Co.053 - Run #7b

Co wt%	NM wt %	Promotor wt%		Support
20	Ru 0.50			Al2O3

SUMMARY REACTION DATA

Reaction Conditions:

P = 1.0 atm
T = 220 °C
H2/CO = 2
weight of catalyst = 0.192 g
WHSV = 13.39 1/hr
time on stream = 18.5 hrs

CO2 (g/g cat/hr) = 0.021
CO2 (% of CO) = 0.1
O/P = 4.20

CO conversion (%)	2.0
rate (g CH2/g cat/hr)	0.12
alpha	0.62
C1 (wt%)	32.1
C2 - C4 (wt%)	31.5
C5 - C12 (wt%)	34.5
C13 + (wt%)	1.9

* Catalyst calcined and reduced insitu after run # 7 (high T study)

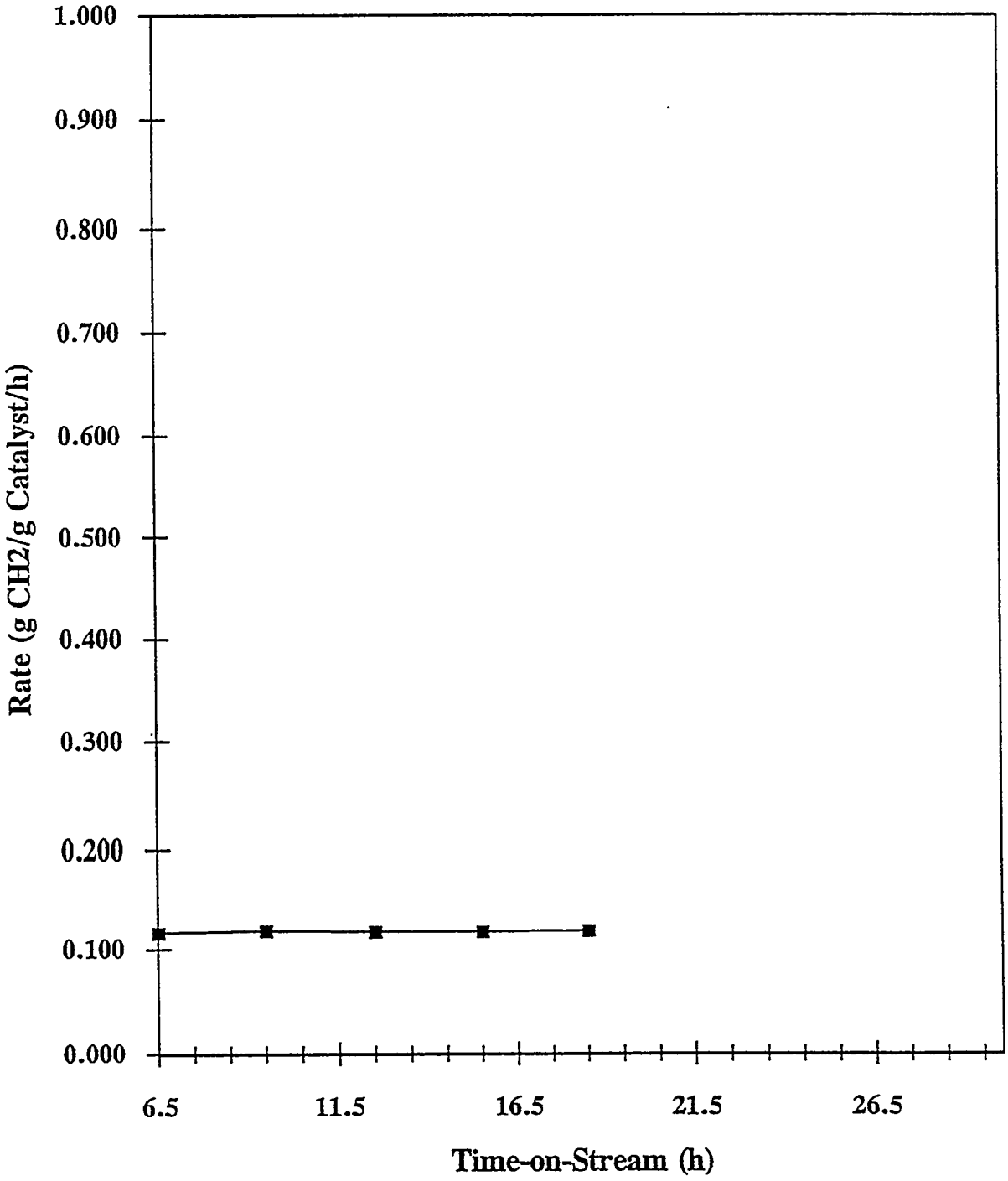
Performance of Co.053

Dates: 01/28/95 - 01/29/95 Run #7b

flow rate = 90.0 cc/min, loading= 0.2 g, WHSV = 13.4 1/hr, H2/CO ratio in feed = 2

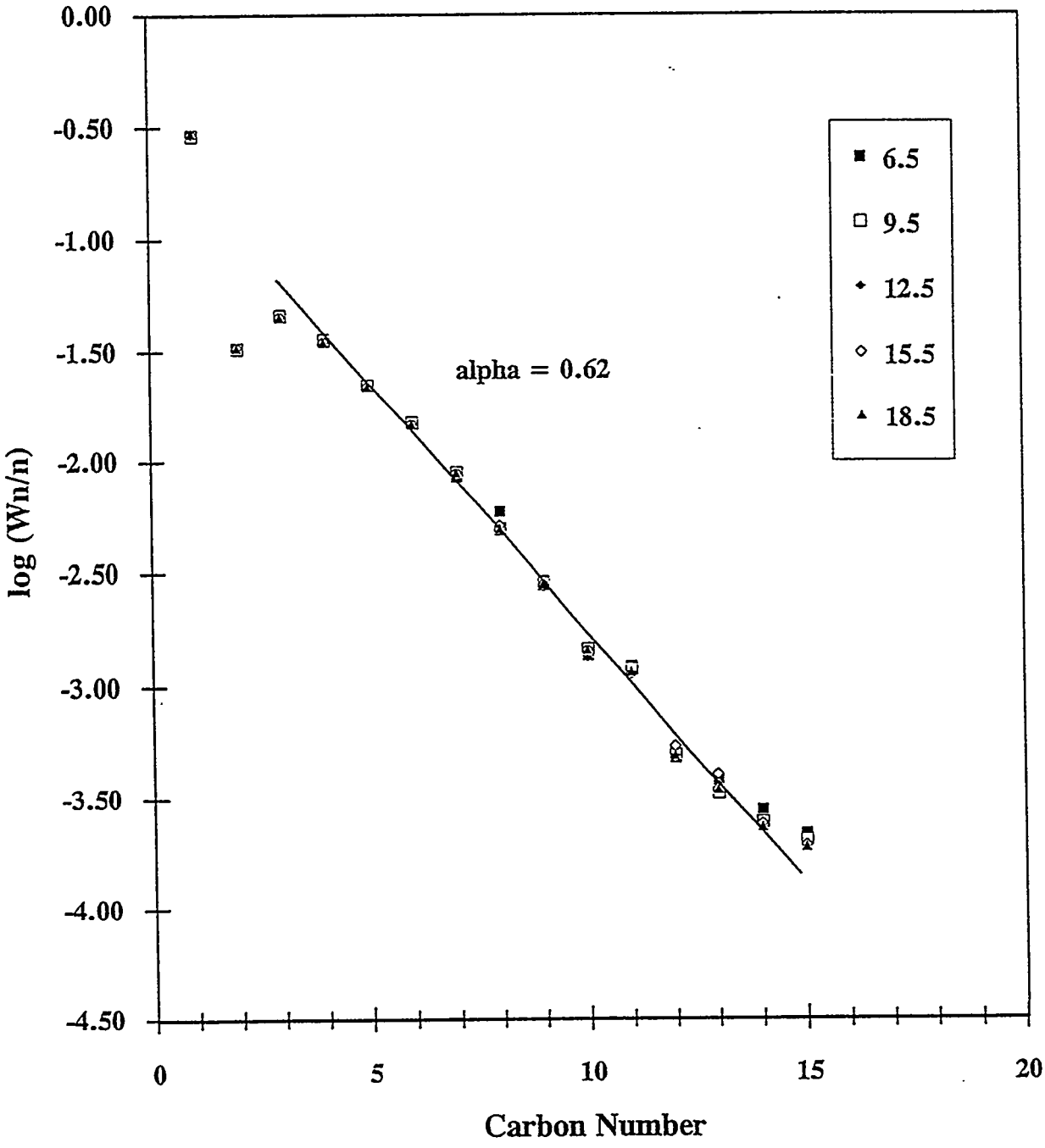
time on stream, hr	6.5	9.5	12.5	15.5	18.5
reaction temperature, °C	220	220	220	220	220
pressure, atm	1.0	1.0	1.0	1.0	1.0
flow, cc/min	90.0	90.0	90.0	90.0	90.0
C1 - C15 product distribution, weight %					
C1	31.24	31.95	32.21	32.27	32.52
C2	6.49	6.56	6.59	6.57	6.58
C3	13.24	13.30	13.24	13.15	13.02
C4	12.76	12.65	12.57	12.46	12.35
C5	12.01	11.90	11.80	11.74	11.63
C6	6.46	6.46	6.43	6.54	6.78
C7	5.96	6.24	6.25	6.20	6.22
C8	4.69	3.91	4.05	4.04	3.95
C9	2.62	2.55	2.56	2.52	2.55
C10	1.38	1.47	1.34	1.46	1.47
C11	1.36	1.32	1.26	1.25	1.28
C12	0.59	0.60	0.60	0.66	0.60
C13	0.50	0.43	0.47	0.53	0.45
C14	0.39	0.34	0.34	0.33	0.32
C15	0.32	0.30	0.29	0.29	0.28
alpha chain growth probability	0.63	0.62	0.62	0.62	0.62
C1 - C50 estimated total product distribution, weight %					
C1	30.8	31.5	31.8	31.9	32.1
C2 - C4	32.0	32.0	32.0	31.8	31.5
C5 - C12	35.1	34.5	34.3	34.4	34.5
C13 - C50	2.1	2.0	1.9	1.9	1.9
CO conversion, %	2.0	2.0	2.0	2.0	2.0
rate, g CH2/g cat/hr	0.12	0.12	0.12	0.12	0.12
CO2 formation, %	0.1	0.1	0.1	0.1	0.1

Time-on-Stream Plot for Co053 - Run #7b



Schulz-Flory Plot for Co.053 - Run #7b
Time on Stream (hrs)

hrs.



Co.053 - Run #8

Co wt%	NM wt %	Promotor wt%		Support
20	Ru 0.50			Al2O3

SUMMARY REACTION DATA

Reaction Conditions:

P = 1.0 atm
T = 220 °C
H2/CO = 2
weight of catalyst = 0.192 g
WHSV = 13.39 1/hr
time on stream = 21.5 hrs

CO2 (g/g cat/hr) = 0.036
CO2 (% of CO) = 0.2
O/P = 1.27

CO conversion (%)	7.7
rate (g CH2/g cat/hr)	0.45
alpha	0.65
C1 (wt%)	30.3
C2 - C4 (wt%)	28.4
C5 - C12 (wt%)	38.1
C13 + (wt%)	3.2

Performance of Co.053

Dates: 01/31/95 - 02/03/95 Run #8

flow rate = 90.0 cc/min, loading= 0.2 g, WHSV = 13.4 1/hr, H2/CO ratio in feed = 2

time on stream, hr	0.5	3.5	6.5	9.5	12.5	15.5
reaction temperature, °C	220	220	220	220	220	220
pressure, atm	1.0	1.0	1.0	1.0	1.0	1.0
flow, cc/min	90.0	90.0	90.0	90.0	90.0	90.0
C1 - C15 product distribution, weight %						
C1	32.33	31.24	31.55	32.64	31.12	31.10
C2	5.46	5.21	5.22	5.40	5.13	5.13
C3	12.93	12.48	12.50	13.03	12.35	12.39
C4	12.68	12.12	12.12	6.92	11.85	11.89
C5	11.40	11.15	11.12	11.76	11.10	11.09
C6	8.22	8.21	8.21	8.81	8.28	8.33
C7	5.66	6.61	6.56	7.06	6.65	6.66
C8	4.53	4.32	4.39	4.76	4.50	4.48
C9	2.74	2.91	2.92	3.21	3.07	3.05
C10	1.76	1.92	1.86	2.17	2.04	2.01
C11	1.29	1.44	1.35	1.52	1.43	0.81
C12	0.60	0.87	0.83	0.97	0.97	1.54
C13	0.24	0.61	0.55	0.64	0.60	0.58
C14	0.10	0.52	0.44	0.59	0.48	0.49
C15	0.04	0.38	0.37	0.52	0.44	0.47
alpha chain growth probability	0.51	0.64	0.63	0.65	0.64	0.65
C1 - C50 estimated total product distribution, weight %						
C1	32.8	30.7	31.0	31.8	30.5	30.3
C2 - C4	31.5	29.3	29.3	24.7	28.7	28.6
C5 - C12	35.4	37.4	37.2	40.2	38.0	38.0
C13 - C50	0.3	2.5	2.4	3.4	2.8	3.1
CO conversion, %	9.6	8.9	8.5	7.7	8.0	7.8
rate, g CH2/g cat/hr	0.56	0.52	0.50	0.45	0.47	0.46
CO2 formation, %	0.2	0.3	0.4	0.6	0.5	0.2

Performance of Co.053

Dates: 01/31/95 - 02/03/95 Run #8

flow rate = 90.0 cc/min, loading= 0.2 g, WHSV = 13.4 1/hr, H2/CO ratio in feed = 2

time on stream, hr	18.5	21.5
reaction temperature, °C	220	220
pressure, atm	1.0	1.0
flow, cc/min	90.0	90.0

C1 - C15 product distribution, weight %

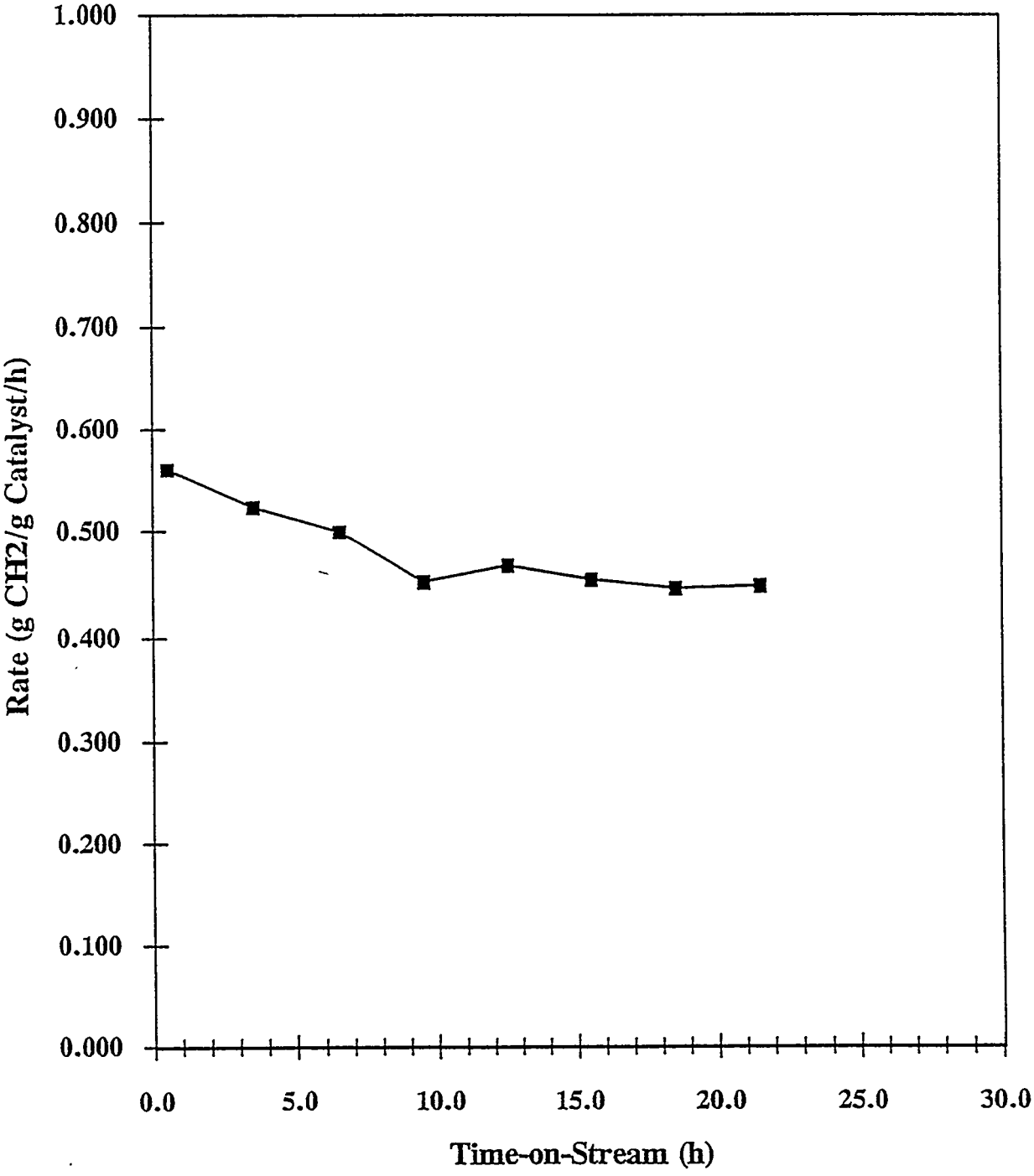
C1	31.14	31.14
C2	5.12	5.12
C3	12.37	12.36
C4	11.84	11.79
C5	11.09	11.02
C6	8.29	8.42
C7	6.70	6.69
C8	4.53	4.52
C9	3.10	3.05
C10	2.02	2.04
C11	1.46	1.40
C12	0.86	0.86
C13	0.55	0.58
C14	0.47	0.50
C15	0.48	0.49
alpha chain growth probability	0.65	0.65

C1 - C50 estimated total product distribution, weight %

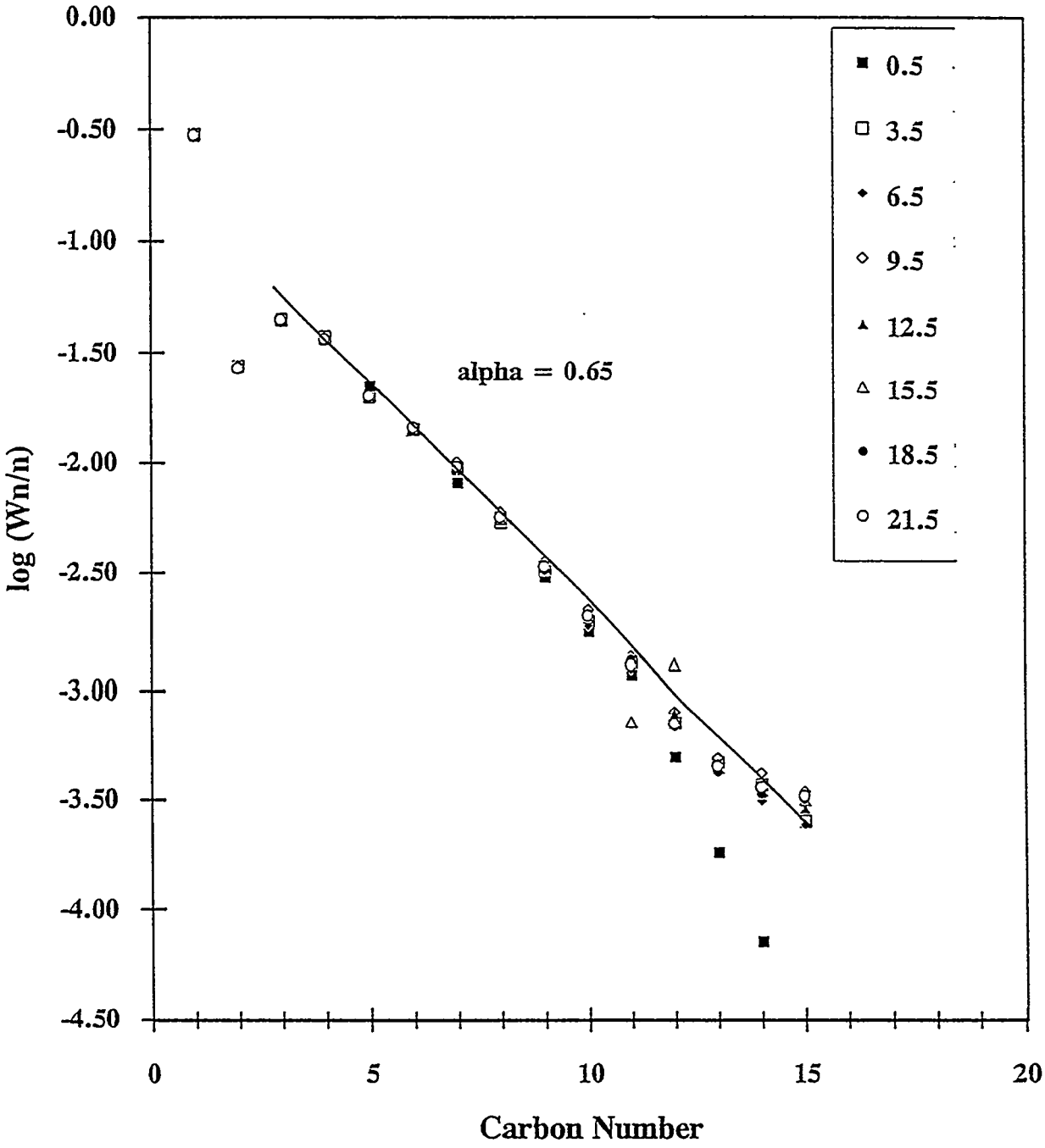
C1	30.3	30.3
C2 - C4	28.6	28.4
C5 - C12	38.0	38.1
C13 - C50	3.1	3.2

CO conversion, %	7.6	7.7
rate, g CH2/g cat/hr	0.45	0.45
CO2 formation, %	0.2	0.2

Time-on-Stream Plot for Co.053 - Run #8



Schulz-Flory Plot for Co.053 - Run #8
Time on Stream (hrs)



Co.053 - Run #8a

Co wt%	NM wt %	Promotor wt%		Support
20	Ru 0.50			Al2O3

SUMMARY REACTION DATA

Reaction Conditions:

P = 1.0 atm
T = 220 °C
H2/CO = 2
weight of catalyst = 0.192 g
WHSV = 13.39 1/hr
time on stream = 24.5 hrs

CO2 (g/g cat/hr) = 0.047
CO2 (% of CO) = 0.2
O/P = 1.44

CO conversion (%)	6.3
rate (g CH2/g cat/hr)	0.37
alpha	0.65
C1 (wt%)	32.8
C2 - C4 (wt%)	30.2
C5 - C12 (wt%)	33.7
C13 + (wt%)	3.3

* 30 cc/min Ar added to the reaction mixture

Co.053 - Run #8b

Co wt%	NM wt %	Promotor wt%		Support
20	Ru 0.50			Al2O3

SUMMARY REACTION DATA

Reaction Conditions:

P = 1.0 atm
T = 240 °C
H2/CO = 2
weight of catalyst = 0.192 g
WHSV = 13.39 1/hr
time on stream = 42.5 hrs

CO2 (g/g cat/hr) = 0.033
CO2 (% of CO) = 0.2
O/P = 3.79

CO conversion (%)	3.0
rate (g CH2/g cat/hr)	0.18
alpha	0.65
C1 (wt%)	37.3
C2 - C4 (wt%)	33.5
C5 - C12 (wt%)	26.3
C13 + (wt%)	2.9

* Temperature surge to 275 °C when it was set at 240 °C

Performance of Co.053

Dates: 02/01/95 - 02/03/95 Run #8a

flow rate = 120.0 cc/min, loading= 0.2 g, WHSV = 13.4 l/hr, H2/CO ratio in feed = 2

time on stream, hr	45.5	48.5	51.5	54.5	57.5	60.5
reaction temperature, °C	260	260	260	280	280	280
pressure, atm	1.0	1.0	1.0	1.0	1.0	1.0
flow, cc/min	120.0	120.0	120.0	120.0	120.0	120.0
C1 - C15 product distribution, weight %						
C1	49.30	47.42	45.60	48.44	44.35	42.15
C2	9.21	9.54	9.78	11.89	13.02	13.80
C3	15.68	15.62	15.71	15.96	15.68	15.49
C4	9.83	10.20	10.42	9.10	9.44	9.53
C5	6.70	7.25	7.66	6.07	6.73	7.01
C6	2.67	2.23	2.34	1.98	2.48	2.76
C7	2.72	2.81	3.00	2.32	3.11	2.81
C8	1.48	1.98	2.14	1.68	1.99	2.20
C9	0.86	1.02	1.15	0.86	1.23	1.35
C10	0.37	0.58	0.61	0.50	0.69	0.73
C11	0.37	0.41	0.52	0.33	0.56	0.70
C12	0.20	0.28	0.27	0.25	0.36	0.46
C13	0.19	0.20	0.26	0.20	0.27	0.33
C14	0.21	0.24	0.27	0.19	0.05	0.28
C15	0.22	0.23	0.26	0.22	0.04	0.40
alpha chain growth probability	0.62	0.62	0.63	0.63	0.53	0.66
C1 - C50 estimated total product distribution, weight %						
C1	48.3	46.5	44.6	47.4	44.6	40.9
C2 - C4	34.0	34.7	35.1	36.2	38.3	37.6
C5 - C12	16.3	17.4	18.6	14.9	16.8	18.9
C13 - C50	1.5	1.5	1.7	1.5	0.3	2.6
CO conversion, %	6.3	5.2	4.6	5.7	3.9	47.8
rate, g CH2/g cat/hr	0.37	0.30	0.27	0.33	0.23	0.19
CO2 formation, %	0.3	0.3	0.3	0.6	0.6	0.4

Performance of Co.053

Dates: 02/01/95 - 02/03/95 Run #8a

flow rate = 120.0 cc/min, loading= 0.2 g, WHSV = 13.4 1/hr, H2/CO ratio in feed = 2

	a	b				
time on stream, hr	24.5	30.5	33.5	36.5	39.5	42.5
reaction temperature, °C	220	240	240	240	240	240
pressure, atm	1.0	1.0	1.0	1.0	1.0	1.0
flow, cc/min	120.0	120.0	120.0	120.0	120.0	120.0
C1 - C15 product distribution, weight %						
C1	33.98	36.42	37.91	37.95	38.37	38.47
C2	5.62	7.59	7.92	7.98	8.07	8.13
C3	13.51	14.81	15.05	14.85	14.80	14.74
C4	12.15	11.89	12.08	11.89	11.78	11.72
C5	10.72	9.80	10.07	9.97	9.77	9.79
C6	7.48	5.83	2.79	2.97	3.05	3.21
C7	5.88	4.82	5.01	5.01	4.93	4.93
C8	3.73	2.90	3.01	3.08	3.07	3.05
C9	2.27	1.88	1.96	1.89	1.95	1.89
C10	1.35	1.05	1.16	1.27	1.22	1.14
C11	1.06	0.97	1.00	1.11	1.04	1.01
C12	0.68	0.53	0.58	0.66	0.60	0.60
C13	0.53	0.48	0.50	0.43	0.50	0.44
C14	0.52	0.45	0.40	0.40	0.38	0.45
C15	0.51	0.59	0.55	0.52	0.46	0.44
alpha chain growth probability	0.65	0.66	0.66	0.66	0.65	0.65
C1 - C50 estimated total product distribution, weight %						
C1	32.8	34.8	36.4	36.5	37.2	37.3
C2 - C4	30.2	32.7	33.6	33.4	33.6	33.5
C5 - C12	33.7	28.7	26.5	26.7	26.3	26.3
C13 - C50	3.3	3.8	3.6	3.4	3.0	2.9
CO conversion, %	6.3	3.5	3.3	3.1	3.1	3.0
rate, g CH2/g cat/hr	0.37	0.20	0.19	0.18	0.18	0.18
CO2 formation, %	0.2	0.2	0.2	0.3	0.2	0.2

(a) 30 cc/min Ar added to the reaction mixture. (b) Temperature surge to 275 °C

Co.053 - Run #9

Co wt%	NM wt %	Promotor wt%		Support
20	Ru 0.50			Al2O3

SUMMARY REACTION DATA

Reaction Conditions:

P = 1.0 atm
T = 220 °C
H2/CO = 2
weight of catalyst = 0.102 g
WHSV = 25.21 1/hr
time on stream = 18.5 hrs

CO2 (g/g cat/hr) = 0.046
CO2 (% of CO) = 0.1
O/P = 1.49

CO conversion (%)	4.3
rate (g CH2/g cat/hr)	0.47
alpha	0.69
C1 (wt%)	21.6
C2 - C4 (wt%)	22.5
C5 - C12 (wt%)	48.6
C13 + (wt%)	7.3

Performance of Co.053

Dates: 02/07/95 - 02/08/95 Run #9

flow rate = 90.0 cc/min, loading= 0.1 g, WHSV = 25.2 1/hr, H2/CO ratio in feed = 2

time on stream, hr	0.5	3.5	6.5	9.5	12.5	15.5
reaction temperature, °C	220	220	220	220	220	220
pressure, atm	1.0	1.0	1.0	1.0	1.0	1.0
flow, cc/min	90.0	90.0	90.0	90.0	90.0	90.0
C1 - C15 product distribution, weight %						
C1	24.26	25.48	23.10	25.81	22.96	26.11
C2	4.63	4.99	4.31	4.78	4.26	4.82
C3	11.43	11.31	10.07	11.09	9.85	11.14
C4	12.35	11.76	10.51	11.45	10.21	11.43
C5	12.43	11.83	10.61	11.56	10.33	11.44
C6	9.56	9.38	8.28	8.90	7.36	9.16
C7	7.89	7.73	10.02	7.57	10.26	7.56
C8	5.54	5.48	7.22	5.64	7.43	5.45
C9	4.01	3.92	5.19	3.95	5.32	3.91
C10	3.00	3.00	3.75	2.86	3.88	2.90
C11	1.95	1.99	2.65	1.99	2.70	2.02
C12	1.26	1.31	1.86	1.50	1.91	1.44
C13	0.88	0.83	1.16	1.01	1.32	1.00
C14	0.63	0.60	0.80	0.92	1.06	0.81
C15	0.18	0.38	0.48	0.97	1.14	0.81
alpha chain growth probability	0.59	0.64	0.64	0.70	0.69	0.68
C1 - C50 estimated total product distribution, weight %						
C1	24.7	25.4	23.1	24.4	21.6	25.1
C2 - C4	29.0	28.0	24.9	25.9	22.9	26.3
C5 - C12	45.1	44.1	48.7	43.4	48.1	43.3
C13 - C50	1.3	2.5	3.2	6.3	7.4	5.3
CO conversion, %	4.2	3.9	4.1	3.9	4.2	3.7
rate, g CH2/g cat/hr	0.46	0.43	0.45	0.43	0.47	0.41
CO2 formation, %	0.1	0.1	0.1	0.1	0.1	0.1

Performance of Co.053

Dates: 02/07/95 - 02/08/95 Run #9

flow rate = 90.0 cc/min, loading= 0.1 g, WHSV = 25.2 1/hr, H2/CO ratio in feed = 2

time on stream, hr	18.5
reaction temperature, °C	220
pressure, atm	1.0
flow, cc/min	90.0

C1 - C15 product distribution, weight %

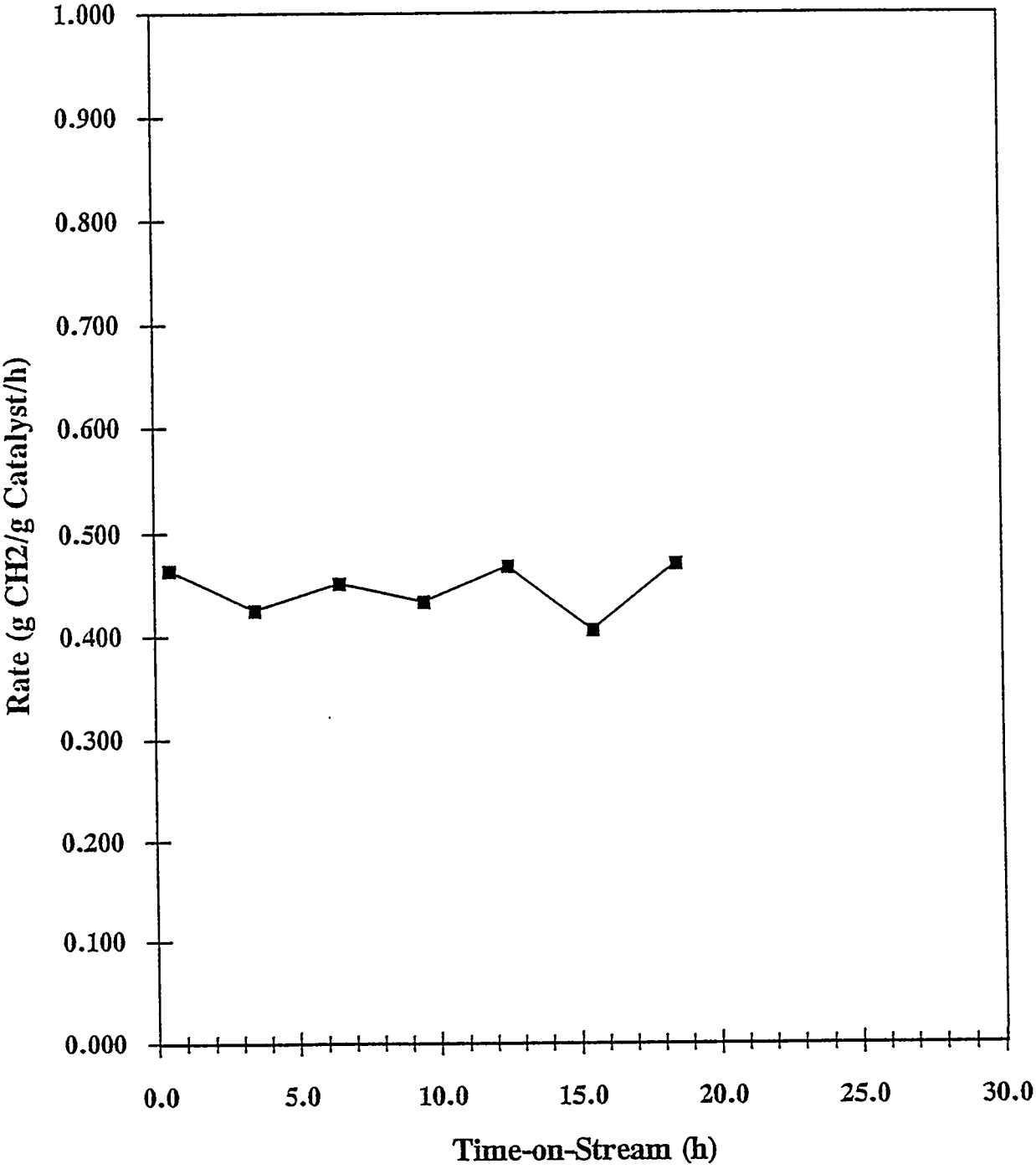
C1	22.91
C2	4.22
C3	9.74
C4	9.97
C5	10.11
C6	7.05
C7	10.67
C8	7.68
C9	5.57
C10	4.05
C11	2.71
C12	1.85
C13	1.29
C14	1.06
C15	1.13
alpha chain growth probability	0.69

C1 - C50 estimated total product distribution, weight %

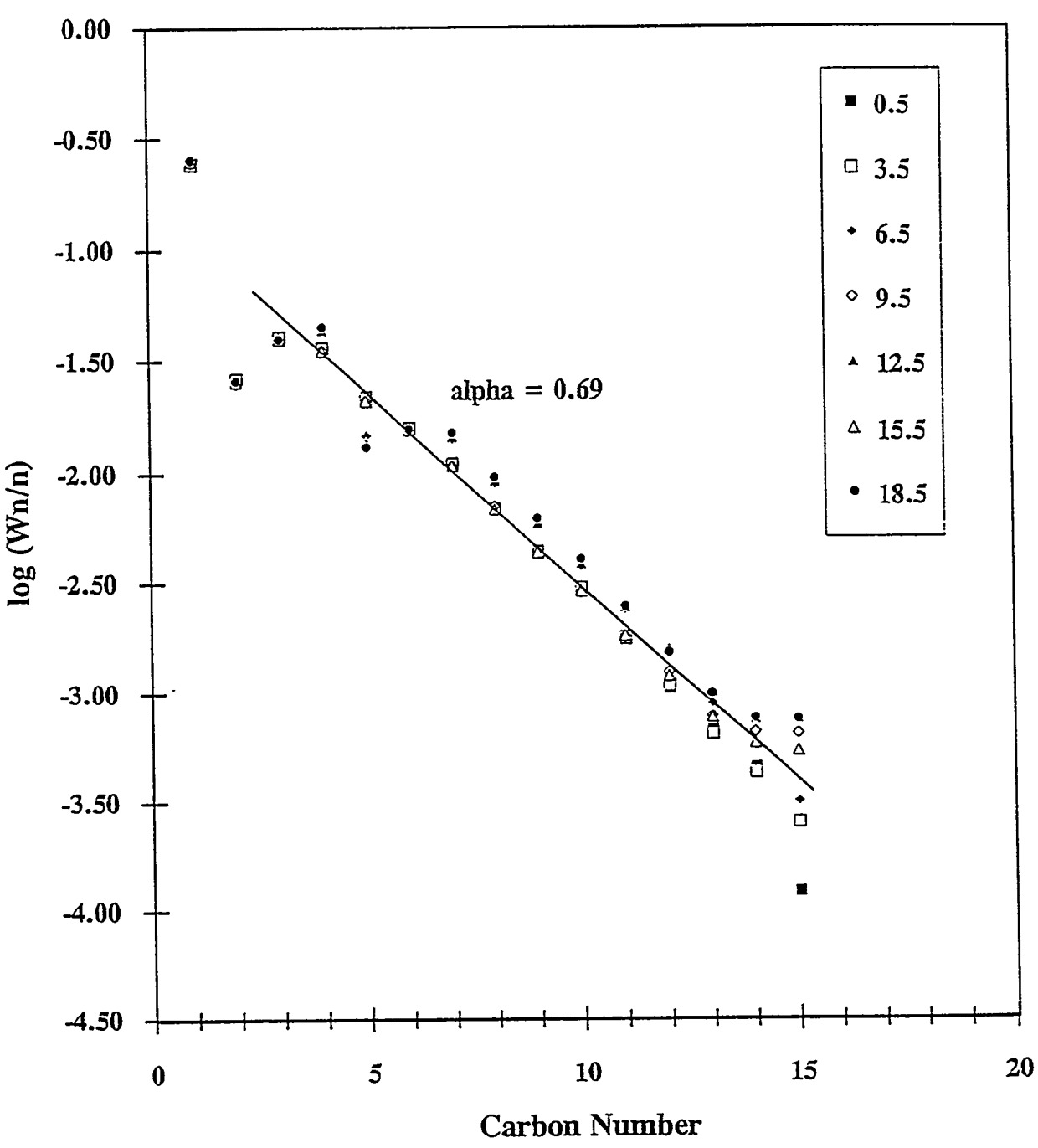
C1	21.6
C2 - C4	22.5
C5 - C12	48.6
C13 - C50	7.3

CO conversion, %	4.3
rate, g CH2/g cat/hr	0.47
CO2 formation, %	0.1

Time-on-Stream Plot for C0.053 - Run #9



Schulz-Flory Plot for Co.053 - Run #9
Time on Stream (hrs)



Co.053 - Run #9a

Co wt%	NM wt %	Promotor wt%		Support
20	Ru 0.50			Al2O3

SUMMARY REACTION DATA*

Reaction Conditions:

P = 1.0 atm
T = 220 °C
H2/CO = 2
weight of catalyst = 0.102 g
WHSV = 25.21 1/hr
time on stream = 21.5 hrs

CO2 (g/g cat/hr) = 0.067
CO2 (% of CO) = 0.2
O/P = 1.54

CO conversion (%)	3.1
rate (g CH2/g cat/hr)	0.35
alpha	0.67
C1 (wt%)	27.9
C2 - C4 (wt%)	28.5
C5 - C12 (wt%)	38.9
C13 + (wt%)	4.7

* 30 cc/min Ar added to the reaction mixture

Performance of Co.053

Dates: 02/07/95 - 02/08/95 Run #9a

flow rate = 120.0 cc/min, loading= 0.1 g, WHSV = 25.2 1/hr, H2/CO ratio in feed = 2

	a					
time on stream, hr	21.5	24.5	27.5	33.5	36.5	39.5
reaction temperature, °C	220	240	240	240	240	240
pressure, atm	1.0	1.0	1.0	1.0	1.0	1.0
flow, cc/min	120.0	120.0	120.0	120.0	120.0	120.0
C1 - C15 product distribution, weight %						
C1	29.37	50.05	47.54	46.84	45.96	50.95
C2	5.52	7.49	7.21	7.20	7.12	7.89
C3	12.43	13.21	13.37	13.90	13.99	8.10
C4	12.00	10.01	10.90	11.23	11.28	12.57
C5	10.96	8.06	7.87	8.25	8.32	9.32
C6	9.25	4.97	6.31	4.54	4.92	1.72
C7	6.74	2.73	3.05	3.43	3.46	3.91
C8	4.50	1.44	1.61	1.90	1.94	2.27
C9	2.95	0.68	0.75	0.99	1.72	1.18
C10	2.02	0.45	0.50	0.56	0.35	0.74
C11	1.37	0.25	0.28	0.34	0.28	0.42
C12	0.82	0.18	0.20	0.25	0.18	0.33
C13	0.68	0.12	0.13	0.18	0.18	0.24
C14	0.67	0.18	0.04	0.15	0.13	0.20
C15	0.73	0.20	0.22	0.21	0.16	0.17
alpha chain growth probability	0.67	0.61	0.61	0.61	0.59	0.60
C1 - C50 estimated total product distribution, weight %						
C1	27.9	49.0	46.3	45.9	45.2	50.2
C2 - C4	28.5	30.1	30.7	31.7	31.8	28.1
C5 - C12	38.9	19.7	21.5	21.1	21.9	20.5
C13 - C50	4.7	1.3	1.4	1.4	1.1	1.1
CO conversion, %	3.1	7.3	6.8	6.2	6.0	5.3
rate, g CH2/g cat/hr	0.35	0.80	0.75	0.69	0.66	0.59
CO2 formation, %	0.2	0.2	0.3	0.2	0.2	0.2

(a) 30 cc/min Ar added to the reaction mixture

Performance of Co.053

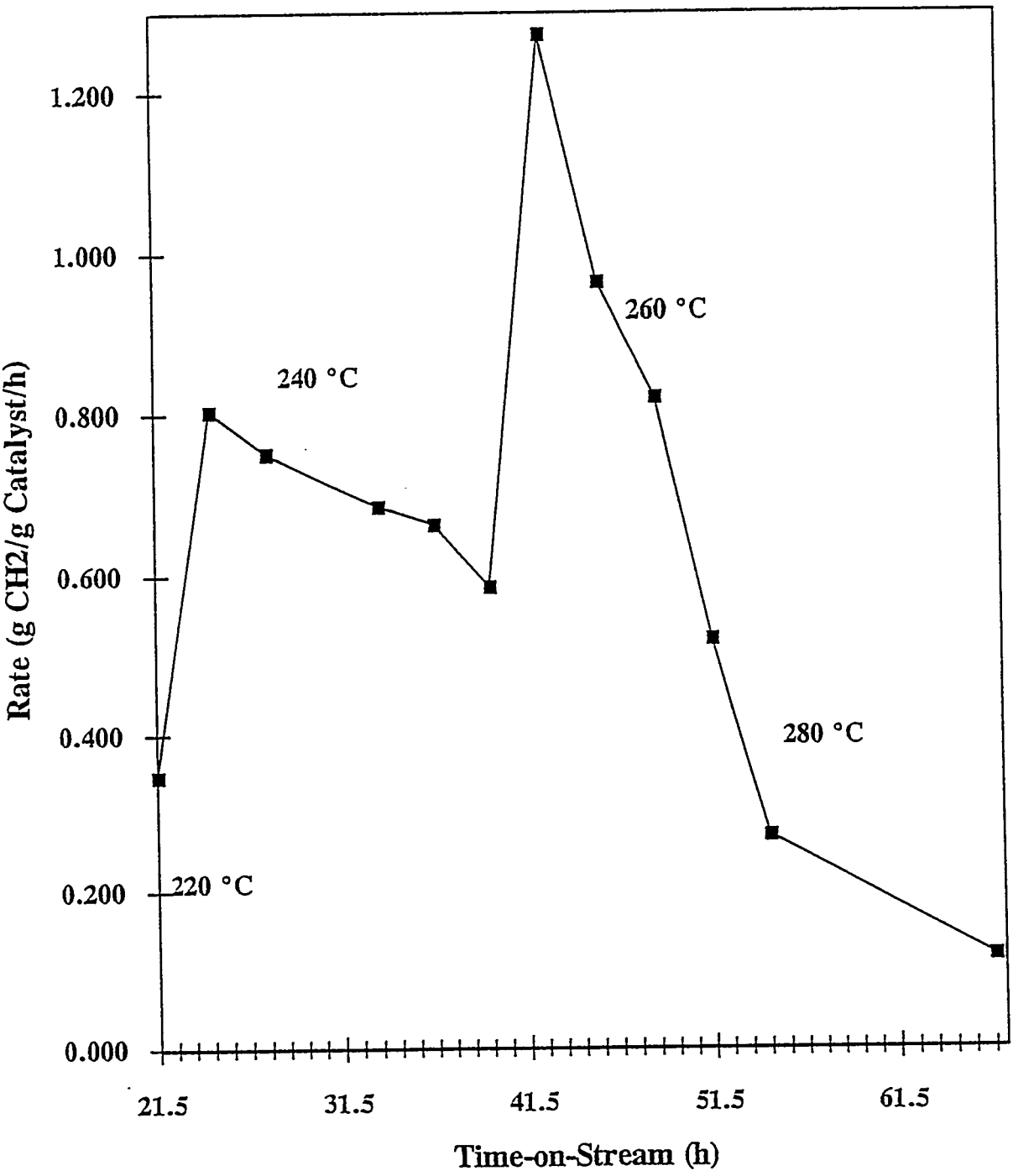
Dates: 02/07/95 - 02/08/95 Run #9a

flow rate = 120.0 cc/min, loading= 0.1 g, WHSV = 25.2 l/hr, H2/CO ratio in feed = 2

				b		
time on stream, hr	42.5	45.5	48.5	51.5	54.5	66.5
reaction temperature, °C	260	260	260	280	280	280
pressure, atm	1.0	1.0	1.0	1.0	1.0	1.0
flow, cc/min	120.0	120.0	120.0	120.0	120.0	120.0
C1 - C15 product distribution, weight %						
C1	64.26	58.91	56.31	38.11	35.03	33.57
C2	8.00	7.84	7.76	11.05	13.19	14.89
C3	10.95	13.35	14.21	16.36	15.37	14.32
C4	7.23	8.47	8.96	10.58	10.19	9.37
C5	3.96	5.08	5.75	7.84	7.82	7.83
C6	1.58	2.57	2.11	5.00	4.27	2.59
C7	1.68	1.65	2.07	3.75	4.27	4.77
C8	0.97	0.81	1.08	2.50	2.97	3.62
C9	0.49	0.51	0.66	1.65	2.06	2.49
C10	0.33	0.30	0.33	1.16	1.50	1.96
C11	0.18	0.15	0.23	0.76	1:04	1.42
C12	0.13	0.10	0.20	0.44	0.90	1.18
C13	0.11	0.08	0.14	0.34	0.62	0.83
C14	0.06	0.08	0.10	0.24	0.40	0.60
C15	0.07	0.08	0.10	0.21	0.37	0.55
alpha chain growth probability	0.59	0.57	0.58	0.62	0.65	0.69
C1 - C50 estimated total product distribution, weight %						
C1	63.9	58.4	55.8	37.6	34.4	32.8
C2 - C4	26.0	29.4	30.6	37.5	38.1	37.7
C5 - C12	9.6	11.7	12.9	23.4	25.1	25.8
C13 - C50	0.5	0.5	0.7	1.4	2.4	3.7
CO conversion, %	11.5	8.7	7.4	4.7	2.5	16.0
rate, g CH2/g cat/hr	1.27	0.96	0.82	0.52	0.27	0.12
CO2 formation, %	1.2	0.7	0.5	0.6	0.4	0.2

(b) Temperature surge to 310 °C

Time-on-Stream Plot for Co.053 - Run #9a



Co.053 - Run #9b

Co wt%	NM wt %	Promotor wt%		Support
20	Ru 0.50			Al2O3

SUMMARY REACTION DATA

Reaction Conditions:

P = 1.0 atm
T = 240 °C
H2/CO = 2
weight of catalyst = 0.102 g
WHSV = 25.21 1/hr
time on stream = 39.5 hrs

CO2 (g/g cat/hr) = 0.087
CO2 (% of CO) = 0.2
O/P = 1.22

CO conversion (%)	5.3
rate (g CH2/g cat/hr)	0.59
alpha	0.60
C1 (wt%)	50.2
C2 - C4 (wt%)	28.1
C5 - C12 (wt%)	20.5
C13 + (wt%)	1.1

Co.053 - Run #10

Co wt%	NM wt %	Promotor wt%		Support
20	Ru 0.50			Al2O3

SUMMARY REACTION DATA

Reaction Conditions:

P = 1.0 atm
T = 220 °C
H2/CO = 2
weight of catalyst = 0.206 g
WHSV = 12.48 1/hr
time on stream = 18.5 hrs

CO2 (g/g cat/hr) = 0.008
CO2 (% of CO) = 0.0
O/P = 1.56

CO conversion (%)	5.6
rate (g CH2/g cat/hr)	0.30
alpha	0.60
C1 (wt%)	29.2
C2 - C4 (wt%)	29.8
C5 - C12 (wt%)	39.5
C13 + (wt%)	1.5

Performance of Co.053

Dates: 03/13/95 - 03/14/95 Run #10

flow rate = 90.0 cc/min, loading= 0.2 g, WHSV = 12.5 1/hr, H2/CO ratio in feed = 2

time on stream, hr	0.5	3.5	6.5	9.5	12.5	15.5
reaction temperature, °C	220	220	220	220	220	220
pressure, atm	1.0	1.0	1.0	1.0	1.0	1.0
flow, cc/min	90.0	90.0	90.0	90.0	90.0	90.0
C1 - C15 product distribution, weight %						
C1	26.13	26.71	26.50	26.90	27.04	27.49
C2	4.57	4.73	4.63	4.66	4.64	4.67
C3	11.94	11.81	11.49	11.60	11.77	11.63
C4	12.17	11.95	11.56	11.55	10.77	11.60
C5	11.93	11.70	11.32	11.46	11.66	11.29
C6	9.27	9.12	8.84	8.99	9.07	8.99
C7	7.49	7.37	7.14	7.18	7.34	7.25
C8	5.43	5.37	5.17	5.19	5.31	5.30
C9	3.95	3.89	3.84	3.77	3.86	3.81
C10	2.72	2.70	2.78	2.70	2.77	2.61
C11	2.10	2.26	2.18	2.15	2.10	1.96
C12	1.27	1.29	1.56	1.48	1.48	1.30
C13	0.71	0.75	1.20	0.99	1.03	0.94
C14	0.26	0.26	1.09	0.76	0.66	0.67
C15	0.08	0.08	0.68	0.61	0.49	0.50
alpha chain growth probability	0.55	0.55	0.67	0.66	0.65	0.65
C1 - C50 estimated total product distribution, weight %						
C1	26.9	27.5	26.0	26.4	26.8	27.1
C2 - C4	29.5	29.4	27.1	27.3	26.9	27.5
C5 - C12	43.0	42.5	42.5	42.4	43.0	42.1
C13 - C50	0.6	0.6	4.5	4.0	3.3	3.3
CO conversion, %	6.9	6.3	6.5	6.2	6.1	6.0
rate, g CH2/g cat/hr	0.38	0.34	0.36	0.34	0.33	0.33
CO2 formation, %	0.2	0.1	0.1	0.1	0.1	0.1