

Table 20

RESULT OF PROPYLENE OPERATION

RUN NO. 9972-14
 CATALYST UCC-107 #10042-71 5600 35.00GM (33.83GM AFTER THE RUN, -1.17GM)
 FEED H₂:C₃H₆:H₂O @ 1:1:2 MOLE RATIO, 0.5 C₃H₆ WHSV, CONTINUOUS OVERNITE
 C₃H₆ MW: 42.0813 DENSITY: 0.51041 GM/CC (@ 73 F)
 TARGET FLOW: C₃H₆ 34.3 CC/HR H₂ 170 CCMN, 10.2 L/HR H₂O 15 CC/HR
 ACTUAL FLOW: 35.15 CCHR EFFLUENT 20.4 L/HR AQ LAYR 13.9 CC/HR

RUN & SAMPLE NO.	9972-14-1	9972-14-2	9972-14-3	9972-14-4	9972-14-5
C ₃ H ₆ WHSV	0.5	0.5	0.5	0.5	0.5
HRS ON STREAM	6.3	25.9	30.3	49.3	52.7
PRESSURE, PSIG	157	150	149	147	149
TEMP. C	280	279	280	279	280
FEED C ₃ H ₆ CC	208.28	690.3	144.73	682.13	113.27
HOURS FEEDING	6.33	19.6	4.4	19.0	3.3
EFFLNT GAS LITER	116.9	395.3	88.5	391.5	67.6
GM AQUEOUS LAYER	82.48	269.11	60.56	260.74	46.07
GM LIQ HYDROCARBON	1.59	1.17	0.00	0.00	0.00
WT FR. LIQ HC/FEED	.0173	.0033	.0000	.0000	.0000
MATERIAL BALANCE WT %	95.27	91.29	100.60	92.23	80.15
C ₃ H ₆ CONVERSION %	13.18	5.95	4.53	3.34	4.14
PRDT SELECTIVITY WT %					
CH ₄	0.00	0.00	0.00	0.00	0.00
C ₂ HC'S	0.00	0.00	0.00	0.00	0.00
C ₃ H ₈	21.49	24.28	29.93	33.18	26.58
C ₄ H ₁₀	3.33	2.67	2.00	0.54	3.00
C ₄ H ₈	5.88	9.01	3.53	2.73	7.75
C ₅ H ₁₂	1.50	1.67	0.58	0.00	0.13
C ₅ H ₁₀	0.13	0.08	0.16	0.00	0.15
C ₆ H ₁₄	9.35	6.07	7.12	6.34	5.44
C ₆ H ₁₂ & CYCLO'S	7.04	12.21	15.35	17.69	15.50
C ₇ + IN GAS	39.08	37.90	41.33	39.53	41.45
LIQ HC'S	12.20	6.10	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00
SUBGROUPING					
C1 -C4	30.70	35.97	35.45	36.45	37.33
C5 -420 F	65.15	60.56	64.55	63.55	62.67
420-700 F	3.78	3.10	0.00	0.00	0.00
700-END PT	0.37	0.38	0.00	0.00	0.00
C5 -END PT	69.30	64.03	64.55	63.55	62.67

Table 20 (cont.)

ISO/NORMAL MOLE RATIO					
C4	1.3338	0.3317	0.6330	-	0.1901
C5	8.5424	4.8085	5.5455	-	-
C6	13.0000	5.1481	4.7734	3.5138	3.6404
C4-	0.4014	0.4007	0.6234	0.6923	0.4336
PARAFFIN/OLEFIN M RATIO					
C2	-	-	-	-	-
C3	0.0316	0.0149	0.0138	0.0111	0.0111
C4	0.5465	0.2862	0.5453	0.1908	0.3739
C5	11.0392	19.5000	3.6000	-	0.8571
LIQ HC COLLECTION					
PHYS: APPEARANCE					
DENSITY					
N. REFRACTIVE INDEX					
SIMULATED DISTILLATION					
10 WT % @ DEG F.	277	341	---	---	---
16	288	368	---	---	---
50	387	439	---	---	---
84	491	568	---	---	---
90	550	642	---	---	---
RANGE (16-84%)	203	200	---	---	---
WT % @420 F	66.0	43.0	---	---	---
WT % @700 F	97.0	91.0	---	---	---

Table 20 (cont.) RESULT OF PROPYLENE OPERATION

RUN NO. 9972-14
 CATALYST MCC-107 #10042-21 56CC 35.00GM (33.83GM AFTER THE RUN, -1.17GM)
 FEED H₂:C₃H₆:H₂O @ 1:1:2 MOLE RATIO, 0.5 C₃H₆ WHSV, CONTINUOUS OVERNITE
 C₃H₆ MW= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)
 TARGET FLOW: C₃H₆ 34.3 CC/HR H₂ 170 CCMN, 10.2 L/HR H₂O 15 CC/HR
 ACTUAL FLOW: 35.15 CCHR EFFLUENT 20.4 L/HR AQ LAYR 13.9 CC/HR

RUN & SAMPLE NO.	9972-14-6	9972-14-7	9972-14-8	9972-14-9	9972-14-10
C ₃ H ₆ WHSV	0.5	0.5	0.5	0.5	0.5
HRS ON STREAM	73.8	77.25	97.8	103.8	123.8
PRESSURE, PSIG	147	149	147	150	152
TEMP. C	280	280	279	339	337
FEED C ₃ H ₆ CC	754.48	115.78	721.76	205.52	713.58
HOURS FEEDING	21.2	1.1	20.6	6.0	20.0
EFFLUENT GAS LITER	435.0	71.3	424.8	123.3	411.9
GM AQUEOUS LAYER	291.46	48.09	282.76	82.85	275.77
GM LIQ HYDROCARBON	0.00	0.00	0.00	0.15	0.6
WT FR. LIQ HC/FEED	.0000	.0000	.0000	.0015	.0016
MATERIAL BALANCE WT %	93.22	88.35	93.51	100.99	92.42
C ₃ H ₆ CONVERSION %	2.67	3.19	3.02	8.70	4.98
PRDT SELECTIVITY WT %					
CH ₄	0.00	0.00	0.00	0.30	0.28
C ₂ HC'S	0.00	0.00	0.00	0.21	0.00
C ₃ H ₈	38.46	32.04	33.15	29.02	28.13
C ₄ H ₁₀	0.48	3.85	3.01	1.33	1.46
C ₄ H ₈	2.35	6.85	7.37	5.97	4.75
C ₅ H ₁₂	0.00	0.20	0.24	0.72	0.39
C ₅ H ₁₀	0.00	0.00	0.00	0.22	0.25
C ₆ H ₁₄	5.67	5.10	4.88	7.25	6.49
C ₆ H ₁₂ & CYCLO'S	0.00	16.93	17.75	15.25	19.48
C ₇ + IN GAS	53.03	35.02	33.61	38.07	35.21
LIQ HC'S	0.00	0.00	0.00	1.66	3.57
TOTAL	100.00	100.00	100.00	100.00	100.00
SUBGROUPING					
C ₁ -C ₄	41.30	42.75	43.52	36.82	34.61
C ₅ -420 F	58.70	57.25	56.48	62.43	63.79
420-700 F	0.00	0.00	0.00	0.68	1.57
700-END PT	0.00	0.00	0.00	0.08	0.03
C ₅ -END PT	50.70	57.25	56.48	63.18	65.39

Table 20 (cont.)

ISO/NORMAL MOLE RATIO					
C4		0.11254	0.1567	1.2363	0.4068
C5		-	-	1.3557	1.0769
C6	3.2892	2.6477	2.3564	4.1263	2.4791
C4+	0.7533	0.4940	0.4587	0.5796	0.6238
PARAFFIN/OLEFIN M RATIO					
C2		-	-	-	-
C3	0.0103	0.0103	0.0100	0.0268	0.0143
C4	0.1982	0.5423	0.3939	0.2144	0.2964
C5		-	-	3.1404	1.5000
LIQ HC COLLECTION					
PHYS. APPEARANCE					
DENSITY					
N. REFRACTIVE INDEX					
SIMULATED DISTILLATION					
10 WT % @ DEG F.	---	---	---	---	---
16	---	---	---	---	---
50	---	---	---	---	---
84	---	---	---	---	---
90	---	---	---	---	---
RANGE (16-84%)	---	---	---	---	---
WT % @420 F	---	---	---	---	---
WT % @700 F	---	---	---	---	---

Table 20 (cont.) RESULT OF PROPYLENE OPERATION

RUN NO. 9972-14
 CATALYST MCC-107 #10042-21 50CC 35.00CM (33.83GM AFTER THE RUN, -1.17GM)
 FEED H₂:C₃H₆:H₂O @ 1:1:2 MOLE RATIO, 0.5 C₃H₆ WHSV, CONTINUOUS OVERNITE
 C₃H₆ MW= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)
 TARGET FLOW: C₃H₆ 34.3 CC/HR H₂ 170 CC/MN, 10.2 L/HR H₂O 15 CC/HR
 ACTUAL FLOW: 35.15 C/HR EFFLUENT 20.4 L/HR AQ LAYR 13.9 CC/HR

RUN & SAMPLE NO. 9972-14-11 9972-14-12

	9972-14-11	9972-14-12
C ₃ H ₆ WHSV	0.5	0.5
HRS ON STREAM	127.5	145.0
PRESSURE, PSIG	153	149
TEMP. C	370	371
FEED C ₃ H ₆ CC	116.41	629.89
HOURS FEEDING	3.7	17.5
EFFLUENT GAS LITER	74.1	358.5
GM AQUEOUS LAYER	50.28	240.66
GM LIQ HYDROCARBON	0.00	0.00
WT FR. LIQ HC/FEED	.0000	.0000
MATERIAL BALANCE WT %	108.41	90.66
C ₃ H ₆ CONVERSION %	8.05	5.68
PRDT SELECTIVITY WT %		
CH ₄	0.75	0.56
C ₂ HC'S	0.92	0.52
C ₃ H ₈	33.56	29.89
C ₄ H ₁₀	1.45	1.98
C ₄ H ₈	6.81	6.37
C ₅ H ₁₂	0.70	0.38
C ₅ H ₁₀	0.28	0.12
C ₅ H ₁₄	7.56	21.72
C ₆ H ₁₂ & CYCLO'S	16.81	15.79
C ₇ - IN GAS	31.37	22.67
LIQ HC'S	0.00	0.00
TOTAL	100.00	100.00
SURGROUPING		
C ₁ -C ₄	43.28	39.32
C ₅ -420 F	56.72	60.68
420-700 F	0.00	0.00
700-END PT	0.00	0.00
C ₅ -END PT	56.72	60.68

Table 20 (cont.)

100/NORMAL MOLE RATIO

C4	0.8178	0.2025
C5	1.0385	0.5000
C6	2.9103	0.1719
C4+	0.5503	0.4490

PARAFFIN/OLEFIN M RATIO

C2	0.6774	-
C3	0.0284	0.0175
C4	0.2050	0.3004
C5	2.4091	3.1579

LIQ HC COLLECTION

PHYS. APPEARANCE

DENSITY

N. REFRACTIVE INDEX

SIMULATED DISTILLATION

10 WT % @ DEG F.	---	---
16	---	---
50	---	---
84	---	---
90	---	---
RANGE (16-84°)	---	---
WT % @420 F	---	---
WT % @700 F	---	---

Table 21

RESULT OF PROPYLENE OPERATION

RUN NO.	9972-15				
CATALYST	RE-Y62 #9939-97 63 CC 35.00CM (40.87GM AFTER THE RUN, 29.87GM)				
FEED	H ₂ :C ₃ H ₆ :H ₂ O @1:1:2 MOLE RATIO, 0.5 C ₃ H ₆ WHSV, CONTINUOUS OVERNITE				
	C ₃ H ₆ MW= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)				
TARGET FLOW:	C ₃ H ₆ 34.3 CC/HR	H ₂ 170 CCMN, 10.2L/HR	H ₂ O	15 CC/HR	
ACTUAL FLOW:	35.3 CC/HR	EFFLUENT 20.0L/HR	AQ LAYR	13.7CC/H	
RUN & SAMPLE NO.	9972-15-1	9972-15-2	9972-15-3	9972-15-4	9972-15-5
C ₃ H ₆ WHSV	0.5	0.5	0.5	0.5	0.5
HRS ON STREAM	7.3	25.4	32.7	50.9	54.3
PRESSURE, PSIG	158	152	149	151	151
TEMP., C	280	280	280	279	279
FEED C ₃ H ₆ CC	230.31	644.99	251.70	663.87	113.27
HOURS FEEDING	7.25	18.083	7.25	18.167	3.417
EFFLUENT GAS LITER	120.8	367.8	147.8	373.8	70.0
GM AQUEOUS LAYER	65.76	250.05	100.02	250.08	47.36
GM LIQ HYDROCARBON	1.40	0.00	0.00	0.00	0.00
WT FR. LIQ HC/FEED	.0119	.0000	.0000	.0000	.0000
MATERIAL BALANCE WT %	89.21	93.08	94.42	91.76	NORMALIZED
C ₃ H ₆ CONVERSION %	10.46	2.13	1.65	1.31	0.99
PROD SELECTIVITY WT %					
CH ₄	0.00	0.00	0.37	0.00	0.00
C ₂ HC'S	0.46	0.00	0.00	0.00	0.00
C ₃ H ₈	27.55	55.66	64.09	71.11	70.11
C ₄ H ₁₀	3.10	4.54	2.52	1.93	0.96
C ₄ H ₈ -	4.97	8.16	4.05	2.20	2.04
C ₅ H ₁₂	2.34	1.35	1.36	0.32	0.00
C ₅ H ₁₀ -	0.25	0.00	0.00	0.00	0.00
C ₆ H ₁₄	8.80	4.76	3.97	2.61	0.85
C ₆ H ₁₂ & CYCLO'S	3.95	4.99	5.10	0.00	0.00
C ₇ - IN GAS	35.62	20.54	18.54	21.83	26.04
LIQ HC'S	12.97	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00
SUBGROUPING					
C ₁ -C ₄	36.08	68.35	71.03	75.24	73.11
C ₅ -420 F	58.60	31.65	28.97	24.76	26.89
420-700 F	3.75	0.00	0.00	0.00	0.00
700-END PT	1.57	0.00	0.00	0.00	0.00
C ₄ -END PT	63.92	31.65	28.97	24.76	26.89

Table 21 (cont.)

ISO/NORMAL MOLE RATIO						
C4	12.4651	0.7906	3.6129	2.2143	-	-
C5	11.5893	2.5652	1.9524	0.0000	-	-
C6	21.8454	4.1778	4.0667	1.8276	-	-
C4-	0.3342	0.3077	0.3235	0.3019	-	0.3939
PARAFFIN/OLEFIN M RATIO						
C2	0.1605	-	-	-	-	-
C3	0.0313	0.0119	0.0106	0.0093	-	0.0069
C4	0.6019	0.5369	0.6008	0.8491	-	0.4545
C5	9.2763	-	-	-	-	-
LIQ HC COLLECTION						
PHYS. APPEARANCE	OIL	-	-	-	-	-
DENSITY	.	.	.	.	.	.
N. REFRACTIVE INDEX	.	.	.	.	.	.
SIMULATED DISTILLATION						
10 WT % @ DEG F.	286	---	---	---	---	---
16	308	---	---	---	---	---
50	345	---	---	---	---	---
84	589	---	---	---	---	---
90	861	---	---	---	---	---
RANGE (16-84%)	281	---	---	---	---	---
WT % @420 F	59.0	---	---	---	---	---
WT % @700 F	87.9	---	---	---	---	---

Table 21 (cont.) RESULT OF PROPYLENE OPERATION

RUN NO. 9972-15
 CATALYST RE-V62 #9939-97 63 CC 35.00GM(40.87GM AFTER THE RUN, 41.87GM)
 FEED H₂:C₃H₆:H₂O @1:1:2 MOLE RATIO, 0.5 C₃H₆ WHSV, CONTINUOUS OVERNITE
 C₃H₆ MW- 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)
 TARGET FLOW: C₃H₆ 34.3 CC/HR H₂ 170 CCMN, 10.2 L/HR H₂O 15 CC/HR
 ACTUAL FLOW: 35.3 CC/HR EFFLUENT 20.0 L/HR AQ LAYR 13.7CC/H

RUN & SAMPLE NO.	9972-15-6	9972-15-7	9972-15-8	9972-15-9
C ₃ H ₆ WHSV	0.5	0.5	0.5	0.5
HRS ON STREAM	75.1	80.4	98.5	101.9
PRESSURE, PSIG	152	159	155	159
TEMP. C	343	343	373	373
FEED C ₃ H ₆ CC	748.54	188.78	643.14	112.64
HOURS FEEDING	20.75	5.333	18.167	3.417
EFFLUENT GAS LITER	424.1	105.9	364.3	66.7
GM AQUEOUS LAYER	287.16	72.39	249.52	46.7
GM LIQ HYDROCARBON	0.66	0.00	0.92	0.00
WT FR. LIQ HC/FEED	.0017	.0000	.0028	.0000
MATERIAL BALANCE WT %	91.39	93.96	90.97	94.18
C ₃ H ₆ CONVERSION %	4.23	4.17	7.99	8.01
PRDT SELECTIVITY WT %				
CH ₄	0.40	0.38	0.52	0.62
C ₂ HC'S	0.00	0.34	0.50	0.31
C ₃ H ₈	35.62	35.27	22.46	23.15
C ₄ H ₁₀	0.78	0.86	0.78	0.73
C ₄ H ₈ -	5.66	5.69	11.04	11.78
C ₅ H ₁₂	0.36	0.48	0.75	0.74
C ₅ H ₁₀ -	0.44	0.53	0.76	0.85
C ₆ H ₁₄	5.76	6.31	7.50	7.86
C ₆ H ₁₂ - & CYCLO'S	12.88	13.39	11.90	12.79
C ₇ - IN GAS	33.68	36.74	39.96	41.18
LIQ HC'S	4.43	0.00	3.85	0.00
TOTAL	100.00	100.00	100.00	100.00
SUBGROUPING				
C1 -C4	42.46	42.54	35.29	36.59
C5 -420 F	55.68	57.46	63.05	63.41
420-700 F	1.55	0.00	1.58	0.00
700-END PT	0.31	0.00	0.07	0.00
C5 -END PT	57.54	57.46	64.71	63.41

Table 21 (cont.)

ISO/NORMAL MOLE RATIO				
C1	0.7273	0.6364	0.9369	1.1236
C5	0.2353	0.8667	0.6019	0.5714
C6	3.0426	3.1467	4.4822	4.3789
C4-	0.3907	0.3926	0.2827	0.2775
PARAFFIN/OLEFIN M RATIO				
C2	-	-	0.5138	-
C3	0.0153	0.0149	0.0189	0.0195
C4	0.1326	0.1463	0.0685	0.0596
C5	0.7925	0.8750	0.9593	0.8462
L10 HC COLLECTION				
PHYS. APPEARANCE			OIL	
DENSITY				
N. REFRACTIVE INDEX				
SAVELATED DISTILLATION				
10 WT % @ DEG F.	---	---	297	---
16	---	---	325	---
50	---	---	408	---
84	---	---	518	---
90	---	---	569	---
RANGE (16-84%)	---	---	193	--
WT % @420 F	---	---	57.0	---
WT % @700 F	---	---	98.1	---

Table 22

RESULT OF PROPYLENE OPERATION

RUN NO. 9972-16
 CATALYST S-115-LE #9939-13 49CC 35.0 GM (34.7GM AFTER THE RUN, 0.3GM)
 FEED H₂:C₃H₆:H₂O @1:1:2 MOLE RATIO, 0.5 C₃H₆ WHSV, CONTINUOUS OVERNITE
 C₃H₆ MW= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)
 TARGET FLOW: C₃H₆ 34.3 CC/HR H₂ 170 CCM, 10.2 L/HR H₂O 15 CC/HR
 ACTUAL FLOW: 35.6 CC/HR EFFLUENT 15.0 L/HR AQ LAYR 14.2CC/HR

RUN & SAMPLE NO.	9972-16-1	9972-16-2	9972-16-3	9972-16-4	9972-16-5
C ₃ H ₆ WHSV	0.5	0.5	0.5	0.5	0.5
HRS ON STREAM	5.2	25.2	28.2	47.9	54.4
PRESSURE, PSIG	143	144	142	145	149
TEMP., C	270	280	281	282	349
FEED C ₃ H ₆ CC	205.77	725.51	91.24	709.80	214.58
HOURS FEEDING	5.167	20.0	3.0	19.667	6.5
EFFLUENT GAS LITER	84.2	364.6	55.5	365.5	89.3
GM AQUEOUS LAYER	68.9	296.29	43.22	283.83	94.77
CM LIQ HYDROCARBON	14.93	18.48	2.28	12.72	41.35
WT FR. LIQ HC/FEED	.1422	.0499	.0490	.0351	.3775
MATERIAL BALANCE WT %	77.57	86.15	109.36	92.56	93.24
C ₃ H ₆ CONVERSION %	30.45	11.61	11.71	10.58	80.08
PRDT SELECTIVITY WT %					
CH ₄	0.00	0.00	0.00	0.00	0.01
C ₂ HC'S	0.00	0.00	0.00	0.00	0.28
C ₃ H ₈	2.42	6.39	6.56	7.70	2.72
C ₄ H ₁₀	0.45	0.00	0.76	0.78	3.26
C ₄ H ₈ -	6.34	7.13	9.59	11.09	17.20
C ₅ H ₁₂	0.52	0.00	0.51	0.78	3.86
C ₅ H ₁₀ -	0.63	0.00	1.10	1.34	0.58
C ₆ H ₁₄	2.11	1.73	2.62	3.10	11.72
C ₆ H ₁₂ - & CYCLO'S	2.24	0.00	3.62	2.50	2.95
C ₇ - IN GAS	22.94	34.50	34.28	36.65	5.39
LIQ HC'S	62.35	50.25	40.97	36.06	52.04
TOTAL	100.00	100.00	100.00	100.00	100.00
SURGROUPING					
C ₁ -C ₄	9.21	13.52	16.91	19.57	23.46
C ₅ -420 F	68.19	58.74 ?	61.38	62.76	69.04
420-700 F	22.60	20.40 ?	21.47	17.66	7.44
700-END PT	0.00	7.34 ?	0.25	0.01	0.00
C ₅ -END PT	90.79	86.48	83.09	80.43	76.54

Table 22 (cont.)

ISO/NORMAL MOLE RATIO					
C4	0.2895	-	0.2269	0.1970	2.4938
C5	0.5611	-	0.3008	0.6051	1.7523
C6	4.2508	-	4.2857	4.6333	15.1733
C4+	0.1263	-	0.1280	0.1326	0.4447
PARAFFIN/OLEFIN M RATIO					
C2					
C3	0.0101	0.0080	0.0083	0.0087	0.1052
C4	0.0679	-	0.0766	0.0681	0.1829
C5	0.8058	-	0.4541	0.5638	6.4843
LTO HC COLLECTION					
PHYS. APPEARANCE	OIL	OIL	OIL	OIL	OIL
DENSITY	0.752	0.760	0.766	0.760	0.739
N. REFRACTIVE INDEX	1.4266	1.4310	1.4325	1.4313	1.4238
SIMULATED DISTILLATION					
10 WT % @ DEG F.	230	262	280	275	147
16	255	289	298	291	171
40	360	430	425	417	267
84	475	651	505	492	409
90	507	1009 ?	538	525	439
RANGE (16-84%)	220	362 ?	207	201	238
WT % @420 F	63.8	44.8	47.0	51.0	85.7
WT % @700 F	100.0	85.4 ?	99.4	100.0	100.0

Table 22 (cont.) RESULT OF PROPYLENE OPERATION

RUN NO. 9972-16
 CATALYST S-115-LE #9939-13 49CC 35.0 GM (34.7GM AFTER THE RUN, 0.30GM)
 FEED H₂:C₃H₆:H₂O @1:1:2 MOLE RATIO, 0.5 C₃H₆ WHSV, CONTINUOUS OVERNITE
 C₃H₆ MW= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)
 TARGET FLOW: C₃H₆ 34.3 CC/HR H₂ 170 CCMN, 10.2 L/HR H₂O 15 CC/HR
 ACTUAL FLOW: 35.6 CC/HR EFFLUENT 15.0 L/HR AQ LAYR 14.2CC/HR

RUN & SAMPLE NO.	9972-16-6	9972-16-7	9972-16-8	9972-16-9	9972-16-10
C ₃ H ₆ WHSV	0.5	0.5	0.5	0.5	0.5
HRS ON STREAM	71.6	79.8	96.4	103.5	120.6
PRESSURE, PSIG	146	155	148	156	151
TEMP. C	340	340	340	341	371
FEED C ₃ H ₆ CC	617.44	276.87	592.76	256.11	609.69
HOURS FEEDING	17.25	8.167	16.583	7.167	17.083
EFFLUENT GAS LITER	225.9	*21.111.1F	223.0	96.5	239.5
GM AQUEOUS LAYER	245.08	117.29	237.06	102.98	248.73
GM LIQ HYDROCARBON	131.26	56.15	120.67	50.02	104.88
WT FR. LIQ HC/FEED	.4226	.3973	.3988	.3826	.3427
MATERIAL BALANCE WT %	95.42	*LEAKING	89.25	92.48	91.64
C ₃ H ₆ CONVERSION %	82.67	79.59	87.08	85.75	86.85
PRDT SELECTIVITY WT %					
CH ₄	0.00	0.00	0.00	0.00	0.01
C ₂ HC'S	0.22	0.19	0.17	0.17	0.46
C ₃ H ₈	2.13	2.15	1.90	1.96	2.74
C ₄ H ₁₀	2.43	2.19	1.73	1.80	3.65
C ₄ H ₈ -	14.59	14.98	15.24	15.67	18.97
C ₅ H ₁₂	2.88	2.68	2.34	2.36	3.72
C ₅ H ₁₀ -	0.49	0.52	0.53	0.56	0.60
C ₆ H ₁₄	8.93	10.00	10.05	10.33	10.78
C ₆ H ₁₂ + & CYCLO'S	2.45	2.67	2.69	2.88	2.66
C ₇ + IN GAS	12.55	13.87	13.48	14.66	13.66
LIQ HC'S	53.32	50.75	51.86	49.61	42.76
TOTAL	100.00	100.00	100.00	100.00	100.00
SURGROUPING					
C ₁ -C ₄	19.37	19.50	19.05	19.60	25.83
C ₅ -420 F	77.64	74.28	75.64	77.62	72.50
420-700 F	2.99	6.22	5.32	2.78	1.67
700-END PT	0.00	0.00	0.00	0.00	0.00
C ₅ -END PT	80.63	80.50	80.95	80.40	74.17

Table 22 (cont.)

ISO/NORMAL MOLE RATIO					
C4	2.5125	2.4883	2.4114	2.4140	2.6612
C5	1.7557	1.6729	1.5560	1.5127	1.9185
C6	13.7427	15.2488	16.4649	16.8586	15.1353
C4-	0.4471	0.4307	0.4215	0.4216	0.4517
PARAFFIN/OLEFIN M RATIO					
C2	0.0194	-	0.0223	-	0.0443
C3	0.0973	0.0802	0.1226	0.1130	0.1737
C4	0.1609	0.1411	0.1098	0.1110	0.1867
C5	5.7629	5.0106	4.3173	4.0747	6.0094
L10 HC COLLECTION					
PHYS. APPEARANCE	OIL	OIL	OIL	OIL	OIL
DENSITY	0.752	0.742	0.736	0.695?	0.747
N. REFRACTIVE INDEX	1.4244	1.4265	1.4262	1.4235	1.4255
SIMULATED DISTILLATION					
10 WT % @ DEG F.	150	159	152	156	147
16	167	181	174	170	166
50	260	267	259	260	255
84	359	397	382	360	341
90	391	430	422	391	372
RANGE (10-84%)	192	216	208	190	175
WT % @420 F	94.4	87.8	89.8	94.4	96.1
WT % @700 F	100.0	100.0	100.0	100.0	100.0

Table 22 (cont.) RESULTS OF PROPYLENE OPERATION

RUN NO. 9972 16
 CATALYST S-115-LE #9939-13 49CC 35.0 GM (34.7GM AFTER THE RUN, -0.3GM)
 FEED H₂:C₃H₆:H₂O W:1:1:2 MOLE RATIO, 0.5 C₃H₆ WHSV, CONTINUOUS OVERNITE
 C₃H₆ MW= 42.0813 DENSITY 0.51041 GM/CC (@ 73 F)
 TARGET FLOW: C₃H₆ 34.3CC/HR H₂ 170 CCMN, 10.2 L/HR H₂O 15 CC/HR
 ACTUAL FLOW: 35.6CC/HR EFFLUENT 15.0 L/HR AQ LAYER 14.2CC/HR

RUN & SAMPLE NO.	9972 16-11	972 16-12	972-16-13	972 16 14
C ₃ H ₆ WHSV	0.5	0.5	0.5	0.5
HRS ON STREAM	127.4	144.8	151.1	169.3
PRESSURE, PSIG	146	153	151	147
TEMP. C	371	370	371	370
FEED C ₃ H ₆ CC	225.27	624.22	213.95	657.60
HOURS FEEDING	6.877	17.417	6.25	18.25
EFFLUENT GAS LIT/HR	95.0	243.4	97.2	247.5
GM AQUEOUS LAYER	100.64	249.75	90.23	237.11
GM LIQ HYDROCARBON	38.81	104.61	35.20	139.00
WT FR. LIQ HC/FEED	.3375	.3283	.3227	.4141
MATERIAL BALANCE WT %	99.60	91.80	102.46	96.72
C ₃ H ₆ CONVERSION %	85.91	86.53	85.66	86.87
PRDT SELECTIVITY WT %				
CH ₄	0.13	0.01	0.02	0.01
C ₂ HC'S	0.44	0.47	0.50	0.41
C ₃ H ₈	2.81	2.88	2.98	2.55
C ₄ H ₁₀	3.73	3.81	4.13	3.51
C ₄ H ₈ -	19.27	18.84	20.10	13.29
C ₅ H ₁₂	3.79	3.92	4.17	3.74
C ₅ H ₁₀ -	0.61	0.60	0.64	0.59
C ₆ H ₁₄	11.00	10.84	11.59	10.16
C ₆ H ₁₂ - & CYCLO'S	2.75	2.68	2.90	2.50
C ₇ - IN GAS	14.98	14.21	15.19	13.53
LIQ HC'S	40.48	41.73	37.79	49.72
TOTAL	100.00	100.00	100.00	100.00
SUBGROUPING				
C1 -C4	26.38	26.01	27.73	19.77
C5 -420 F	72.12	72.45	70.80	78.54
420-700 F	1.50	1.53	1.47	1.69
700-END PT	0.00	0.00	0.00	0.00
C4 -END PT	73.62	73.99	72.27	80.23

Table 22 (cont.)

ISO/NORMAL MOLE RATIO				
C4	2.6151	2.6121	2.5467	2.4590
C5	1.8849	1.9090	1.8896	1.7719
C6	14.7360	14.6306	14.0187	14.0910
C4	0.4517	0.4509	0.4496	0.5809
PARAFFIN/OLEFIN M RATIO				
C2		0.0398	0.0416	0.0562
C3	0.1646	0.1779	0.1712	0.1617
C4	0.1868	0.1952	0.1984	0.2546
C5	5.9995	6.3662	6.3032	6.2117
L10 HC COLLECTION				
PHYS. APPEARANCE	OIL	OIL	OIL	OIL
DENSITY	0.743	0.750	0.713	0.760
N. REFRACTIVE INDEX	1.4272	1.4246	1.4252	1.4246
SIMULATED DISTILLATION				
10 WT % @ DEG F.	149	149	156	146
16	166	166	171	165
50	258	256	259	255
84	342	340	344	338
90	372	371	374	369
RANGE(16-84%)	176	174	173	173
WT % @470 F	96.3	96.3	96.1	96.6
WT % @700 F	100.0	100.0	100.0	100.0

Table 23

RESULTS OF PROPYLENE OPERATION

RUN NO. 9972-17
 CATALYST 5115-HE-CAW #10042-43 48CC 35.0GM (33.83 GM AFTER RUN, 1.17GM)
 FEED H₂/C₃H₆/H₂O 61:1:2 MOLE RATIO, 0.5 C₃H₆ WHSV, CONTINUOUS OVERNITE
 C₃H₆ MW: 42.0813 DENSITY: 0.51041 GM/CC (@ 73 F)
 TARGET FLOW: C₃H₆ 34.3 CC/HR H₂ 170 CC/MN, 10.2 L/HR H₂O 15.0 CC/HR
 ACTUAL FLOW: 34.9 CC/HR EFFLUENT 14.1 L/HR AQ LAYR 19.3 CC/HR

RUN & SAMPLE NO.	9972-17-1	9972-17-2	9972-17-3	9972-17-4	9972-17-5
C ₃ H ₆ WHSV	0.5	0.5	0.5	0.5	0.5
HRS ON STREAM	17.4	24.4	42.8	48.2	64.9
PRESSURE, PSIC	137	158	162	143	145
TEMP., C	249	247	247	249	248
FEED C ₃ H ₆ CC	866.49	239.12	660.72	188.78	603.66
HOURS FEEDING	17.417	7.0	18.417	5.417	16.75
EFFLUENT GAS LITER	309.72	123.9	334.13	97.86	305.17
CM AQUEOUS LAYER	241.0	102.63	296.43	79.98	246.50
CM LIQ HYDROCARBON	22.2	2.72	5.33	1.21	4.90
WT FR. LIQ HC/FEED	.0502	.0223	.0158	.0126	.0161
MATERIAL BALANCE WT %	68.43	94.46	91.82	99.47	94.36
C ₃ H ₆ CONVERSION %	12.81	7.52	5.71	5.74	5.71
PRDT SELECTIVITY WT %					
CH ₄	0.00	0.00	0.00	0.00	0.00
C ₂ HC'S	0.00	0.00	0.00	0.00	0.00
C ₃ H ₈	7.16	12.38	14.85	15.17	15.09
C ₄ H ₁₀	0.76	1.02	0.58	0.99	0.79
C ₄ H ₈ -	4.11	5.69	4.97	6.34	5.42
C ₅ H ₁₂	0.63	0.75	0.40	0.59	0.33
C ₅ H ₁₀ =	0.59	0.83	0.82	0.94	0.87
C ₆ H ₁₄	1.36	1.88	1.46	2.12	1.70
C ₆ H ₁₂ = & CYCLO'S	4.72	9.58	10.64	12.92	11.77
C ₇ + IN GAS	23.07	35.62	35.96	38.21	34.33
LIQ HC'S	57.61	32.25	30.32	22.72	29.69
TOTAL	100.00	100.00	100.00	100.00	100.00
SUB-GROUPING					
C ₁ -C ₄	12.02	19.09	20.40	22.50	21.30
C ₅ -420 F	53.22	59.40	58.77	61.44	57.62
420-700 F	34.07	20.70	19.95	15.40	20.55
700-END PT	0.69	0.81	0.88	0.66	0.53
C ₅ -END PT	87.98	80.91	79.60	77.50	78.70

Table 23 (cont.)

ISO/NORMAL MOLE RATIO					
C4	0.3046	0.3018	0.2929	0.2640	0.2878
C5	0.2767	0.2446	-	0.2111	-
C6	2.3357	2.1579	1.5833	2.3608	2.1205
C4-	0.1053	0.1084	0.1140	0.1171	0.1157
PARAFFIN/OLEFIN M RATIO					
C2	-	-	-	-	-
C3	0.0101	0.0097	0.0086	0.0089	0.0088
C4	0.1780	0.1721	0.1131	0.1506	0.1409
C5	1.0354	0.8827	0.4667	0.6124	0.3747
L10 HC COLLECTION					
PHYS. APPEARANCE	OIL	OIL	OIL	OIL	OIL
DENSITY	0.753	0.762	0.744		0.748
N. REFRACTIVE INDEX	1.4335	1.4356	1.4367		1.4354
SIMULATED DISTILLATION					
10 WT % @ DEG F.	289	302	301	312	328
16	315	333	337	352	364
50	436	447	449	453	448
84	529	546	552	553	528
90	563	595	603	602	563
RANGE (16-84°)	214	213	215	201	164
WT % @120 F	39.7	33.3	31.3	29.3	29.0
WT % @700 F	98.8	97.5	97.1	97.1	98.2

Table 23 (cont.) RESULT OF PROPYLENE OPERATION

RUN NO. 9972-17
 CATALYST S114-HE-CAW #10042-43 48CC 35.0GM (33.83 GM AFTER RUN, -1.17GM)
 FEED H₂:C₃H₆:H₂O @1:1:2 MOLE RATIO, 0.5 C₃H₆ WHSV, CONTINUOUS OVERNITE
 C₃H₆ MW= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)
 TARGET FLOW: C₃H₆ 34.3 CC/HR H₂ 170 CCMN, 10.2 L/HR H₂O 15.0 CC/HR
 ACTUAL FLOW: 34.9 CC/HR EFFLUENT 14.1 L/HR AQ LAYR 13.3 CC/HR

RUN & SAMPLE NO.	9972-17-6	9972-17-7	9972-17-8	9972-17-9	9972-17-10
C ₃ H ₆ WHSV	0.5	0.5	0.5	0.5	0.5
HRS ON STREAM	70.8	88.62	94.12	113.4	134.0
PRESSURE, PSIG	151	121	110	281	149
TEMP, C	283	282	282	280	281
FEED C ₃ H ₆ CC	213.95	651.28	195.07	686.52	547.45
HOURS FEEDING	5.933	17.816	5.5	19.25	16.75
EFFLUENT GAS LITER	94.31	273.44	85.80	302.47	283.98
GM AQUEOUS LAYER	86.56	264.60	81.44	275.03	150.92
GM LIQ HYDROCARBON	18.07	85.42	20.09	48.78	17.19
WT FR. LIQ HC/FEED	.1655	.2570	.2018	.1392	.0615
MATERIAL BALANCE WT %	84.95	80.72	95.01	85.41E	89.42
C ₃ H ₆ CONVERSION %	43.00	48.11	37.68	26.62E	18.12
PRDT SELECTIVITY WT %				NO GC	
CH ₄	0.00	0.00	0.00	0.00E	0.00
C ₂ HC'S	0.08	0.00	0.00	0.00E	0.00
C ₃ H ₈	4.08	1.90	2.82	3.20E	5.24
C ₄ H ₁₀	1.18	0.22	0.27	0.14E	0.23
C ₄ H ₈ -	15.60	8.21	11.53	7.45E	12.21
C ₅ H ₁₂	1.19	0.34	0.39	0.20E	0.33
C ₅ H ₁₀ -	1.13	0.73	0.97	0.75E	1.22
C ₆ H ₁₄	6.02	3.43	4.12	2.45E	4.02
C ₆ H ₁₂ - & CYCLO'S	6.38	4.30	4.81	5.36E	8.77
C ₇ + IN GAS	17.51	14.16	17.00	18.13E	29.68
LIQ HC'S	46.82	66.73	58.09	62.33E	38.31
TOTAL	100.00	100.00	100.00	100.00	100.00
SUB-GROUPING					
C1 -C4	20.95	10.32	14.62	10.79E	17.68
C5 -420 F	59.85	81.51	60.26	76.95E	73.51
420-700 F	19.01	8.17	24.68	12.26E	8.81
700-END PT	0.19	0.00	0.44	0.00	0.00
C5 -END PT	79.05	89.68	85.38	89.21E	82.32

Table 23 (cont.)

ISO/NORMAL MOLE RATIO					
C4	0.4257	0.6759	0.6917	-	0.7791
C5	0.4551	0.4220	0.1921	-	0.3730
C6	8.7570	10.2005	11.1373	-	7.9450
C4+	0.1481	0.1384	0.1435	-	0.1197
PARAFFIN/OLEFIN M RATIO					
C2	-	-	-	-	-
C3	0.0295	0.0168	0.0163	-	0.0111
C4	0.0731	0.0255	0.0223	-	0.0183
C5	1.0199	0.4453	0.3916	-	0.2590
LIG HC COLLECTION					
PHYS. APPEARANCE	OIL	OIL	OIL	OIL	OIL
DENSITY	0.733	0.724	0.728	0.731	0.745
N. REFRACTIVE INDEX	1.4260	1.4264	1.4269	1.4275	1.4290
SIMULATED DISTILLATION					
10 WT % @ DEG F.	234	209	248	240	241
16	258	233	272	263	267
50	383	319	394	340	347
84	489	408	493	437	459
90	527	432	531	474	504
RANGE (16-84%)	231	175	221	174	192
WT % @420 F	59.0	87.8	56.8	80.3	77.0
WT % @700 F	99.6	100	99.2	100	100

Table 23 (cont.) RESULT OF PROPYLENE OPERATION

RUN NO. 9972-17
 CATALYST S115-HE-GAW #10042-43 4RCC 35.0CM (33.83 GM AFTER RUN, 1.17GM)
 FEED H₂:C₃H₆:H₂O @1:1:2 MOLE RATIO, 0.5 C₃H₆ WHSV, CONTINUOUS OVERNITE
 C₃H₆ MW- 42.0813 DENSITY- 0.51041 GM/CC (@ 73 F)
 TARGET FLOW: C₃H₆ 34.3 CC/HR H₂ 170 CCMN, 10.2 L/HR H₂O 15.0 CC/HR
 ACTUAL FLOW: 34.9 CC/HR EFFLUENT 14.1 L/HR AQ LAYR 13.3 CC/HR

RUN & SAMPLE NO.	9972-17-11	972-17-12	972-17-13	9972-17-14
C ₃ H ₆ WHSV	0.5	0.5	0.5	0.5
HRS ON STREAM	156.6	164.8	181.3	188.3
PRESSURE, PSIG	149	155	148	149
TEMP. C	340	340	342	344
FEED C ₃ H ₆ CC	591.50	283.17	597.17	239.18
HOURS FEEDING	16.167	8.167	16.5	7.0
EFFLUENT GAS LITER	199.35	99.76	203.02	84.95
GM AQUEOUS LAYER	230.62	116.55	223.40	99.53
GM LIQ HYDROCARBON	130.78	63.44	132.68	53.72
WT FR. LIQ HC/FEED	.3186	.4389	.4353	.4620
MATERIAL BALANCE WT %	88.13	91.89	87.91	93.47
C ₃ H ₆ CONVERSION %	89.37	89.20E	89.34	89.29
PRDT SELECTIVITY WT %		NO. GC		
CH ₄	0.01	0.01E	0.01	0.01
C ₂ HC'S	0.41	0.41E	0.41	0.41
C ₃ H ₈	3.45	3.51E	3.34	3.41
C ₄ H ₁₀	5.97	6.07E	5.94	6.01
C ₄ H ₈ =	10.27	10.44E	10.09	10.82
C ₅ H ₁₂	5.57	5.66E	5.33	5.50
C ₅ H ₁₀ =	0.30	0.30E	0.31	0.33
C ₆ H ₁₄	8.09	8.23E	7.88	8.34
C ₆ H ₁₂ = & CYCLO'S	2.54	2.59E	2.57	2.74
C ₇ - IN GAS	7.82	7.96E	8.11	8.31
LIQ HC'S	55.59	54.82E	56.01	54.11
TOTAL	100.00	100.00	100.00	100.00
SUB-GROUPING				
C ₁ -C ₄	20.09	20.44E	19.80	20.66
C ₅ -420 F	72.79	77.53E	77.51	77.23
420-700 F	7.12	2.03E	2.69	2.11
700-END PT	0.00	0.00	0.00	0.00
C ₅ -END PT	79.91	79.56E	80.20	79.34

Table 23 (cont.)

ISO/NORMAL MOLE RATIO				
C4	2.3900	-	2.4940	2.4410
C5	2.2550	-	2.3102	2.2562
C6	10.1424	-	10.4345	10.2416
C4+	0.4743	-	0.4747	0.4744
PARAFFIN/OLEFIN M RATIO				
C2	0.0913	-	0.0806	0.0635
C3	0.2785	-	0.2690	0.2737
C4	0.5613	-	0.5681	0.5362
C5	18.1791	-	16.8575	16.2543
L10 HC COLLECTION				
PHYS. APPEARANCE	OIL	OIL	OIL	OIL
DENSITY	0.733	0.728	0.726	0.732
N. REFRACTIVE INDEX	1.4285	1.4305	1.4280	1.4285
SIMULATED DISTILLATION				
10 WT % @ DEG F.	154	147	150	148
16	179	168	172	170
50	272	262	264	263
81	399	348	353	349
90	433	376	386	378
RANGE (16-84%)	220	180	181	170
WT % @420 F	87.2	96.3	95.2	96.1
WT % @700 F	100	100	100	100

Table 24

RESULT OF PROPYLENE OPERATION

RUN NO. 9972-18
 CATALYST ZSM-5 #9939-44 5ACC 35.00GM (35.59GM AFTER THE RUN, +0.59G)
 FEED H₂:C₃H₆:H₂O @ 1:1:2 MOLE RATIO, 0.5 C₃H₆ WHSV, CONTINUOUS FEED
 C₃H₆ MW= 42.0813 DENSITY= 0.5087 GM/CC (@ 73 F)
 TARGET FLOW: C₃H₆ 34.3 CC/HR H₂ 168 CCMN, 10.1 L/HR H₂O 15.0 CC/HR
 ACTUAL FLOW: 34.1 CC/HR EFFLUENT 13.1 L/HR AQ LAYR 13.9 CC/HR

RUN & SAMPLE NO.	9972-18-01	972-18-02	972-18-03	972-18-04	972-18-05
C ₃ H ₆ WHSV	0.49	0.51	0.49	0.50	0.51
HRS ON STREAM	2.9	19.5	27.15	45.4	50.9
PRESSURE, PSIG	152	152	154	135	146
TEMP. C	279	279	279	279	279
FEED C ₃ H ₆ CC	96.91	565.07	270.58	633.03	191.29
HOURS FEEDING	2.90	16.25	8.00	18.25	5.50
EFFLNT GAS LITER	36.40	203.83	107.45	265.55	82.92
GM AQUEOUS LAYER	38.19	234.56	115.74	242.38	74.26
GM LIQ HYDROCARBON	20.26	133.24	56.24	104.45	26.30
WT FR. LIQ HC/FEED	0.4110	0.4635	0.4086	0.3244	0.2703
MATERIAL BALANCE WT %	92.97	92.42	95.97	97.70	97.94
C ₃ H ₆ CONVERSION %	84.43	73.75	65.72	50.34	43.70
PRDT SELECTIVITY, WT %					
CH ₄	0.00	0.00	0.00	0.00	0.00
C ₂ HC'S	0.10	0.05	0.03	0.00	0.02
C ₃ H ₈	5.74	2.90	3.05	3.13	3.34
C ₄ H ₁₀	6.97	2.06	2.01	1.46	1.39
C ₄ H ₈ =	6.59	7.48	8.61	8.17	8.74
C ₅ H ₁₂	5.59	1.75	1.49	1.13	0.99
C ₅ H ₁₀ =	0.24	0.36	0.42	0.44	0.50
C ₆ H ₁₄	7.15	4.67	4.04	3.61	3.39
C ₆ H ₁₂ = & CYCLO'S	2.54	3.15	4.09	4.23	4.41
C ₇ + IN GAS	8.58	8.77	9.74	11.29	11.74
LIQ HC'S	56.51	68.84	66.52	66.55	65.47
TOTAL	100.00	100.00	100.00	100.00	100.00
SUB-GROUPING					
C ₁ -C ₄	19.40	12.47	13.70	12.76	13.50
C ₅ -420 F	75.24	83.46	80.18	79.65	77.99
420-700 F	5.37	4.06	6.12	7.59	8.51
700- END PT	0.00	0.00	0.00	0.00	0.00
C ₅ + -END PT	80.60	87.53	86.30	87.24	86.50
ISO/NORMAL MOLE RATIO					
C ₄	1.5218	1.2047	1.0059	0.9882	1.0146
C ₅	1.7258	1.3639	1.3957	1.2251	1.1840
C ₆	8.2157	11.2969	11.7850	10.1468	10.7688
C ₄ =	0.3678	0.1978	0.1615	0.1359	0.1276

Table 24 (cont.)

PARAFFIN/OLEFIN RATIO					
C3	0.2995	0.0779	0.0560	0.0304	0.0248
C4	1.0220	0.2656	0.2259	0.1727	0.1538
C5	22.7112	4.7759	3.4449	2.4776	1.9374
LIQ HC COLLECTION					
PHYS. APPEARANCE	CLEAR OIL	CLEAR OIL	CLEAR OIL	CLEAR OIL	CLEAR OIL
DENSITY	0.759	0.748	0.748	0.750	0.751
N. REFRACTIVE INDEX	1.4363	1.4285	1.4275	1.4275	1.4283
SIMULT'D DISTILLATE					
10 WT % @ DEG F	170	154	184	200	209
16	197	170	210	221	234
50	288	261	295	307	312
84	380	358	381	394	402
90	414	390	412	435	450
RANGE(16-84 %)	183	188	171	173	168
WT % @ 420 F	90.5	94.1	90.8	88.6	87.0
WT % @ 700 F	100	100	100	100	100

Table 24 (cont.) RESULT OF PROPYLENE OPERATION

RUN NO. 9972-18
 CATALYST ZSM-5 #9939-44 54CC 35.00GM (35.59GM AFTER THE RUN, +0.59G)
 FEED H₂:C₃H₆:H₂O @ 1:1:2 MOLE RATIO, 0.5 C₃H₆ WHSV, CONTINUOUS FEED
 C₃H₆ MW= 42.0813 DENSITY= 0.5087 GM/CC (@ 73 F)
 TARGET FLOW: C₃H₆ 34.3 CC/HR H₂ 168 CCMN, 10.1 L/HR H₂O 15.0 CC/HR
 ACTUAL FLOW: 34.1 CC/HR EFFLUENT 13.1 L/HR AQ LAYE 13.9 CC/HR

RUN & SAMPLE NO.	9972-18-06	972-18-07	972-18-08	972-18-09
C ₃ H ₆ WHSV	0.52	0.51	0.51	0.50
HRS ON STREAM	71.82	76.24	93.74	99.91
PRESSURE, PSIG	151	150	147	154
TEMP. C	339	339	340	340
FEED C ₃ H ₆ CC	675.82	154.80	610.38	213.95
HOURS FEEDING	18.92	4.42	17.50	6.17
EFFLNT GAS LITER	246.49	55.90	227.65	78.55
GM AQUEOUS LAYER	272.51	64.30	252.84	89.31
GM LIQ HYDROCARBON	137.79	32.94	131.34	45.79
WT FR. LIQ HC/FEED	0.4008	0.4183	0.4230	0.4207
MATERIAL BALANCE WT %	93.78	96.11	92.73	97.41
C ₃ H ₆ CONVERSION %	84.45	84.03	86.43	85.64
PRDT SELECTIVITY, WT %				
CH ₄	0.01	0.02	0.02	0.02
C ₂ HC'S	0.30	0.27	0.21	0.18
C ₃ H ₈	3.08	2.64	2.21	2.05
C ₄ H ₁₀	3.89	3.02	2.16	2.06
C ₄ H ₈ =	13.04	13.32	14.49	14.31
C ₅ H ₁₂	3.94	3.16	2.47	2.53
C ₅ H ₁₀ =	0.42	0.43	0.46	0.51
C ₆ H ₁₄	9.97	9.17	9.56	10.03
C ₆ H ₁₂ = & CYCLO'S	4.24	4.26	4.64	5.33
C ₇ + IN GAS	10.04	9.65	10.46	10.96
LIQ HC'S	51.06	54.06	53.31	52.03
TOTAL	100.00	100.00	100.00	100.00
SUB-GROUPING				
C ₁ -C ₄	20.32	19.26	19.09	18.61
C ₅ -420 F	71.40	78.63	78.61	79.05
420-700 F	8.27	2.11	2.29	2.34
700-END PT	0.00	0.00	0.00	0.00
C ₅ + -END PT	79.68	80.74	80.91	81.39
ISO/NORMAL MOLE RATIO				
C ₄	2.1699	2.3078	2.3233	2.1780
C ₅	2.0037	1.8915	1.7441	1.6120
C ₆	12.6516	14.0644	15.4883	15.3583
C ₄ =	0.4502	0.4377	0.4248	0.4071

Table 24 (cont.)

PARAFFIN/OLEFIN RATIO				
C3	0.1606	0.1333	0.1350	0.1172
C4	0.2878	0.2187	0.1442	0.1388
C5	9.0552	7.2249	5.1665	4.8597
LIQ HC COLLECTION				
PHYS. APPEARANCE	CLEAR OIL	CLEAR OIL	CLEAR OIL	CLEAR OIL
DENSITY	0.754	0.744	0.739	0.738
N. REFRACTIVE INDEX	1.4312	1.4263	1.4228	1.4236
SIMULT'D DISTILATN				
10 WT % @ DEG F	212	147	145	149
16	238	167	164	165
50	319	261	256	256
84	420	343	349	349
90	474	371	379	379
RANGE(16-84 %)	182	176	185	184
WT % @ 420 F	83.8	96.1	95.7	95.5
WT % @ 700 F	100	100	100	100