

APPENDIX C

The stream table of reaction zone

Appendix Table C1 The stream table of 1 reaction zone

	1A	2A	3A	4A	5A	6A	RECYCLE MEOH	MEOH	NAOH	OIL
Temperature C	60.74636	60.74774	60	25.00764	60	77.79451	69.3167443	25	25	25
Pressure kPa	100	101.325	101.325	101.325	101.325	101.325	101.325	100	100	100
Vapor Frac	0	0	0	0	0	0	0	0	0	0
Mole Flow kmol/hr	14.0063	14.0063	14.0063	1.132865	1.132865	7.43248	7.70668671	6	0.30002168	1.13286532
Mass Flow kg/hr	389.855	389.855	389.855	1000	1000	1004.163	197.612298	130	12	1000
Volume Flow cum/hr	12.6796	12.67961	12.67795	5.585033	5.619089	1.44675	13.6339749	0.242462	0.00634077	5.58502526
Mass Flow kg/hr										
TRIOLEIC	0	0	0	550	550	0.099217	0	0	0	550
METHANOL	389.855	389.855	389.855	0	0	0	197.612298	130	0	0
NAOH	12	12	12	0	0	12	0	0	12	0
METHYL-OLEIC	0	0	0	0	0	506.2527	0	0	0	0
GLYCEROL	0	0	0	0	0	80.01476	0	0	0	0
WATER	0	0	0	0	0	0	0	0	0	0
DI-OLEIC	0	0	0	0	0	0.106491	0	0	0	0
MONO-OLE	0	0	0	0	0	0.00031	0	0	0	0
TRI-LINOLEIC	0	0	0	450	450	0.01842	0	0	0	450
DI-LINOLEIC	0	0	0	0	0	0.086564	0	0	0	0
MONO-LINLEIC	0	0	0	0	0	0.000254	0	0	0	0
MET-LINOLEIC	0	0	0	0	0	405.5844	0	0	0	0

Appendix Table C2 The stream table of 2 reaction zone

	1A	2A	3A	4A	5A	6A	RECYCLE MEOH	MEOH	NAOH	OIL
Temperature C	53.42366	53.42548	60	25.00764	60	77.80057	74.6926459	25	25	25
Pressure kPa	100	101.325	101.325	101.325	101.325	101.325	101.325	100	100	100
Vapor Frac	0	0	0	0	0	0	0	0	0	0
Mole Flow kmol/hr	13.24091	13.24091	13.24091	1.132865	1.132865	7.432925	6.94084749	6	0.30002168	1.13286532
Mass Flow kg/hr	413.4555	413.4555	413.4555	1000	1000	1004.455	221.201323	130	12	1000
Volume Flow cum/hr	0.841246	0.841248	0.84745	5.585033	5.619089	1.446478	0.61136807	0.242462	0.00634077	5.58502526
Mass Flow kg/hr										
TRIOLEIC	0	0	0	550	550	0.01986	0	0	0	550
METHANOL	413.4555	413.4555	413.4555	0	0	0	221.201323	130	0	0
NAOH	12	12	12	0	0	12	0	0	12	0
METHYL-OLEIC	0	0	0	0	0	506.323	0	0	0	0
GLYCEROL	0	0	0	0	0	80.01476	0	0	0	0
WATER	0	0	0	0	0	0	0	0	0	0
DI-OLEIC	0	0	0	0	0	0.032645	0	0	0	0
MONO-OLE	0	0	0	0	0	0.000284	0	0	0	0
TRI-LINOLEIC	0	0	0	450	450	0.009881	0	0	0	450
DI-LINOLEIC	0	0	0	0	0	0.053646	0	0	0	0
MONO-LINLEIC	0	0	0	0	0	0.000233	0	0	0	0
MET-LINOLEIC	0	0	0	0	0	406.0011	0	0	0	0

Appendix Table C3 The stream table of 3 reaction zone

	1A	2A	3A	4A	5A	6A	RECYCLE MEOH	MEOH	NAOH	OIL
Temperature C	51.54241	51.54448	60	25.00764	60	77.79946	70.4840782	25	25	25
Pressure kPa	100	101.325	101.325	101.325	101.325	101.325	101.325	100	100	100
Vapor Frac	0	0	0	0	0	0	0	0	0	0
Mole Flow kmol/hr	13.24314	13.24314	13.24314	1.132865	1.132865	7.432981	6.9430203	6	0.30002168	1.13286532
Mass Flow kg/hr	412.5536	412.5536	412.5536	1000	1000	1004.579	279.90789	130	12	1000
Volume Flow cum/hr	1.074453	1.074455	1.08314	5.585033	5.619089	1.446565	0.83537772	0.242462	0.00634077	5.58502526
Mass Flow kg/hr										
TRIOLEIC	0	0	0	550	550	0.01791	0	0	0	550
METHANOL	412.5536	412.5536	412.5536	0	0	0	225.297515	130	0	0
NAOH	12	12	12	0	0	12	0	0	12	0
METHYL-OLEIC	0	0	0	0	0	506.3576	0	0	0	0
GLYCEROL	0	0	0	0	0	80.01061	0	0	0	0
WATER	0	0	0	0	0	0	0	0	0	0
DI-OLEIC	0	0	0	0	0	0.029776	0	0	0	0
MONO-OLE	0	0	0	0	0	0.000284	0	0	0	0
TRI-LINOLEIC	0	0	0	450	450	0.015164	0	0	0	450
DI-LINOLEIC	0	0	0	0	0	0.079337	0	0	0	0
MONO-LINLEIC	0	0	0	0	0	0.000233	0	0	0	0
MET-LINOLEIC	0	0	0	0	0	406.0676	0	0	0	0

Appendix Table C4 The stream table of 4 reaction zone

	1A	2A	3A	4A	5A	6A	RECYCLE MEOH	MEOH	NAOH	OIL
Temperature C	51.54241	51.54448	60	25.00764	60	77.79946	70.4840782	25	25	25
Pressure kPa	100	101.325	101.325	101.325	101.325	101.325	101.325	100	100	100
Vapor Frac	0	0	0	0	0	0	0	0	0	0
Mole Flow kmol/hr	13.24314	13.24314	13.24314	1.132865	1.132865	7.432981	6.9430203	6	0.30002168	1.13286532
Mass Flow kg/hr	420.5536	420.5536	420.5536	1000	1000	1004.58	227.297515	130	12	1000
Volume Flow cum/hr	1.074453	1.074455	1.08314	5.585033	5.619089	1.446565	0.83537772	0.242462	0.00634077	5.58502526
Mass Flow kg/hr										
TRIOLEIC	0	0	0	550	550	0.01791	0	0	0	550
METHANOL	420.5536	420.5536	420.5536	0	0	0	227.297515	130	0	0
NAOH	12	12	12	0	0	12	0	0	12	0
METHYL-OLEIC	0	0	0	0	0	506.3586	0	0	0	0
GLYCEROL	0	0	0	0	0	80.01061	0	0	0	0
WATER	0	0	0	0	0	0	0	0	0	0
DI-OLEIC	0	0	0	0	0	0.029776	0	0	0	0
MONO-OLE	0	0	0	0	0	0.000284	0	0	0	0
TRI-LINOLEIC	0	0	0	450	450	0.015164	0	0	0	450
DI-LINOLEIC	0	0	0	0	0	0.079337	0	0	0	0
MONO-LINLEIC	0	0	0	0	0	0.000233	0	0	0	0
MET-LINOLEIC	0	0	0	0	0	406.0676	0	0	0	0

Appendix Table C5 The stream table of 5 reaction zone

	1A	2A	3A	4A	5A	6A	RECYCLE MEOH	MEOH	NAOH	OIL
Temperature C	60.11879	60.12045	60	25.00764	60	77.80131	69.1523464	25	25	25
Pressure kPa	100	101.325	101.325	101.325	101.325	101.325	101.325	100	100	100
Vapor Frac	0	0	0	0	0	0	0	0	0	0
Mole Flow kmol/hr	13.98849	13.98849	13.98849	1.132865	1.132865	7.432866	7.68849173	6	0.30002168	1.13286532
Mass Flow kg/hr	425.5536	425.5536	425.5536	1000	1000	1004.459	230.389878	130	12	1000
Volume Flow cum/hr	11.25124	11.25125	11.251	5.585033	5.619089	1.446368	11.9630773	0.242462	0.00634077	5.58502526
Mass Flow kg/hr										
TRIOLEIC	0	0	0	550	550	0.001085	0	0	0	550
METHANOL	425.5536	425.5536	425.5536	0	0	0	230.389878	130	0	0
NAOH	12	12	12	0	0	12	0	0	12	0
METHYL-OLEIC	0	0	0	0	0	506.4138	0	0	0	0
GLYCEROL	0	0	0	0	0	80.30933	0	0	0	0
WATER	0	0	0	0	0	0	0	0	0	0
DI-OLEIC	0	0	0	0	0	0.004366	0	0	0	0
MONO-OLE	0	0	0	0	0	0.000308	0	0	0	0
TRI-LINOLEIC	0	0	0	450	450	0.011069	0	0	0	450
DI-LINOLEIC	0	0	0	0	0	0.05306	0	0	0	0
MONO-LINLEIC	0	0	0	0	0	0.000253	0	0	0	0
MET-LINOLEIC	0	0	0	0	0	405.6662	0	0	0	0