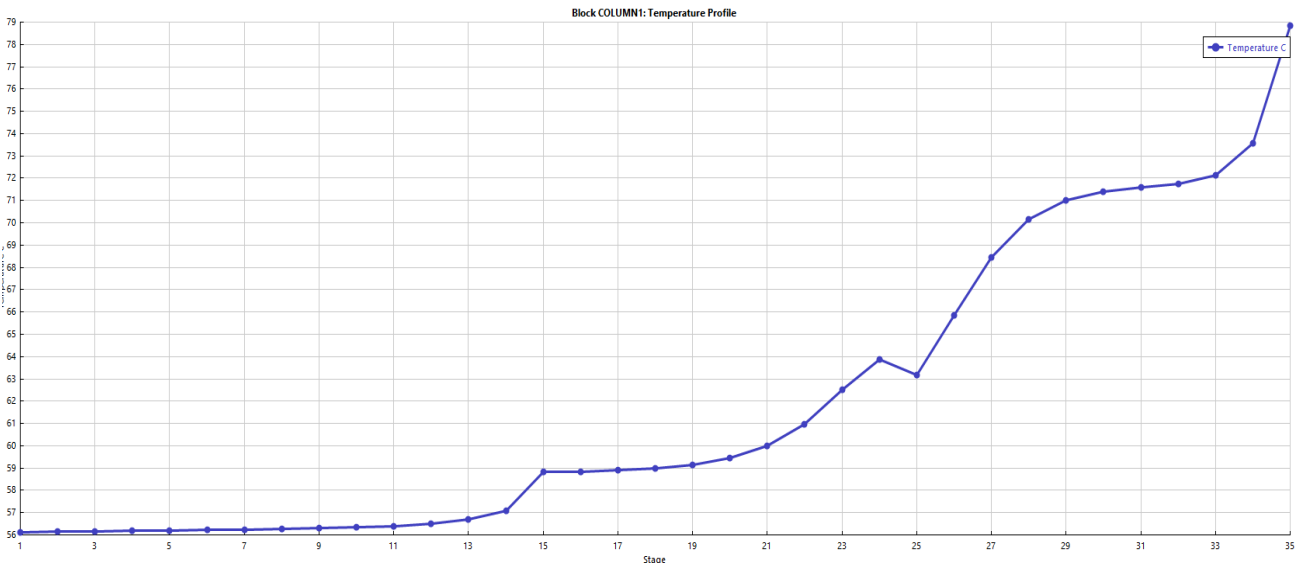
Flowsheet



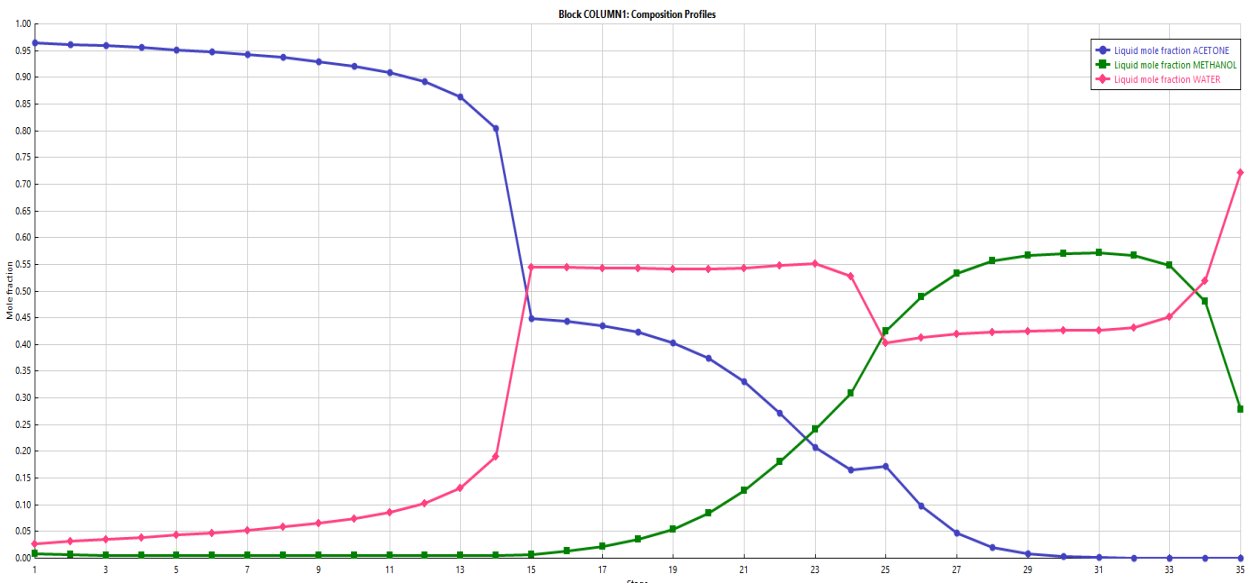
Stream Result

	Units	MET+ACE	WATER	ACE	MET+WAT	
Pressure	bar	1.01325	1.01325	1.01325	1.01325	
Molar Vapor Fraction		0	0	0	0	
Molar Liquid Fraction		1	1	1	1	
Molar Solid Fraction		0	0	0	0	
Mass Vapor Fraction		0	0	0	0	
Mass Liquid Fraction		1	1	1	1	
Mass Solid Fraction		0	0	0	0	
Molar Enthalpy	cal/mol	-57279	-67870.7	-58356.5	-64147.8	
Mass Enthalpy	cal/gm	-1271.14	-3767.4	-1028.11	-2925.42	
Molar Entropy	cal/mol-K	-62.6187	-37.7034	-70.1874	-40.2956	
Mass Entropy	cal/gm-K	-1.38964	-2.09286	-1.23654	-1.83765	
Molar Density	mol/cc	0.0170318	0.0539888	0.0132525	0.0381123	
Mass Density	gm/cc	0.767471	0.972623	0.752221	0.835718	
Enthalpy Flow	cal/sec	-8.59186e+06	-1.31971e+07	-4.53884e+06	-1.71061e+07	
Average MW		45.0611	18.0153	56.7609	21.9278	
➤ Mole Flows	kmol/hr	540	700	280	960	
➤ Mole Fractions						
ACETONE		0.5	0	0.964238	1.39972e-05	
METHANOL		0.5	0	0.00810202	0.278887	
WATER		0	1	0.0276603	0.721099	
DMSO		0	0	0	0	
➤ Mass Flows	kg/hr	24333	12610.7	15893	21050.6	
➤ Mass Fractions						

Profiles for Column 1

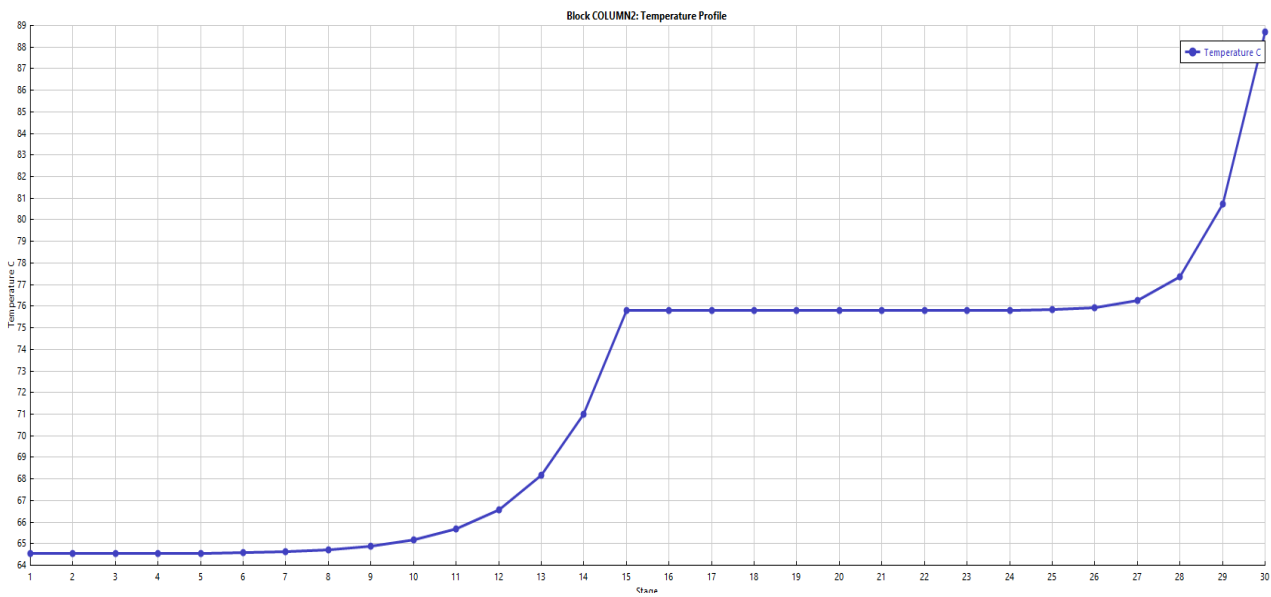


Temperature Profile

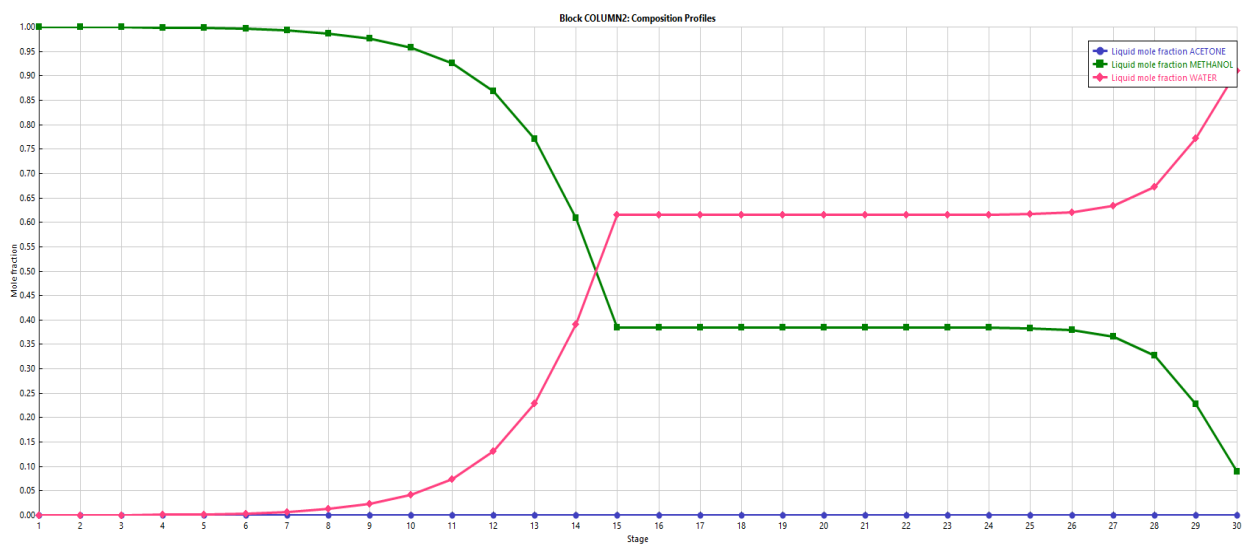


Composition Profile

Profiles for Column 2



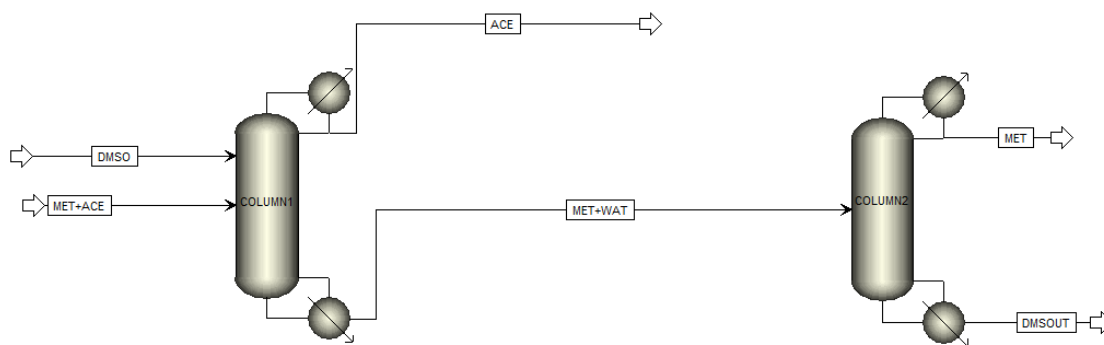
Temperature Profile



Composition Profile

Extraction-DMSO

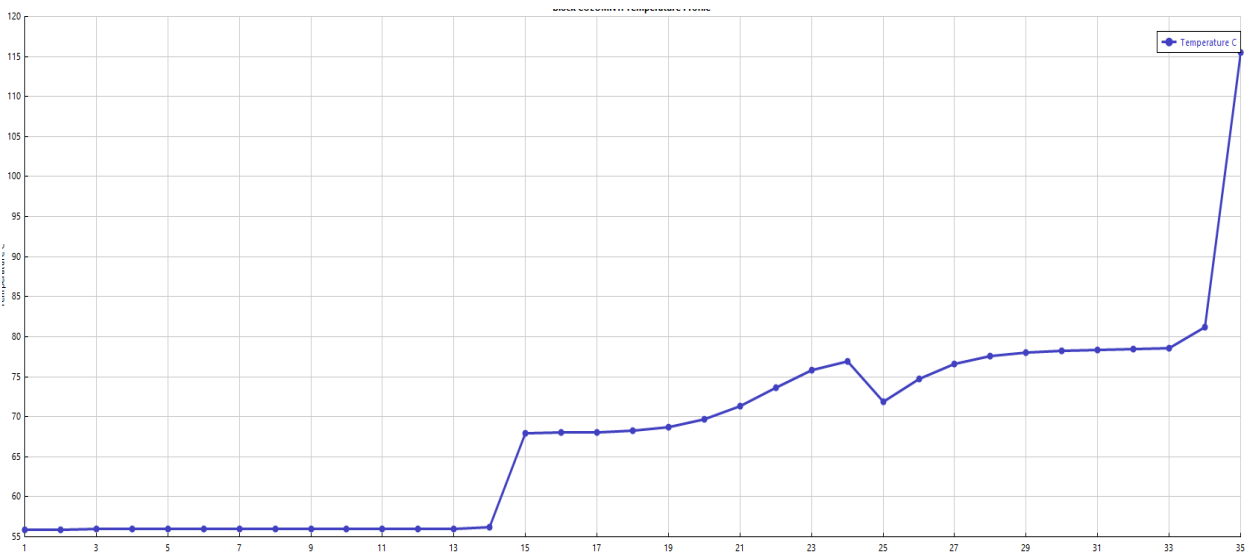
Flowsheet



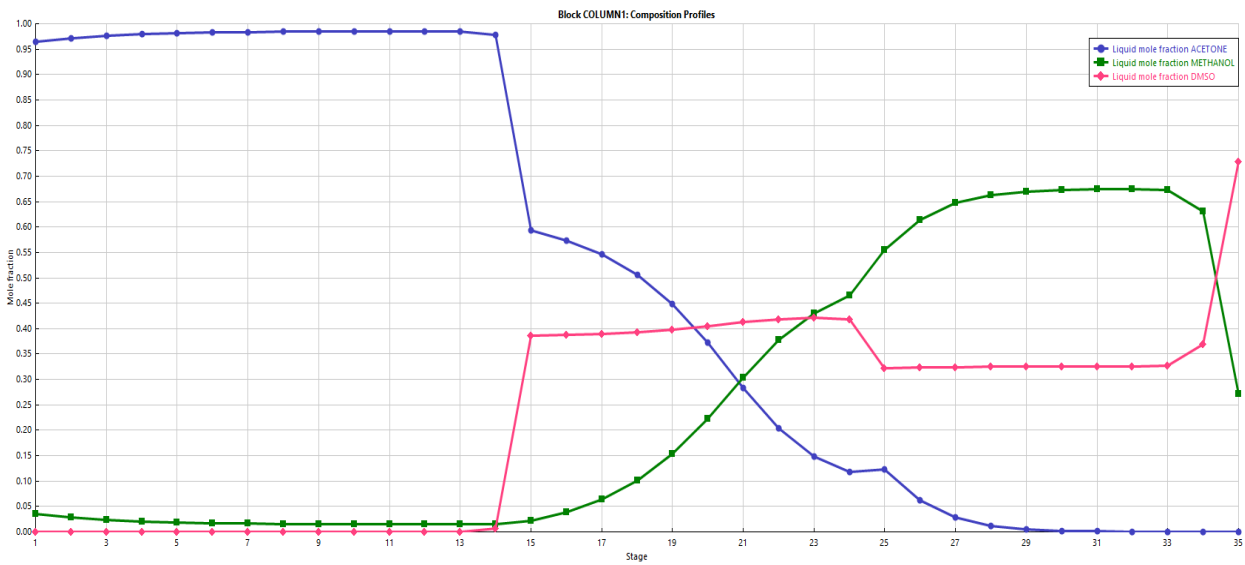
Stream Result

	Units	ACE	DMSO	DMSOUT	MET	MET+ACE	MET+WAT	
▶ Molar Solid Fraction		0	0	0	0	0	0	
▶ Mass Vapor Fraction		0	0	0	0	0	0	
▶ Mass Liquid Fraction		1	1	1	1	1	1	
▶ Mass Solid Fraction		0	0	0	0	0	0	
▶ Molar Enthalpy	cal/mol	-57952.9	-47772.7	-44667.6	-55990.4	-57279	-48003.8	
▶ Mass Enthalpy	cal/gm	-1014.06	-611.412	-599.597	-1747.33	-1271.14	-731.187	
▶ Molar Entropy	cal/mol-K	-70.3995	-80.8706	-68.1679	-54.5391	-62.6187	-66.6901	
▶ Mass Entropy	cal/gm-K	-1.23185	-1.03501	-0.915053	-1.70203	-1.38964	-1.01582	
▶ Molar Density	mol/cc	0.0131518	0.0137252	0.012773	0.0232189	0.0170318	0.0145182	
▶ Mass Density	gm/cc	0.751613	1.07242	0.951542	0.744016	0.767471	0.953148	
▶ Enthalpy Flow	cal/sec	-4.50745e+06	-9.28914e+06	-9.42983e+06	-3.11058e+06	-8.59186e+06	-1.2801e+07	
▶ Average MW		57.1491	78.135	74.4961	32.0435	45.0611	65.6518	
▶ ✚ Mole Flows	kmol/hr	280	700	760	200	540	960	
▶ — Mole Fractions								
▶ ACETONE		0.964248	0	2.31183e-13	5.22282e-05	0.5	1.08809e-05	
▶ METHANOL		0.0357516	0	0.0789474	0.999948	0.5	0.270822	
▶ WATER		0	0	0	0	0	0	
▶ DMSO		1.04268e-27	1	0.921053	3.9769e-34	0	0.729167	
▶ ✚ Mass Flows	kg/hr	16001.8	54694.5	56617.1	6408.7	24333	63025.8	
▶ ✚ Mass Fractions								
▶ Volume Flow	l/min	354.831	850.018	991.672	143.561	528.424	1102.06	

Profiles for Column 1

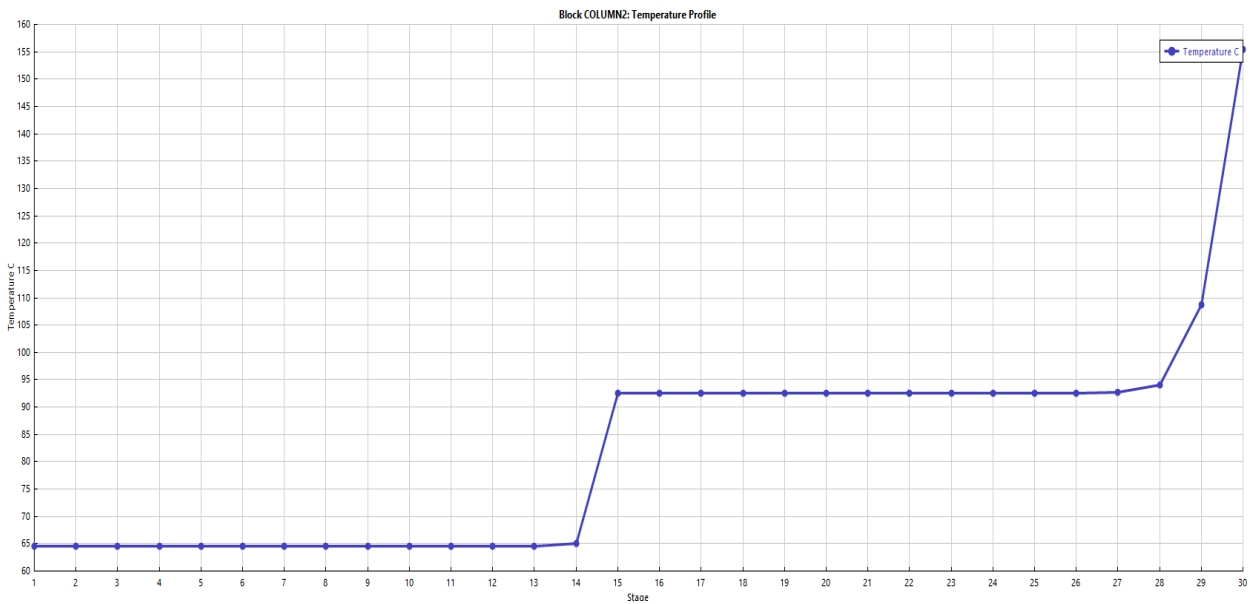


Temperature Profile

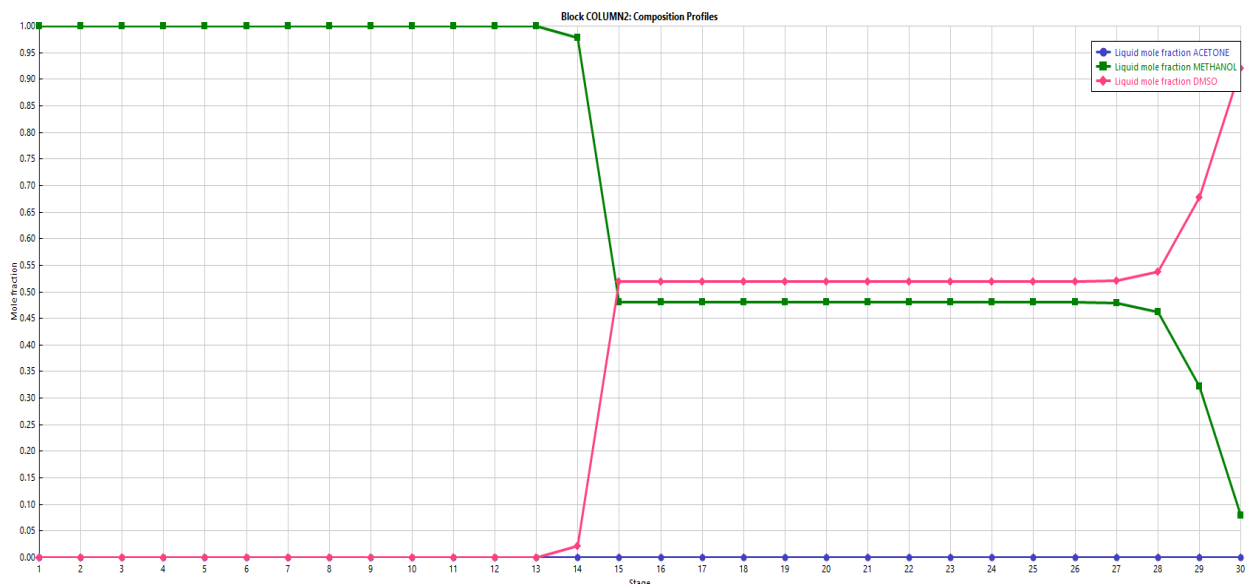


Composition Profile

Profiles for Column 2



Temperature profile



Composition Profile

