

Chrom

Gas Chromatograph

MAKING Expanded & Excellent



GC5200

GC5200 main spec

Max capacity: 2 inlets, 3 detectors (3 channel signal output)

Peak area RSD $\leq 1.0\%$

Full AFC/EPC, 6 AFC module with 18-channel
AFC/EPC independent control

Retention time RSD $\leq 0.02\%$

AFC/EPC pressure accuracy 0.001 psi

Split ratio: 4500:1

Independent split cold-trap and septum collecting trap

Carrier gas control mode: pressure, flow, programming pressure, programming flow, Programming pressure/flow/linear speed: max 8 steps

Maintenance tracking reminder, intelligent regular maintenance plan



Autosampler



Detector spec

Detector	Max operating temp	Limit of detection	Baseline noise	Baseline drift (after 2hrs stabilization)	Linear dynamic range
FID	450°C	$\leq 3.0 \times 10^{-12}$ g/s (N-C16)	$\leq 2 \times 10^{-14}$ A	5×10^{-14} A/30min	$\geq 10^7$
TCD	400°C	≥ 10000 mV.ml/mg (N-C16)	≤ 30 uV	≤ 100 uV/30min	$\geq 10^4$
ECD	400°C	$\leq 3 \times 10^{-14}$ g/ml (γ-666)	≤ 20 uV	≤ 50 uV/30min	$\geq 10^4$
FPD	400°C	S: $\leq 2.0 \times 10^{-11}$ g/s P: $\leq 5.0 \times 10^{-13}$ g/s or 2.0×10^{-13} g/s	S: $\leq 2 \times 10^{-13}$ A P: $\leq 8 \times 10^{-13}$ A	S: $\leq 1 \times 10^{-12}$ A/30min P: $\leq 2 \times 10^{-12}$ A/30min	S: $\geq 10^2$ P: $\geq 10^3$
NPD	400°C	N: $\leq 1 \times 10^{-12}$ g/s (Azobenzene) P: $\leq 5 \times 10^{-13}$ g/s (Malathion)	$\leq 4 \times 10^{-13}$ A	2×10^{-12} A/30min	N: $\geq 10^3$ P: $\geq 10^3$

Other GC pre-treatment device



Thermal desorption



Automatic Headspace

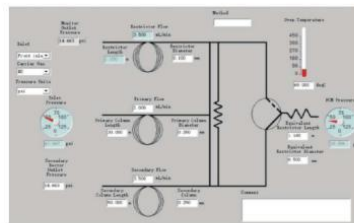
Multi-valve system



Multi-valve/multi-column available to customize per different application, max 4 external valve can be installed
One-time injection for complete gasanalysis
High stability and low valve switchoverfluctuation

Microchannel Flow Control

Designed for complex matrix
Uses photochemical etching technique to reduce dead volume of flow paths;
'Visa card' flow-broad: Capable for faster thermal response and leak-free
Deactivated Inner-surfaces for inert gas line
No leakages under repeated heating to 400°C and cooling



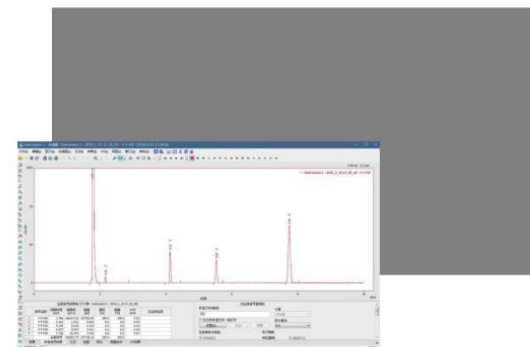
Patented gas purifier



Brand-new design for gas purifier to achieve H₂ over-pressure shutoff safely.
Strict EMC test to make excellent anti-interference capability

Workstation

FL97PLUS and Clarity workstation available for selection, with audit trail, electronic signature, authority management to meet GMP regulation

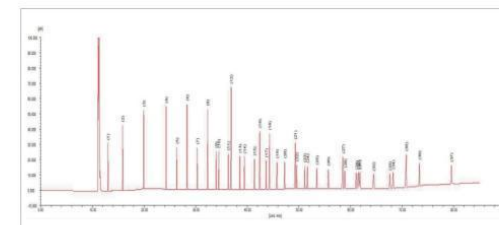


Typical application

Food safety

Fatty acid

Column: HP-88/100m*0.25mm*0.2μm
Carrier gas: N₂, constant-flow 0.8mL/min
Column oven: 100°C for 13min,
ramp from 100 to 180°C at 10°C/min for 6min
ramp from 180°C to 200°C at 4°C/min for 20min
ramp from 200°C to 230°C at 1°C/min for 15min
Injection: splitless, 270°C
Detector: FID, 250°C
Sample: 1μl 37 types of fatty acid (200-400ppm)

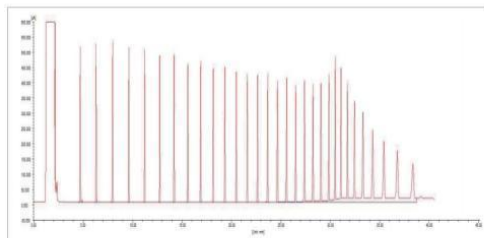


1.C4:0	2.C6:0	3.C8:0	4.C10:0	5.C11:0	6.C12:0	7.C13:0	8.C14:0	9.c14:1	10.C15:0
11.C15:1	12.C16:0	13.C16:1	14.C17:0	15.C17:1	16.C18:0	17.C18:1n9t	18.C18:1n9c	19.C18:2n6t	20.C18:2n6c
21.C20:0	22.C18:3n6	23.C20:1	24.C18:3n3	25.C21:0	26.C20:2	27.C22:0	28.C20:3n6	29.C22:1n9	30.C20:3n3
31.C20:4n6	32.C23:0	33.C22:2	34.C24:0	35.C20:5n3	36.C24:1	37.C22:6n3			

Environment

petroleum hydrocarbon in soil and water

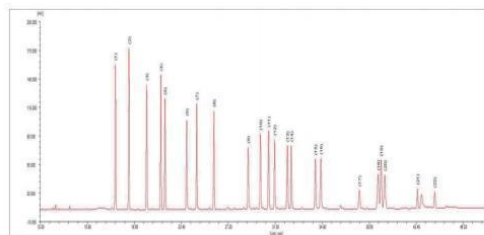
Column: HP-5/30m*0.32mm*0.25μm
Carrier gas: N₂, constant-flow 3mL/min
Column oven: 60°C at 1min,
ramp from 60 to 290°C at 8°C /min,
ramp from 290°C to 310°C at 30°C /min, keep 10min
Injection: splitless, 320°C
Detector: FID, 320°C
Sample: 1μl C10-C40 petroleum



Pesticide

Organochlorine residue

Column: RB-50+/30m*0.25mm*0.25μm
Carrier gas: N₂, constant-pressure 80kPa
Column oven: 60°C at 0.3min,
ramp from 20 to 180°C at 20°C/min, keep 5min
ramp from 180°C to 240°C at 3°C/min, keep 10min
ramp from 240°C to 260°C at 40°C/min, keep 6min
Injection: splitless, 240°C
Detector: ECD, 280°C
Sample: 1μl organochlorine(22 types, 200ppb)



Petroleum

Dimethyl ether in LPG

Detector: FID
Injector: capillary inlet
Injection mode: GSV
Column: PLOT Q capillary column
Peak: CH₄ -ethylene -propylene -propane
-methylalldimethyl ether -n-butene -maleic
-isopentane-methyl alcohol -n-pentane

