

Appendix III: Analytical System

Unit 1 GC Conditions

Higher Alcohols and Isomers Analysis

Temperatures

GC Oven Program	30°C (3 min) - 15°C/min - 180°C (0 min)
Injector A (Packed V2)	180°C
Injector B (Packed V3)	200°C
Detector A (FID V2)	250°
Dectector B (FID V3)	200°
Aux Oven (Valve Oven A)	120°C
Valco Temp. Controller (Valve Oven B)	120°

Valve 2 (10 port) Higher Alcohols

Column	15m x 0.53mm ID x 5µm film, AT-1 (Alltech) Capillary
Head Pressure	5 psig Helium
Flow Rate	6 ml/min
Excess Flow	20 ml/min
Sample Loop	25 µl

Valve 3 (10 Port) Isomers

Column	25m x 0.53mm Al ₂ O ₃ Capillary PLOT
Pre-Column	10m x 0.53mm CP-WAX 52 Capillary
Backflush Flow	10 ml/min
Head Pressure	2 psig
Flow Rate	3 ml/min
Sample Loop	8µl

Valve Times (Valves 1 and 2 controlled by HP GC, Valve 3 controlled by Turbochrom)

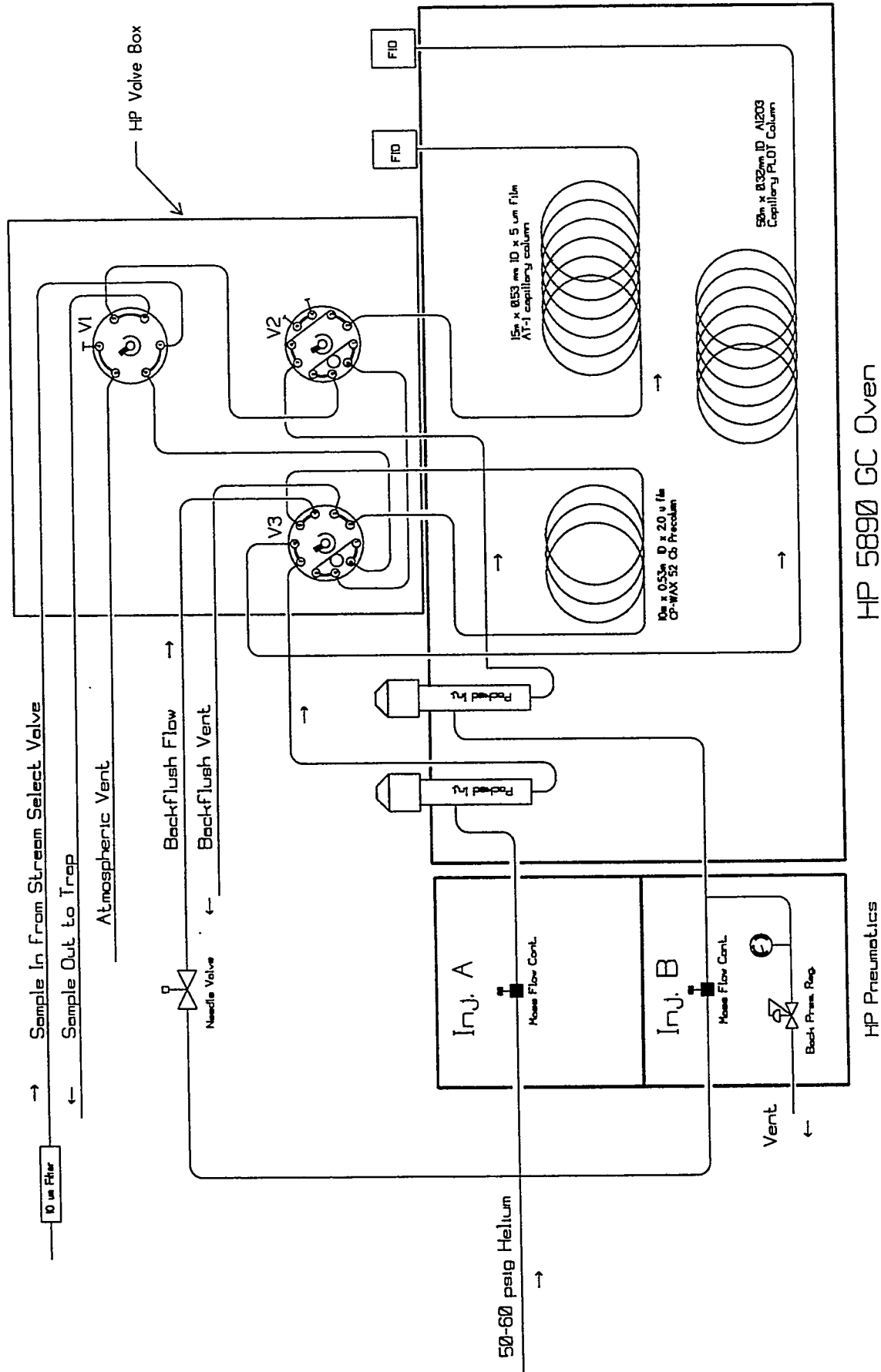
Valve 1 ON	0.01 min	Vent to atmosphere
Valve 2 and 3 ON	0.09 min	Inject Valves 2 and 3
Valve 3 OFF	0.4 min	Return Valve 3 and backflush pre-column
Valve 1 OFF	0.5 min	Return atmospheric vent valve
Valve 2 OFF	1.1 min	Return valve 2

Signal Output (0 -1 volt)

Signal A Range (Turbochrom chanel 0, V2)	6
Signal B Range (Turbochrom chanel 1, V3)	3

Misc

Equilibration Time	1 min
Run Time	13 min
Max. Column Oven Temp.	200°C



All valves shown in load position
 V2 Sample Loop 25 µl
 V3 Sample Loop 8 µl
 Temp. Prog. 30(3)-15-180(10)

Date
 1/26/93

Title Lab 17, Unit 1, Iron Run
 Higher Alcohols and Isomers Analysis