

## Gas Chromatography

### GC-ECD-TCD-MSD with Autosampler



**Brand :** Agilent Technology

**Model:** GC6890N with ECD & TCD, MSD5973N

**Custodian :** Sirichai Kositarat

**Location :** K638 Room, 6<sup>th</sup> Floor, Chaloemprakiet Building, Phyathai Campus

#### GC-ECD-TCD

Description	Specification
Auto injector	Fast injection Injection volume 0.1 - 5 microliter Syringe size 5 and 10 microliter
Auto Sampler	2 ml Sample vial up to 100 vials
Inlet	2 Injection port Split/Splitless mode for capillary column only Maximum temperature set up to 400°C Electronic Pneumatics Control (EPC)
Oven	Temperature range +4°C from room temperature up to 400°C Temperature program ramps up to 6 Steps Temperature program rate from 1 - 120°C/min
Thermal Conductivity Detector (TCD)	Temperature set up to 400°C Linearity range up to 10 <sup>5</sup> Minimum detectable for propane is 400 pg/mL
Electron Capture Detector (ECD)	Radioactive source 63Ni Temperature set up to 400°C Linearity dynamic range minimum 5 x 10 <sup>4</sup> of Lindane
Data Processing and Report	Computer control by Chemstation software OS system on Window 2003 server
Column	HP-1 (30m x 0.32 mm x 0.17 µm film thickness) HP-5 (30m x 0.32 mm x 0.25 µm film thickness) HP-Innowax (30m x 0.25 mm x 0.25 µm film thickness) HP-Mosieve5A (10m x 0.32 x 30 µm film thickness)
Application	For separation and determination gas and volatile mixtures Determination biogas by TCD Determination halogen compounds by ECD

## GC-MSD

Description	Specification
Mass Selective Detector (MSD)	Electron impact ion source (EI) Selectable voltage 5 - 240 eV 2 Filament for continuous run Mass selection 1.6 - 800 amu (Atomic Mass Unit) Scan mode and SIM (Selected Ion Monitoring) Sensitivity for scan mode signal to noise for 1 pg Octafluronaphthane is 10/1 Sensitivity for SIM Mode signal to noise for 20 fg Octafluronaphthane is 10/1 Ion source temperature 100 - 250°C Interface temperature 100 - 350°C Quadrupole temperature 100 - 200°C Standard diffusion pump vacuum system
Library Search for Match Mass Spectrum	Wiley7 MS Database Pesticide MS Database NIST Chemical Structure Database
Data Processing and Report	Computer control by MSD Chemstation software OS system on Window 2003 server
Column	DB-1MS (30m x 0.25 mm x 0.25 µm film thickness) HP-1 (25m x 0.32 mm x 0.17 µm film thickness) HP-5MS (30m x 0.25 mm x 0.25 µm film thickness) HP-Innowax (30m x 0.25 mm x 0.25 µm film thickness)
Application	For separation and determination volatile mixtures with MS Database interpretation