Table 9 PROPYLENE(WITH H2) OPERATION

RUN NO. 9972-01
CATALYST LZ-105-6 #9939-01 50 CC 30.0 GM (33.16 GM AFTER THE RUN)
FEED C3H6/H2 @ 1/1 MOLE RATIO, 290 CC/MIN H2 FLOW, C3= FLOW 7 HR/D
C3H6 MW= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)

RUN & SAMPLE NO.	9972-01-1	9972-01-2	9972-01-3	9972-01-4	9972-01-5
C3H6 WHSV	1.1	1.1	1.1	1.1	1.1
HRS ON STREAM5	2.5	7.5	11.0	14.0	17.5
PRESSURE,PSIG	152	148	144	142	143
TEMP. C	278	279	307	307	336
FEED C3H6 CC	131.51	314.0	198.2	195.07	195.07
HOURS FEEDING	2.0	5.0	3.0	3.0	3.0
EFFLNT GAS LITER	45.2	116.9	71.1	70.3	74.3
GM LIQ HYDROCARBON	32.77	93.30	42.13	51.31	32.75
WT FR. LIQ HC/FEED	.4882	.5821	.4165	.5153	.3289
MATERIAL BALANCE WT %	83.99	90.23	80.26	90.80	82.83
C3H6 CONVERSION %	93.70	96.19	94.65	94.65	95.27
PRDT SELECTIVITY WT %					
CH4	0.0509	0.0387	0.1174	0.0911	0.2584
C2 HC'S	0.1635	0.1226	0.0000	0.2999	0.7806
C3H8	6.7851	9.0719	6.4647	4.4276	10.5096
C4H10	5.3615	2.8712	9.2434	6.6405	16.0236
C4H8=	3.5921	3.7820	4.7222	4.6925	4.3213
C5H12	3.9458	2.2712	6.9334	5.3198	10.2667
C5H10=	4.0046	4.2365	4.4360	4.7022	3.3246
C6H14	3.0899	2.1888	4.2713	3.6977	5.0462
C6H12= & CYCLO'S	1.8936	2.0526	1.9870	1.6435	0.9596
C7+ IN GAS	5.2618	4.6779	4.9821	6.3212	5.4495
LIQ HC'S	65.8512	69.1784	56.8424	62.1638	43.0597
TOTAL	100.00	100.00	100.00	100.00	100.00
SUBGROUPING					
C1 -C4	15.95	15.89	20.55	16.15	31.89
C5 -420 F	70.61	69.14	69.79	73.59	60.51
420-700 F	13.43	14.42	9.38	10.26	7.43
C5 -END PT	84.05	84.11	79.45	83.85	68.11

Table 9 (cont.)

ISO/NORMAL MOLE RATIO					
C4	1.1577	1.2819	1.7247	1.8769	1.5071
C5	2.7926	2.7286	2.7825	2.8644	2.5075
C6	2.8870	2.1805	3.0477	2.7869	3.5047
C4=	0.4146	0.3881	0.4389	0.4324	0.4413
PARAFFIN/OLEFIN M RATIO					
C3	0.9677	2.1937	1.0930	0.7481	2.0319
C4	1.4408	0.7328	1.8895	1.3660	3.5794
C5	0.9578	0.5211	1.5193	1.0997	3.0018
LIQ HC COLLECTION					
PHYS. APPEARANCE	CLEAR OIL	CLEAR OIL	OIL,LT BL	OIL,LT BL	OIL,YL GR
DENSITY	0.759	0.761	0.777	0.755	0.797
N,REFRACTIVE INDEX	1.4346	1.4337	1.4457	1.4399	1.4684
SIMULATED DISTILLATION					
10 WT % @ DEG F.	172	183	157	162	159
16	204	210	192	193	195
50	315	321	297	300	299
84	445	453	426	423	431
90	492	503	475	468	477
RANGE(16-84%)	241	243	234	230	236
WT % @420 F	79.6	78.2	83.0	83.5	82.4
WT % @700 F	100.0	99.2	99.5	100.0	99.6

TABLE 9(cont), PROPYLENE(WITH H2) OPERATION

RUN NO. 9972-01
CATALYST LZ-105-6 #9939-01 50 CC 30.0 GM (33.16 GM AFTER THE RUN)
FEED C3H6/H2 @ 1/1 MOLE RATIO, 290 CC/MIN H2 FLOW, C3= FLOW 7 HR/D
C3H6 MW= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)

RUN & SAMPLE NO.	9972-01-6	9972-01-7	9972-01-8	9972-01-9	9972-1-10
C3H6 WHSV	1.1	1.1	1.1	1.1	1.1
HRS ON STREAMS	21.0	25.0	29.0	32.5	37.5
PRESSURE,PSIG	145	147	145	147	150
TEMP. C	337	370	370	282	282
FEED C3H6 CC	223.39	230.94	247.30	193.81	292.60
HOURS FEEDING	3.5	3.5	4.0	3.0	4.5
EFFLNT GAS LITER	85.4	90.3	101.7	72.9	109.2
GM LIQ HYDROCARBON	49.15	29.72	44.41	58.77	86.62
WT FR. LIQ HC/FEED	.4311	.2521	.3518	.5941	.5800
MATERIAL BALANCE WT %	90.36	85.41	92.38	95.08	93.74
C3H6 CONVERSION %	95.04	95.20	97.06	86.37	89.19
PRDT SELECTIVITY WT %					
CH4	0.2065	0.5748	0.4903	0.0294	0.0276
C2 HC'S	0.6403	1.5026	1.3124	0.0200	0.0762
C3H8	7.1552	17.8821	14.0543	3.0490	8.1101
C4H10	12.1173	21.1874	16.9210	1.1281	1.4564
C4H8=	4.7449	4.1059	4.0579	4.7259	4.1347
C5H12	8.4045	10.2999	9.4264	0.9042	1.0794
C5H10=	3.8333	2.3068	2.8045	4.8598	4.3935
C6H14	4.3723	4.1523	4.2326	1.5975	1.6156
C6H12= & CYCLO'S	1.5794	0.8800	0.8119	2.6501	2.6697
C7+ IN GAS	5.2174	5.2134	5.6469	5.8134	5.2274
LIQ HC'S	51.7287	31.8948	40.2417	75.2225	71.2092
TOTAL	100.00	100.00	100.00	100.00	100.00
SUBGROUPING					
C1 -C4	24.86	45.25	36.84	8.95	13.81
C5 -420 F	67.17	47.38	56.89	75.10	71.10
420-700 F	7.97	7.24	6.28	15.87	15.03
C5 -END PT	75.14	54.75	63.16	91.05	86.19

Table 9 (cont.)

ISO/NORMAL MOLE RATIO					
C4	1.6531	1.3480	1.3967	1.1239	0.5756
C5	2.5364	2.7891	2.5174	2.4760	1.5747
C6	2.9060	4.8999	3.6158	1.5029	1.2075
C4=	0.4366	0.4201	0.4834	0.3231	0.3400
PARAFFIN/OLEFIN M RATIO					
C3	1.3100	3.4063	4.4573	0.1845	0.6397
C4	2.4652	4.9813	4.0253	0.2304	0.3400
C5	2.1312	4.3403	3.2672	0.1809	0.2388
LIQ HC COLLECTION					
PHYS. APPEARANCE	OIL,YL GR	OIL,YL GR	OIL,YL GR	OIL,YL GR	OIL,YL GR
DENSITY	0.773	0.839	0.815	0.753	0.736
N,REFRACTIVE INDEX	1.4562	1.4972	1.4732	1.4287	1.4305
SIMULATED DISTILLATION					
10 WT % @ DEG F.	155	188	161	188	187
16	191	224	196	212	212
50	294	321	299	324	323
84	416	457	417	449	449
90	463	489	466	494	494
RANGE(16-84%)	225	233	221	237	237
WT % @420 F	84.6	76.9	84.4	78.8	78.8
WT % @700 F	100.0	99.6	100.0	99.9	99.9

TABLE 9 STEP. PROPYLENE(WITH H2) OPERATION

RUN NO. 9972-01
CATALYST LZ-105-6 #9939-01 50 CC 30.0 GM (33.16 GM AFTER THE RUN)
FEED C3H6/H2 @ 1/1 MOLE RATIO, 290 CC/MIN H2 FLOW, C3= FLOW 7 HR/D
C3H6 MW= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)

RUN & SAMPLE NO.	9972-1-11	9972-1-12	9972-1-13	9972-1-14	9972-1-15
C3H6 WHSV	1.1	1.1	1.1	1.1	1.0
HRS ON STREAM5	40.5	44.0	48.0	52.0	55.5
PRESSURE,PSIG	147	74	73	299	303
TEMP. C	282	279	281	283	289
FEED C3H6 CC	186.26	188.78	258.63	219.61	210.80
HOURS FEEDING	3.0	3.0	4.0	3.5	3.5
EFFLNT GAS LITER	74.1	77.2	104.2	79.9	80.4
GM LIQ HYDROCARBON	57.36	53.72	69.70	45.24	59.46
WT FR. LIQ HC/FEED	.6034	.5575	.5280	.4036 *****	.5526
MATERIAL BALANCE WT %	100.21	97.00	98.24	71.43	91.70
C3H6 CONVERSION %	84.11	80.99	78.37	85.87	89.09
PRDT SELECTIVITY WT %					
CH4	0.0248	0.0167	0.0190	0.0809	0.0688
C2 HC'S	0.0713	0.0594	0.0659	0.1805	0.1589
C3H8	2.6535	2.2477	2.1299	6.6429	4.7074
C4H10	0.7715	0.6357	0.6745	1.9969	1.7005
C4H8=	5.0642	6.2363	6.6248	4.0554	3.6196
C5H12	0.7983	0.5001	0.5482	1.2119	1.1676
C5H10=	4.8852	5.8271	6.2591	4.3761	3.9528
C6H14	1.7032	1.6093	1.7335	1.9060	4.5162
C6H12= & CYCLO'S	3.4710	3.6054	3.5951	3.0626	2.6430
C7+ IN GAS	6.0648	6.7315	8.6878	6.1712	5.0870
LIQ HC'S	74.4924	72.5307	69.6620	70.3155	72.4052
TOTAL	100.00	100.00	100.00	100.00	100.00
SUBGROUPING					
C1 -C4	8.5852	9.1957	9.5141	12.9566	10.2552
C5 -420 F	75.3244	78.1839	78.7827	68.4098	72.7296
420-700 F	16.0159	12.6204	11.7032	17.8602	16.6532
C5 -END PT	91.4148	90.8043	90.4859	87.0434	89.7448

Table 9 (cont.)

ISO/NORMAL MOLE RATIO					
C4	1.1515	1.2932	1.4982	0.6539	0.8371
C5	2.3461	2.7149	2.6332	2.1944	2.4042
C6	1.4732	1.2844	1.2967	1.4945	6.2711
C4=	0.2901	0.2939	0.3045	0.3169	0.3289
PARAFFIN/OLEFIN M RATIO					
C3	0.1341	0.0913	0.0737	0.3865	0.3679
C4	0.1471	0.0984	0.0983	0.4753	0.4535
C5	0.1588	0.0834	0.0851	0.2692	0.2891
LIQ HC COLLECTION					
PHYS. APPEARANCE	LT YL OIL	LT YL OIL	LT YL OIL	LT YL OIL	LT YL OIL
DENSITY	0.726	0.719	0.719	0.713	0.783
N,REFRACTIVE INDEX	1.4309	1.4288	1.4289	1.4304	1.4320
SIMULATED DISTILLATION					
10 WT-% @ DEG F.	189	178	173	205	193
16	213	209	208	233	217
50	324	308	305	341	328
84	450	427	424	475	461
90	495	469	466	524	509
RANGE(16-84%)	237	218	216	242	244
WT % @420 F	78.4	82.6	83.2	73.5	76.5
WT % @700 F	99.9	100.0	100.0	98.9	99.5

Table 9 (cont.) PROPYLENE(WITH H2) OPERATION

RUN NO. 9972-01
CATALYST LZ-105-6 #9939-01 50 CC 30.0 GM (33.16 GM AFTER THE RUN)
FEED C3H6/H2 @ 1/1 MOLE RATIO, 290 CC/MIN H2 FLOW, C3= FLOW 7 HR/D
C3H6 MW= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)

RUN & SAMPLE NO.	9972-1-16	9972-1-17	9972-1-18	9972-1-19	9972-1-20
C3H6 WHSV	1.0	1.0	1.1	1.1	1.1
HRS ON STREAMS	59.0	62.0	65.5	68.5	72.5
PRESSURE,PSIG	307	300	150	153	52
TEMP. C	371	369	363	364	371
FEED C3H6 CC	182.48	183.11	188.78	185.63	221.50
HOURS FEEDING	3.0	3.0	3.0	3.0	3.5
EFFLNT GAS LITER	70.0	70.3	76.0	75.5	96.1
GM LIQ HYDROCARBON	8.81	14.80	30.79	36.92	41.22
WT FR. LIQ HC/FEED	.0946	.1584	.3195	.3897	.3646
MATERIAL BALANCE WT %	90.11	87.50	83.58	95.97	94.02
C3H6 CONVERSION %	98.05	97.25	93.47	94.22	89.16
PRDT SELECTIVITY WT %					
CH4	1.8615	1.3055	0.3256	0.4916	0.0142
C2 HC'S	4.4719	3.1024	0.0000	0.0000	0.9910
C3H8	47.1570	35.5407	10.7354	10.8825	8.1611
C4H10	20.5693	20.6111	15.9695	14.9539	12.5917
C4H8=	1.1714	1.9056	5.7303	5.1026	9.8380
C5H12	6.5860	8.1639	9.5202	8.7946	6.7556
C5H10=	0.4300	1.2504	4.0157	3.4684	5.9569
C6H14	2.6697	3.2520	4.6131	4.3146	3.7071
C6H12= & CYCLO'S	0.3932	0.5338	1.4037	1.4463	1.9894
C7+ IN GAS	3.2135	4.4145	5.3114	5.8777	5.9876
LIQ HC'S	11.4765	19.9201	42.3751	44.6677	44.0073
TOTAL	100.00	100.00	100.00	100.00	100.00
SUBGROUPING					
C1 -C4	75.23	62.47	32.76	31.43	31.60
C5 -420 F	20.41	32.42	60.03	62.32	63.08
420-700 F	4.18	5.12	7.20	6.25	5.32
C5 -END PT	24.77	37.53	67.24	68.57	68.40

Table 9 (cont.)

ISO/NORMAL MOLE RATIO					
C4	0.9991	1.0912	1.4695	1.4744	1.7370
C5	2.8005	2.9919	2.5089	2.6507	2.6828
C6	6.3846	5.4527	3.3978	3.6525	3.1930
C4=	0.4617	0.4555	0.4329	0.4290	0.4345
PARAFFIN/OLEFIN M RATIO					
C3	23.3722	12.2638	1.4624	1.6976	0.6412
C4	16.9506	10.4408	2.6902	2.8290	1.2355
C5	14.8880	6.3466	2.3045	2.4648	1.1024
LIQ HC COLLECTION					
PHYS. APPEARANCE	LT YG OIL	LT YG OIL	LT GR OIL	YL GR OIL	YL GR OIL
DENSITY	0.925	0.853	0.786	0.794	0.825
N,REFRACTIVE INDEX	1.5142	1.5004	1.4766	1.4610	1.4651
SIMULATED DISTILLATION					
10 WT % @ DEG F.	232	199	160	155	158
16	265	233	196	193	192
50	363	327	299	292	288
84	488	473	428	407	398
90	528	500	472	451	437
RANGE(16-84%)	223	240	232	214	206
WT % @420 F	62.0	74.3	83.0	86.0	87.9
WT % @700 F	98.4	100.0	100.0	100.0	100.0

Table 9 (cont.) PROPYLENE(WITH H2) OPERATION

RUN NO. 9972-01
CATALYST LZ-105-6 #9939-01 50 CC 30.0 GM (33.16 GM AFTER THE RUN)
FEED C3H6/H2 @ 1/1 MOLE RATIO, 290 CC/MIN H2 FLOW, C3= FLOW 7 HR/D
C3H6 Mw= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)

RUN & SAMPLE NO.	9972-1-21
C3H6 WHSV	1.8
HRS ON STREAMS	75.5
PRESSURE,PSIG	47
TEMP. C	371
FEED C3H6 CC	190.67
HOURS FEEDING	3.0
EFFLNT GAS LITER	80.0
GM LIQ HYDROCARBON	29.44
WT FR. LIQ HC/FEED	.3025
MATERIAL BALANCE WT %	85.39
C3H6 CONVERSION %	96.77
PRDT SELECTIVITY WT %	
CH4	0.0137
C2 HC'S	0.0000
C3H8	16.2809
C4H10	13.6646
C4H8=	7.8575
C5H12	7.5489
C5H10=	5.3913
C6H14	3.9106
C6H12= & CYCLO'S	1.5540
C7+ IN GAS	6.7336
LIQ HC'S	37.0448
TOTAL	100.00
SUBGROUPING	
C1 -C4	37.82
C5 -420 F	57.70
420-700 F	4.49
C5 -END PT	62.18

Table 9 (cont.)

ISO/NORMAL MOLE RATIO	
C4	1.2401
C5	2.1048
C6	2.2465
C4=	0.5205
PARAFFIN/OLEFIN M RATIO	
C3	4.6953
C4	1.6787
C5	1.3611
LIQ HC COLLECTION	
PHYS. APPEARANCE	YL GR OIL
DENSITY	0.772
N,REFRACTIVE INDEX	1.4617
SIMULATED DISTILLATION	
10 WT % @ DEG F.	159
16	192
50	287
84	406
90	438
RANGE(16-84%)	214
WT % @420 F	87.9
WT % @700 F	100.0

Table II PROPYLENE(WITH H2) OPERATION

RUN NO. 9972-2
CATALYST LZ-105-6 #9939-01 50 CC 35.0 GM (34.27 GM AFTER THE RUN)
FEED H2:C3H6:H2O @ 1:1:2 MOLE RATIO,0.5 C3H6 WHSV,CONTINOUS OVERNITE
C3H6 MW= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)
TARGET FLOW: C3H6 34.3 CC/HR H2 168 CCMN, 10.08 L/HR H2O 15 CC/HR
ACTUAL FLOW: 27.77 CCHR EFFLUENT 10.70 L/HR 10.63 CC/HR

RUN & SAMPLE NO.	9972-2-1	9972-2-2	9972-2-3	9972-2-4	9972-2-5
C3H6 WHSV	0.4	0.4	0.4	0.4	0.4
HRS ON STREAMS	7.5	24.5	29.5	47.5	53.
PRESSURE,PSIG	174	154	162	158	176
TEMP. C	410	410	408	409	409
FEED C3H6 CC	213.95	487.67	132.14	503.4	138.44
HOURS FEEDING	7.5	16.83	5.17	18.0	5.5
EFFLNT GAS LITER	82.0	187.5	47.3	198.0	47.9
GM AQUEOUS LAYER	73.59	176.58	50.10	182.02	57.73
GM LIQ HYDROCARBON	25.02	63.46	18.87	69.68	20.61
WT FR. LIQ HC/FEED	.2291	.2549	.2798	.2712	.2917
MATERIAL BALANCE WT %	94.99	96.22	97.55	97.05	94.42
C3H6 CONVERSION %	97.90	96.00	96.97	97.03	97.19
PRDT SELECTIVITY WT %					
CH4	0.7609	0.3632	0.3466	0.3315	0.3093
C2 HC'S	2.2081	1.4594	1.3206	1.3695	1.2670
C3H8	30.7507	22.1348	21.0171	21.3033	19.4161
C4H10	25.4877	28.4025	27.4300	28.3054	26.3262
C4H8=	1.2135	2.3285	2.0277	2.0841	2.0393
C5H12	6.9660	9.7110	9.8116	10.1027	9.7838
C5H10=	0.0228	0.0533	0.0408	0.0458	0.0467
C6H14	1.1132	1.7058	1.7949	1.7990	1.9180
C6H12= & CYCLO'S	0.2425	0.4559	0.4736	0.5002	0.5593
C7+ IN GAS	5.8875	5.4898	4.9319	5.0625	5.1790
LIQ HC'S	25.3472	27.8960	30.8052	29.0959	33.1554
TOTAL	100.00	100.00	100.00	100.00	100.00
SUBGROUPING					
C1 -C4	60.4208	54.6884	52.1421	53.3939	49.3579
C5 -420 F	34.3830	42.4941	44.0997	44.1912	47.1974
420-700 F	5.1962	2.8175	3.7582	2.4150	3.4447
C5 -END PT	39.5792	45.3116	47.8579	46.6061	50.6421

Table 10 (cont.)

ISO/NORMAL MOLE RATIO					
C4	2.0769	2.4555	2.3613	2.4110	2.3919
C5	5.4191	5.6217	5.3059	5.6500	5.5687
C6	7.6082	7.6459	7.3716	7.7657	7.4144
C4=	0.4614	0.4953	0.4677	0.4910	0.4850
PARAFFIN/OLEFIN M RATIO					
C3	13.8700	5.1500	6.5519	6.8021	6.5335
C4	20.2750	11.7749	13.0582	13.1106	12.4617
C5	297.3053	177.1607	233.8688	214.3594	203.8476
LIQ HC COLLECTION					
PHYS. APPEARANCE	OIL	OIL	OIL	OIL	OIL
DENSITY	0.888	0.863	0.862	0.849	0.852
N,REFRACTIVE INDEX	1.5114	1.4996	1.4957	1.4975	1.4906
SIMULATED DISTILLATION					
10 WT % @ DEG F.	231	231	221	218	209
16	236	235	233	234	233
50	293	289	289	290	290
84	439	389	396	372	387
90	475	430	435	405	425
RANGE(16-84%)	203	154	163	138	154
WT % @420 F	79.5	89.0	88.0	91.7	89.6
WT % @700 F	100.0	100.0	100.0	100.0	100.0

Table 11 (cont.) PROPYLENE(WITH H2) OPERATION

RUN NO. 9972-2
CATALYST LZ-105-6 #9939-01 50 CC 35.0 GM (34.27 GM AFTER THE RUN)
FEED H2:C3H6:H2O @ 1:1:2 MOLE RATIO,0.5 C3H6 WHSV,CONTINOUS OVERNITE
C3H6 MW= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)
TARGET FLOW: C3H6 34.3 CC/HR H2 168 CCMN, 10.08 L/HR H2O 15 CC/HR
ACTUAL FLOW: 27.76 CCHR EFFLUENT 10.70 L/HR 10.63 CC/HR

RUN & SAMPLE NO.	9972-2-6	9972-2-7
C3H6 WHSV	0.4	0.4
HRS ON STREAMS	71.8	79.1
PRESSURE,PSIG	168	168
TEMP. C	410	409
FEED C3H6 CC	516.62	223.37
HOURS FEEDING	18.75	7.417
EFFLNT GAS LITER	205.3	80.4
GM AQUEOUS LAYER	194.21	75.49
GM LIQ HYDROCARBON	75.98	30.74
WT FR. LIQ HC/FEED	.2953	.2696
MATERIAL BALANCE WT %	109.24	99.83
C3H6 CONVERSION %	96.47	96.39
PRDT SELECTIVITY WT %		
CH4	0.2351	0.2629
C2 HC'S	1.1456	1.2075
C3H8	17.7434	18.8471
C4H10	30.3359	28.7799
C4H8=	2.8610	2.7738
C5H12	13.1666	11.5828
C5H10=	0.0674	0.0600
C6H14	2.2889	2.3055
C6H12= & CYCLO'S	0.6315	0.6871
C7+ IN GAS	3.8993	4.7166
LIQ HC'S	27.6253	28.7768
TOTAL	100.00	100.00
SUBGROUPING		
C1 -C4	52.3210	51.8712
C5 -420 F	46.1596	46.2583
420-700 F	1.5194	1.8705
C5 -END PT	47.6790	48.1288

Table 10 (cont.)

ISO/NORMAL MOLE RATIO		
C4	2.2820	2.3460
C5	5.5353	4.9806
C6	7.5869	6.7056
C4=	0.4842	0.4699
PARAFFIN/OLEFIN M RATIO		
C3	4.7488	4.9172
C4	10.2355	10.0159
C5	189.8147	187.8043
LIQ HC COLLECTION		
PHYS. APPEARANCE	OIL	OIL
DENSITY	0.837	0.840
N,REFRACTIVE INDEX	1.4841	1.4920
SIMULATED DISTILLATION		
10 WT % @ DEG F.	180	197
16	230	234
50	287	291
84	354	358
90	385	392
RANGE(16-84%)	124	124
WT % @420 F	94.5	93.5
WT % @700 F	100.0	100.0

Table 11. PROPYLENE(WITH H2) OPERATION

RUN NO. 9972-3
CATALYST UCC-101 #9939-27 60 CC 35.0 GM (44.3 GM AFTER THE RUN, +9.3 GM)
FEED H2:C3H6:H2O @ 1:1:2 MOLE RATIO,0.5 C3H6 WHSV,CONTINOUS OVERNITE
C3H6 Mw= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)
TARGET FLOW: C3H6 34.3 CC/HR H2 168 CCMN, 10.08 L/HR H2O 15 CC/HR
ACTUAL FLOW: 28.92 CCHR EFFLUENT 17.13 L/HR 10.42 CC/HR

RUN & SAMPLE NO.	9972-3-1	9972-3-2	9972-3-3	9972-3-4	9972-3-5
C3H6 WHSV	0.4	0.4	0.4	0.4	0.4
HRS ON STREAMS	4.1667	7.6667	25.1667	31.9167	48.5833
PRESSURE,PSIG	172	178	179	178	179
TEMP. C	408	408	408	409	408
FEED C3H6 CC	132.14	99.423	523.54	165.49	484.53
HOURS FEEDING	4.1667	3.50	17.50	6.75	16.6667
EFFLNT GAS LITER	64.60	57.30	302.10	114.40	294.00
GM AQUEOUS LAYER	0.0	72.37	175.12	67.37	167.36
GM LIQ HYDROCARBON	0.0	3.51	1.40	0.29	0.13
WT FR. LIQ HC/FEED	.0000	.0692	.0052	.0034	.0005
MATERIAL BALANCE WT %	69.13	96.42	84.12	102.30	86.81
C3H6 CONVERSION %	50.37	31.06	9.47	7.86	5.16
PROD SELECTIVITY WT %					
CH4	1.2558	0.8444	1.3219	1.4112	1.6555
C2 HC'S	1.9387	1.5031	2.3223	2.6226	3.8195
C3H8	62.9995	47.4961	62.3689	62.2339	63.0845
C4H10	4.5238	1.1010	1.2465	2.6253	4.2017
C4H8=	7.1352	4.4865	3.7899	5.6893	7.1939
C5H12	2.5906	0.6025	0.6040	0.6929	0.8256
C5H10=	0.2053	0.1618	0.1890	0.2343	0.3750
C6H14	4.9462	3.0185	3.5826	3.7124	4.2668
C6H12= & CYCLO'S	4.6688	7.9576	9.6325	8.5573	7.8029
C7+ IN GAS	9.7360	8.6442	8.4847	7.9335	6.6254
LIQ HC'S	0.0000	24.1844	14.1610E	4.2874E	1.1490E
TOTAL	100.00	100.00	100.00	100.00	100.00
SUBGROUPING					
C1 -C4	77.8530	55.4312	71.0495	74.5822	78.9552
C5 -420 F	22.1470	33.9277	23.8295	23.5314	20.5392
420-700 F	0.0000	9.6979	4.3266	1.7192	0.4608
C5 -END PT	22.1470	44.5688	28.9505	25.4178	21.0448

Table 11 (cont.)

ISO/NORMAL MOLE RATIO					
C4	2.0584	1.1355	0.3955	0.1466	0.0833
C5	2.9107	1.0894	0.4038	0.4639	0.2442
C6	3.7536	2.0800	1.7256	1.8657	1.4759
C4=	0.4142	0.4460	0.4075	0.3768	0.3553
PARAFFIN/OLEFIN M RATIO					
C3	0.6321	0.2098	0.0644	0.0524	0.0340
C4	0.6120	0.2369	0.3175	0.4454	0.5638
C5	12.2640	3.6197	3.1064	2.8750	2.1400
LIQ HC COLLECTION					
PHYS. APPEARANCE		OIL			
DENSITY		0.879			
N,REFRACTIVE INDEX		1.5171			
SIMULATED DISTILLATION					
10 WT % @ DEG F.	0	295	386	0	0
16	0	325	408	0	0
50	0	407	511	0	0
84	0	564	659	0	0
90	0	604	729	0	0
RANGE(16-84%)		239	251		
WT % @420 F	0	56	20.7	0	0
WT % @700 F	0	96.1	87.6	0	0

Table 12 PROPYLENE(WITH H2) OPERATION

RUN NO. 9972-4
CATALYST UCC-101 #9939-27 60 CC 35.0 GM (37.11GM AFTER THE RUN, -2.1 GM)
FEED H2:C3H6:H2O @ 1:1:3 MOLE RATIO,0.5 C3H6 WHSV,CONTINOUS OVERNITE
C3H6 MW= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)
TARGET FLOW: C3H6 34.3 CC/HR H2 168 CCMN, 10.11 L/HR H2O 22.5 CC/HR
ACTUAL FLOW: 29.8 CCHR EFFLUENT 14.99 L/HR 24.67 CC/HR

RUN & SAMPLE NO.	9972-4-1	9972-4-2	9972-4-3	9972-4-4	9972-4-5
C3H6 WHSV	0.4	0.4	0.4	0.4	0.4
HRS ON STREAM	7.8	23.8	28.1	31.2	48.1
PRESSURE,PSIG	160	154	156	157	160
TEMP. C	278	278	278	340	338
FEED C3H6 CC	215.84	488.93	125.85	86.21	521.03
HOURS FEEDING	7.75	16.00	4.25	3.17	16.92
EFFLNT GAS LITER	108.70	244.40	63 80	45.80	258.30
GM AQUEOUS LAYER	187.46	390.30	104.88	77.11	412.63
GM LIQ HYDROCARBON	0.0	1.43	0.00	1.12	2.00
WT FR. LIQ HC/FEED	0.000	0.0057	0.000	0.0255	0.0075
MATERIAL BALANCE WT %	85.07	83.96	88.49	97.09	83.91
C3H6 CONVERSION %	10.99	7.14	6.51	22.76	11.81
PRDT SELECTIVITY WT %					
CH4	0.0453	0.0837E	0.0925	0.2210	0.1835
C2 HC'S	0.1854	0.1178E	0.1303	0.3156	0.2482
C3H8	34.9861	35.4022E	39.1240	37.1714	38.9291
C4H10	3.6021	2.2243E	2.4581	4.9234	3.6059
C4H8=	5.9033	10.0413E	11.0969	10.2263	13.2319
C5H12	2.9608	1.3998E	1.5470	2.9490	0.7180
C5H10=	0.2288	0.1971E	0.2178	0.2826	0.3462
C6H14	15.2585	8.4234E	9.3089	7.3512	3.7970
C6H12= & CYCLO'S	7.9238	9.6847E	10.7028	6.2292	12.0398
C7+ IN GAS	28.9061	22.9128E	25.3217	18.1121	19.3498
LIQ HC'S	0.0000	9.5128E	0.0000	12.2182	7.5507
TOTAL	100.00	100.00	100.00	100.00	100.00
SUBGROUPING					
C1 -C4	44.7221	47.8693E	52.9018	52.8577	56.1986
C5 -420 F	55.2779	47.8499E	47.0982	41.8274	39.8977
420-700 F	0.0000	3.9954E	0.0000	4.8751	3.6243
C5 -END PT	55.2779	52.1307E	47.0982	47.1423	43.8014

Table 12 (cont.)

ISO/NORMAL MOLE RATIO					
C4	5.8252	---	1.7902	2.2263	0.3878
C5	------	---	10.6000	5.9028	0.0973
C6	18.4058	---	7.3011	6.8580	1.8226
C4=	0.5287	---	0.4669	0.4643	0.4480
PARAFFIN/OLEFIN M RATIO					
C3	0.0422	0.0265	0.0265	0.1070	0.0508
C4	0.5890	0.2138	0.2138	0.4647	0.2631
C5	12.5811	6.9048	6.9048	10.1429	2.0163
LIQ HC COLLECTION					
PHYS. APPEARANCE		OIL		OIL	OIL
DENSITY	.	.			
N,REFRACTIVE INDEX	.	.			
SIMULATED DISTILLATION					
10 WT % @ DEG F.	0	291	0	275	303
16	0	330	0	290	335
50	0	409	0	405	425
84	0	508	0	531	555
90	0	556	0	592	609
RANGE(16-84%)	0	178	0	241	220
WT % @420 F	0	55.0	0	56.5	48.3
WT % @700 F	0	97.0	0	96.4	96.3

Table 12 (cont.) PROPYLENE(WITH H2) OPERATION

RUN NO. 9972-4
CATALYST UCC-101 =9939-27 60 CC 35.0 GM (37.11GM AFTER THE RUN, +2.1 GM)
FEED H2:C3H6:H2O @ 1:1:3 MOLE RATIO,0.5 C3H6 WHSV,CONTINOUS OVERNITE
C3H6 MW= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)
TARGET FLOW: C3H6 34.3 CC/HR H2 168 CCMN, 10.08 L/HR H2O 22.5 CC/HR
ACTUAL FLOW: 29.8 CC/HR EFFLUENT 14.89 L/HR 24.7 CC/HR

RUN & SAMPLE NO.	9972-4-6
	=========
C3H6 WHSV	0.4
HRS ON STREAM5	55.0
PRESSURE,PSIG	155
TEMP. C	338
FEED C3H6 CC	201.36
HOURS FEEDING	6.92
EFFLNT GAS LITER	103.50
GM AQUEOUS LAYER	167.84
GM LIQ HYDROCARBON	0.790
WT FR. LIQ HC/FEED	0.0020
MATERIAL BALANCE WT %	67.55
C3H6 CONVERSION %	9.81
PRDT SELECTIVITY WT %	
CH4	0.1694
C2 HC'S	0.4297
C3H8	39.4476
C4H10	3.1567
C4H8=	10.9984
C5H12	0.8183
C5H10=	0.3326
C6H14	3.7366
C6H12= & CYCLO'S	13.4696
C7+ IN GAS	18.3737
LIQ HC'S	9.0675
TOTAL	100.00
SUBGROUPING	
C1 -C4	54.2018
C5 -420 F	41.7179
420-700 F	3.8083
C5 -END PT	45.7982

Table 12 (cont.)

ISO/NORMAL MOLE RATIO	
C4	0.3321
C5	1.3918
C6	1.4639
C4=	0.4805
PARAFFIN/OLEFIN M RATIO	
C3	0.0419
C4	0.2771
C5	2.3918
LIQ HC COLLECTION	
PHYS. APPEARANCE	OIL
DENSITY	.
N,REFRACTIVE INDEX	.
SIMULATED DISTILLATION	
10 WT % @ DEG F.	
16	0
50	0
84	0
90	0
RANGE(16-84%)	0
WT % @420 F	0
WT % @700 F	0

Table 13 PROPYLENE(WITH H2) OPERATION

RUN NO. 9972-5
CATALYST ALPO-11 (20% AL2O3) #9939-67, 63 CC 30 GM,30.05G AFTER THE RUN
FEED H2:C3H6:H2O @ 2:1:1 MOLE RATIO,0.5 C3H6 WHSV,DAY-TIME FEED
C3H6 MW= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)
TARGET FLOW: C3H6 29.4 CC/HR H2 290 CCMN, 17.4 L/HR H2O 6.4 CC/HR
ACTUAL FLOW: 29.1 CCHR EFFLUENT 22.55 L/HR 6.0 CC/HR

RUN & SAMPLE NO.	9972-5-1	9972-5-2	9972-5-3	9972-5-4	9972-5-5
C3H6 WHSV	0.4	0.5	0.5	0.5	0.5
HRS ON STREAMS	7.0	24.6	32.0	38.8	46.4
PRESSURE,PSIG	150	148	149	304	301
TEMP. C	278	278	339	337	336
FEED C3H6 CC	182.48	534.87	207.66	218.35	203.88
HOURS FEEDING	7.0	17.6	7.4	6.8	7.5
EFFLNT GAS LITER	159.3	409.0	168.6	145.5	162.3
GM AQUEOUS LAYER	32.2	92.86	39.67	37.55	40.51
GM LIQ HYDROCARBON	0.0	0.0	0.0	0.0	0.0
WT FR. LIQ HC/FEED	0.000	0.000	0.000	0.000	0.000
MATERIAL BALANCE WT %	97.30	84.55	86.29	83.46	86.91
C3H6 CONVERSION %	3.80	0.91	5.48	6.75	6.87
PRDT SELECTIVITY WT %					
CH4	0.4707	2.2457	0.0000	0.3702	0.0000
C2 HC'S	0.0000	0.0000	0.0000	0.1877	0.0000
C3H8	72.9831	0.0000	27.0770	18.7602	15.0155
C4H10	5.3347	12.7855	0.0000	3.0310	0.8574
C4H6=	2.6909	10.3224	0.0000	9.2956	0.4543
C5H12	0.0000	0.0000	0.0000	1.4880	0.7122
C5H10=	0.0000	0.0000	0.0000	0.1102	0.0000
C6H14	1.6208	7.1690	0.0000	7.8285	6.5284
C6H12= & CYCLO'S	11.6183	45.1719	54.0272	34.0115	48.9986
C7+ IN GAS	5.2815	22.3054	18.8958	24.9170	27.4336
LIQ HC'S	0.0000	0.0000	0.0000	0.0000	0.0000
TOTAL	100.00	100.00	100.00	100.0	100.00
SUBGROUPING					
C1 -C4	81.4794	25.3536	27.0770	31.6449	16.3272
C5 -420 F	18.5206	74.6464	72.9230	68.3551	83.6728
420-700 F	0.0000	0.0000	0.0000	0.0000	0.0000
C5 -END PT	18.5206	74.6464	72.9230	68.3551	83.6728

Table 13 (cont.)

ISO/NORMAL MOLE RATIO					
C4	2.2752	0.6871	------	0.0684	0.2430
C5	------	------	------	0.4384	0.3284
C6	0.5152	0.5522	0.0000	0.9392	1.0449
C4=	0.5255	0.4739	0.0000	0.4861	0.0000
PARAFFIN/OLEFIN M RATIO					
C3	0.0286	------	0.0152	0.0131	0.0107
C4	1.9137	1.1957	------	0.3148	1.8219
C5	------	------	------	13.1250	------