

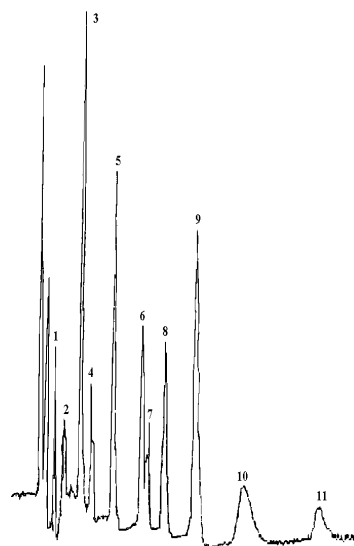
Phenol Separation Using Glassy Carbon Electrode (3 mm) with ppb Sensitivity

Sample

US EPA Priority Phenol Pollutants (5 ppb)

Chromatogram

1. 2,4-Dinitrophenol
2. 2-Chlorophenol
3. Phenol
4. 4-Nitrophenol
5. 2-Methyl-4,6-Dinitrophenol
6. 2-Nitrophenol
7. 2,4-Dinitrophenol
8. 4-Chloro-3-methylphenol
9. 2,4-Dichlorophenol
10. 2,4,6-Trichlorophenol
11. Pentachlorophenol



Conditions

Column: Spherisorb OD S2 (C18) 5 μ M Column (150 x 4.6 mm ID)
Mobile Phase: 20 M Ammonium Acetate, (pH 5.0) (60%): Acetonitrile (40%)
Flow Rate: 1.0 ml/min
Injection Vol: 20 μ l
Temperature: 40°C
Electrode: 3 mm Glassy Carbon
Potential: 1.0 V (Ag/AgCl)

This application illustrates the use of the patented impinging wall jet electrochemical detector. Most environmental applications require extractions and derivative formation to ensure sensitivity and selectivity. This detector removes the sample preparation required. This can mean up to a day's labor savings. The sample preparation consists of a filtering of the sample followed by injection or storage on the autosampler carousel.

When sample throughput is required, this application can save the commercial clinical laboratory hundreds of dollars per run. Compared to the cost of a GC-MS at \$50,000 to \$150,000, payback for this system, which is about one third of the cost of a GC-MS can be recovered in as little as one month.

Key Features

- Sensitivity
- Cost savings
- Selectivity
- New patented technology
- Limited technical expertise

Relevant Industries

- Commercial environmental laboratories
- EPA laboratories
- Industrial monitoring laboratories
- Water quality laboratories
- Water treatment laboratories
- Landfill monitoring

'...this detector removes the sample preparation required. This can mean up to a day's labor savings...'

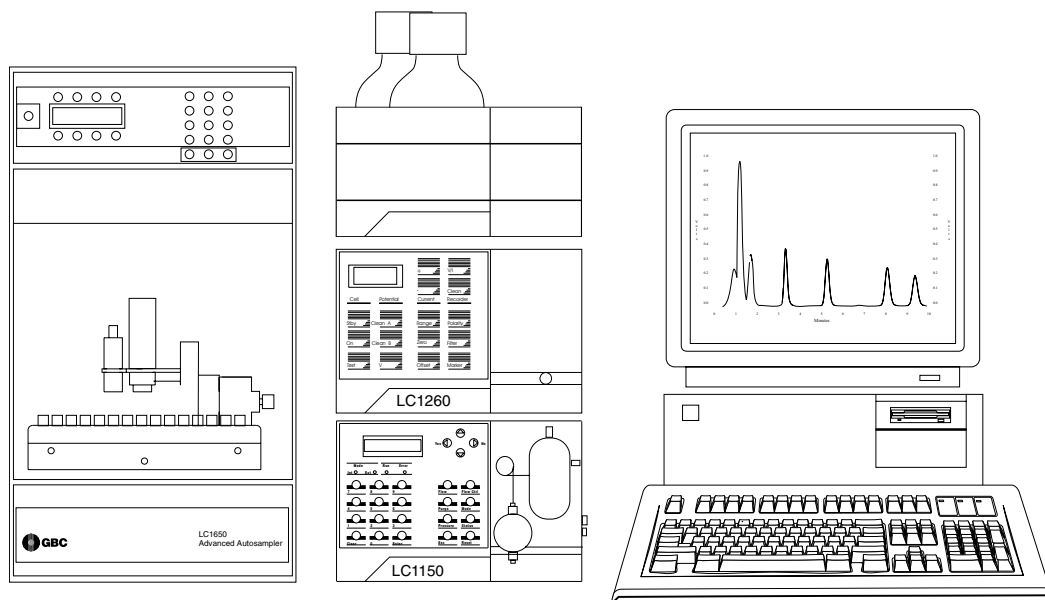


E2

01-0348-00

GBC HPLC Instrumentation

LC1150 Quaternary HPLC Pump
LC1260 Electrochemical Detector
LC1120/LC1150 HPLC Column Oven
LC1650 Advanced Autosampler
WinChrom Chromatography Data
Management System



E2
01-0348-00

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