

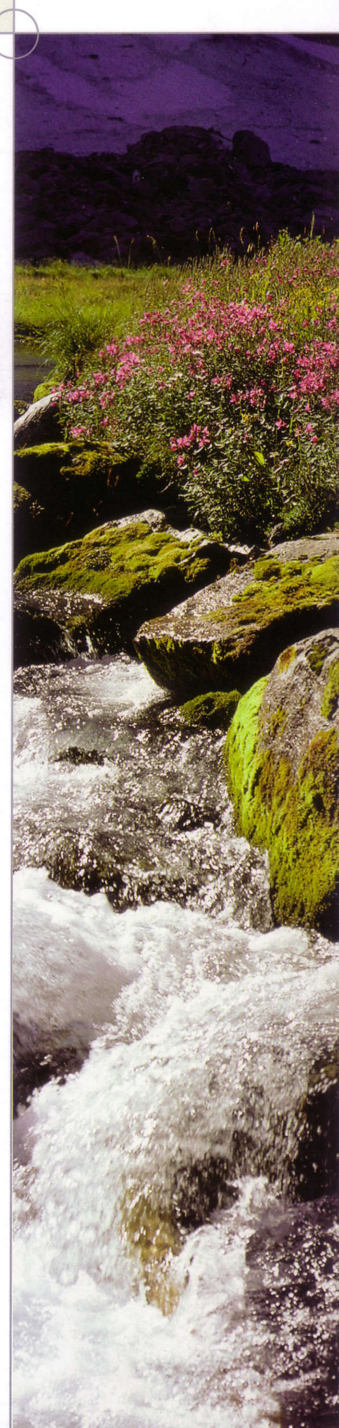
Your environmental analysis can be faster, easier and more efficient

- Ensure compliance with strict regulatory requirements
- Determine target compounds in complex matrices with greater confidence
- Detect and identify chemical contaminants at ultra-trace levels
- Meet the growing demand to analyze new classes of emerging contaminants
- Successfully meet the challenges of laboratory workflow and data management

Waters systems address the challenges of environmental analysis

Rigorous regulatory requirements, numerous compound types, complicated mixtures and labor-intensive, time-consuming analyses are just some of the challenges you face each day. Waters Corporation, the world leader in liquid chromatography, mass spectrometry and laboratory informatics, understands the ever-changing trends and requirements in a demanding worldwide environmental marketplace. Waters scientists are continually working with customers to stay at the forefront of environmental analysis. Our innovative instrumental capabilities, column chemistries and software tools provide comprehensive solutions that will allow you to stay ahead of all your demanding experimental needs.

	LC	LC/MS	LC/MS/MS	GC/MS/MS	GC-HRMS
Dioxins/furans, PCBs & related compounds				•	•
Pesticides	•	•	•	•	
Endocrine disruptors	•	•	•	•	
Perfluorinated alkyl compounds			•		
Volatile & semi-volatile organic compounds				•	
Brominated flame retardants				•	•
Polycyclic aromatic hydrocarbons (PAHs)	•			•	
Aldehydes & ketones	•				
Perchlorates		•	•		
Explosives	•	•			
Personal care products & pharmaceuticals			•		



SUCCESSFUL SEPARATIONS

Successful environmental analysis requires the combination of powerful separations and sensitive, selective detection. Historically much environmental analysis has been carried out by gas chromatography (GC), which has the potential to resolve highly complex mixtures. Laboratories are increasingly using high performance liquid chromatography (HPLC) for analysis of more polar compounds that are not amenable to GC. There is an ever-growing number of HPLC based applications in the environmental laboratory, especially when it is used in combination with mass spectrometric detection.

Ultra Performance Liquid Chromatography (UPLC) for unrivalled sensitivity, resolution and speed

The Waters® ACQUITY Ultra Performance LC™ (UPLC™) System features novel liquid chromatography technology that utilizes 1.7 μm stationary phase particles. Compared to today's HPLC systems, UPLC run times are up to nine times faster, have up to twice the peak resolution and are up to three times more sensitive.

The ACQUITY UPLC™ synergistically combines unique instrumentation capabilities, column chemistries and software for data acquisition and processing to yield more information and increased sample throughput. When coupled with Waters high performance mass spectrometry systems, the ACQUITY UPLC System provides a powerful solution for your environmental analysis needs.



Waters ACQUITY UPLC System.

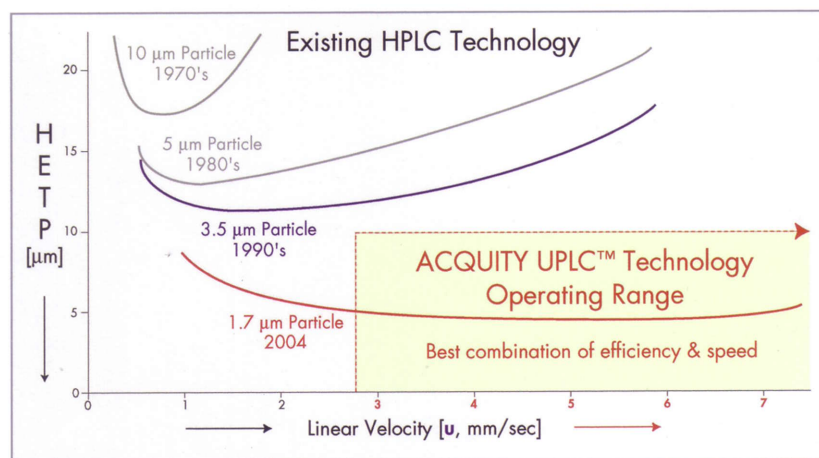


Figure 1. Van Deemter curves are used to predict and determine the mobile phase flow rate where column efficiency will be maximized. As particle size decreases, the corresponding Height Equivalent to Theoretical Plate (HETP) also decreases, resulting in higher efficiency. Also note the extended minimum HETP of 1.7 μm particles, which means that the highest efficiencies are available over a much wider range of flow rates than with larger particle sizes. As a result, flow rate (speed of assay) can be optimized without sacrificing resolution.