

APPENDIX F

The stream table of reflux ratio

Appendix Table F1 The stream table of 0.1 reflux

	1A	2A	3A	4A	5A	6A	RECYCLE MEOH	MEOH	NAOH	OIL
Temperature C	46.82628	46.82807	60	25.00764	60	106.0222	78.1186619	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	6.838531	6.838531	6.838531	1.132865	1.132865	5.490047	2.48134977	6	0.300022	1.132865
Mass Flow kg/hr	221.274	221.274	221.274	1000	1000	1004.092	260.215146	130	12	1000
Volume Flow cum/hr	0.324292	0.324293	0.328982	5.585033	5.619089	1.375142	0.17201821	0.242462	0.006341	5.585025
Mass Flow kg/hr										
TRIOLEIC	0	0	0	550	550	0.012597	0	0	0	550
METHANOL	209.274	209.274	209.274	0	0	0	260.215146	130	0	0
NAOH	12	12	12	0	0	12	0	0	12	0
METHYL-OLEIC	0	0	0	0	0	506.0011	0	0	0	0
GLYCEROL	0	0	0	0	0	80.02258	0	0	0	0
WATER	0	0	0	0	0	0	0	0	0	0
DI-OLEIC	0	0	0	0	0	0.021125	0	0	0	0
MONO-OLE	0	0	0	0	0	0.000458	0	0	0	0
TRI-LINOLEIC	0	0	0	450	450	0.003764	0	0	0	450
DI-LINOLEIC	0	0	0	0	0	0.021928	0	0	0	0
MONO-LINLEIC	0	0	0	0	0	0.000375	0	0	0	0
MET-LINOLEIC	0	0	0	0	0	406.0079	0	0	0	0

Appendix Table F2 The stream table of 1 reflux

	1A	2A	3A	4A	5A	6A	RECYCLE MEOH	MEOH	NAOH	OIL
Temperature C	46.82628	46.82807	60	25.00764	60	106.022183	78.1186619	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	6.838531	6.838531	6.838531	1.132865	1.132865	5.49004669	2.26134977	6	0.300022	1.132865
Mass Flow kg/hr	212.274	212.274	212.274	1000	1000	1004.1481	154.119456	130	12	1000
Volume Flow cum/hr	0.324292	0.324293	0.328982	5.585033	5.619089	1.37514179	0.17201821	0.242462	0.006341	5.585025
Mass Flow kg/hr										
TRIOLEIC	0	0	0	550	550	0.0125967	0	0	0	550
METHANOL	200.274	200.274	200.274	0	0	0	154.119456	130	0	0
NAOH	12	12	12	0	0	12	0	0	12	0
METHYL-OLEIC	0	0	0	0	0	506.091135	0	0	0	0
GLYCEROL	0	0	0	0	0	80.002575	0	0	0	0
WATER	0	0	0	0	0	0	0	0	0	0
DI-OLEIC	0	0	0	0	0	0.0111248	0	0	0	0
MONO-OLE	0	0	0	0	0	0.00045766	0	0	0	0
TRI-LINOLEIC	0	0	0	450	450	0.00176432	0	0	0	450
DI-LINOLEIC	0	0	0	0	0	0.00182821	0	0	0	0
MONO-LINLEIC	0	0	0	0	0	0.00007495	0	0	0	0
MET-LINOLEIC	0	0	0	0	0	406.026548	0	0	0	0

Appendix Table F3 The stream table of 5 reflux

	1A	2A	3A	4A	5A	6A	RECYCLE MEOH	MEOH	NAOH	OIL
Temperature C	46.82628	46.82807	60	25.00764	60	106.022183	78.1186619	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	6.838531	6.838531	6.838531	1.132865	1.132865	5.49004669	2.26134977	6	0.300022	1.132865
Mass Flow kg/hr	212.274	212.274	212.274	1000	1000	1004.1911	35.04216	130	12	1000
Volume Flow cum/hr	0.324292	0.324293	0.328982	5.585033	5.619089	1.37514179	0.17201821	0.242462	0.006341	5.585025
Mass Flow kg/hr										
TRIOLEIC	0	0	0	550	550	0.0105967	0	0	0	550
METHANOL	200.274	200.274	200.274	0	0	0	35.04216	130	0	0
NAOH	12	12	12	0	0	12	0	0	12	0
METHYL-OLEIC	0	0	0	0	0	506.091135	0	0	0	0
GLYCEROL	0	0	0	0	0	80.002575	0	0	0	0
WATER	0	0	0	0	0	0	0	0	0	0
DI-OLEIC	0	0	0	0	0	0.0111248	0	0	0	0
MONO-OLE	0	0	0	0	0	0.00045766	0	0	0	0
TRI-LINOLEIC	0	0	0	450	450	0.00176432	0	0	0	450
DI-LINOLEIC	0	0	0	0	0	0.00182821	0	0	0	0
MONO-LINLEIC	0	0	0	0	0	0.00007495	0	0	0	0
MET-LINOLEIC	0	0	0	0	0	406.071548	0	0	0	0

Appendix Table F4 The stream table of 10 reflux

	1A	2A	3A	4A	5A	6A	RECYCLE MEOH	MEOH	NAOH	OIL
Temperature C	46.82628	46.82807	60	25.00764	60	106.022183	78.1186619	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	6.838531	6.838531	6.838531	1.132865	1.132865	5.49004669	2.26134977	6	0.300022	1.132865
Mass Flow kg/hr	207.274	207.274	207.274	1000	1000	1004.1951	23.47691	130	12	1000
Volume Flow cum/hr	0.324292	0.324293	0.328982	5.585033	5.619089	1.37514179	0.17201821	0.242462	0.006341	5.585025
Mass Flow kg/hr										
TRIOLEIC	0	0	0	550	550	0.0105967	0	0	0	550
METHANOL	195.274	195.274	195.274	0	0	0	23.47691	130	0	0
NAOH	12	12	12	0	0	12	0	0	12	0
METHYL-OLEIC	0	0	0	0	0	506.091135	0	0	0	0
GLYCEROL	0	0	0	0	0	80.002575	0	0	0	0
WATER	0	0	0	0	0	0	0	0	0	0
DI-OLEIC	0	0	0	0	0	0.0111248	0	0	0	0
MONO-OLE	0	0	0	0	0	0.00045766	0	0	0	0
TRI-LINOLEIC	0	0	0	450	450	0.00176432	0	0	0	450
DI-LINOLEIC	0	0	0	0	0	0.00182821	0	0	0	0
MONO-LINLEIC	0	0	0	0	0	0.00007495	0	0	0	0
MET-LINOLEIC	0	0	0	0	0	406.075548	0	0	0	0

Appendix Table F5 The stream table of 20 reflux

	1A	2A	3A	4A	5A	6A	RECYCLE MEOH	MEOH	NAOH	OIL
Temperature C	46.82628	46.82807	60	25.00764	60	106.022183	78.1186619	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	6.838531	6.838531	6.838531	1.132865	1.132865	5.49004669	2.26134977	6	0.300022	1.132865
Mass Flow kg/hr	202.274	207.274	202.274	1000	1000	1004.1951	15.55365	130	12	1000
Volume Flow cum/hr	0.324292	0.324293	0.328982	5.585033	5.619089	1.37514179	0.17201821	0.242462	0.006341	5.585025
Mass Flow kg/hr										
TRIOLEIC	0	0	0	550	550	0.0105967	0	0	0	550
METHANOL	190.274	195.274	190.274	0	0	0	15.55365	130	0	0
NAOH	12	12	12	0	0	12	0	0	12	0
METHYL-OLEIC	0	0	0	0	0	506.091135	0	0	0	0
GLYCEROL	0	0	0	0	0	80.002575	0	0	0	0
WATER	0	0	0	0	0	0	0	0	0	0
DI-OLEIC	0	0	0	0	0	0.0111248	0	0	0	0
MONO-OLE	0	0	0	0	0	0.00045766	0	0	0	0
TRI-LINOLEIC	0	0	0	450	450	0.00176432	0	0	0	450
DI-LINOLEIC	0	0	0	0	0	0.00182821	0	0	0	0
MONO-LINLEIC	0	0	0	0	0	0.00007495	0	0	0	0
MET-LINOLEIC	0	0	0	0	0	406.075548	0	0	0	0

Appendix Table F6 The stream table of 30 reflux

	1A	2A	3A	4A	5A	6A	RECYCLE MEOH	MEOH	NAOH	OIL
Temperature C	46.82628	46.82807	60	25.00764	60	106.022183	78.1186619	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	6.838531	6.838531	6.838531	1.132865	1.132865	5.49004669	2.26134977	6	0.300022	1.132865
Mass Flow kg/hr	199.135	199.135	199.135	1000	1000	1004.1958	10.56183	130	12	1000
Volume Flow cum/hr	0.324292	0.324293	0.328982	5.585033	5.619089	1.37514179	0.17201821	0.242462	0.006341	5.585025
Mass Flow kg/hr										
TRIOLEIC	0	0	0	550	550	0.0105967	0	0	0	550
METHANOL	187.135	187.135	187.135	0	0	0	10.56183	130	0	0
NAOH	12	12	12	0	0	12	0	0	12	0
METHYL-OLEIC	0	0	0	0	0	506.091835	0	0	0	0
GLYCEROL	0	0	0	0	0	80.002575	0	0	0	0
WATER	0	0	0	0	0	0	0	0	0	0
DI-OLEIC	0	0	0	0	0	0.0111248	0	0	0	0
MONO-OLE	0	0	0	0	0	0.00045766	0	0	0	0
TRI-LINOLEIC	0	0	0	450	450	0.00176432	0	0	0	450
DI-LINOLEIC	0	0	0	0	0	0.00182821	0	0	0	0
MONO-LINLEIC	0	0	0	0	0	0.00007495	0	0	0	0
MET-LINOLEIC	0	0	0	0	0	406.075548	0	0	0	0

Appendix Table F7 The stream table of 40 reflux

	1A	2A	3A	4A	5A	6A	RECYCLE MEOH	MEOH	NAOH	OIL
Temperature C	46.82628	46.82807	60	25.00764	60	106.022183	78.1186619	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	6.838531	6.838531	6.838531	1.132865	1.132865	5.49004669	2.26134977	6	0.300022	1.132865
Mass Flow kg/hr	199.135	199.135	199.135	1000	1000	1004.1958	10.56183	130	12	1000
Volume Flow cum/hr	0.324292	0.324293	0.328982	5.585033	5.619089	1.37514179	0.17201821	0.242462	0.006341	5.585025
Mass Flow kg/hr										
TRIOLEIC	0	0	0	550	550	0.0105967	0	0	0	550
METHANOL	187.135	187.135	187.135	0	0	0	10.56183	130	0	0
NAOH	12	12	12	0	0	12	0	0	12	0
METHYL-OLEIC	0	0	0	0	0	506.091835	0	0	0	0
GLYCEROL	0	0	0	0	0	80.002575	0	0	0	0
WATER	0	0	0	0	0	0	0	0	0	0
DI-OLEIC	0	0	0	0	0	0.0111248	0	0	0	0
MONO-OLE	0	0	0	0	0	0.00045766	0	0	0	0
TRI-LINOLEIC	0	0	0	450	450	0.00176432	0	0	0	450
DI-LINOLEIC	0	0	0	0	0	0.00182821	0	0	0	0
MONO-LINLEIC	0	0	0	0	0	0.00007495	0	0	0	0
MET-LINOLEIC	0	0	0	0	0	406.075548	0	0	0	0

Appendix Table F8 stream table of 70 reflux

	1A	2A	3A	4A	5A	6A	RECYCLE MEOH	MEOH	NAOH	OIL
Temperature C	46.82628	46.82807	60	25.00764	60	106.022183	78.1186619	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	6.838531	6.838531	6.838531	1.132865	1.132865	5.49004669	2.26134977	6	0.300022	1.132865
Mass Flow kg/hr	199.135	199.135	199.135	1000	1000	1004.1958	10.56183	130	12	1000
Volume Flow cum/hr	0.324292	0.324293	0.328982	5.585033	5.619089	1.37514179	0.17201821	0.242462	0.006341	5.585025
Mass Flow kg/hr										
TRIOLEIC	0	0	0	550	550	0.0105967	0	0	0	550
METHANOL	187.135	187.135	187.135	0	0	0	10.56183	130	0	0
NAOH	12	12	12	0	0	12	0	0	12	0
METHYL-OLEIC	0	0	0	0	0	506.091835	0	0	0	0
GLYCEROL	0	0	0	0	0	80.002575	0	0	0	0
WATER	0	0	0	0	0	0	0	0	0	0
DI-OLEIC	0	0	0	0	0	0.0111248	0	0	0	0
MONO-OLE	0	0	0	0	0	0.00045766	0	0	0	0
TRI-LINOLEIC	0	0	0	450	450	0.00176432	0	0	0	450
DI-LINOLEIC	0	0	0	0	0	0.00182821	0	0	0	0
MONO-LINLEIC	0	0	0	0	0	0.00007495	0	0	0	0
MET-LINOLEIC	0	0	0	0	0	406.075548	0	0	0	0