

High-performance LCMS Analysis System

# PsiPort™ Browser

Web-based Analytical/ Preparative  
LCMS System



Liquid Chromatograph Mass Spectrometer

# PsiPort™ Browser Concept

PsiPort Browser is Web-based LCMS instrument as a tool (for The system administrator sets to using a Web browser.

PsiPort Browser

## Technologies offered by PsiPort™ Browser

### Web-based Software

- To permit easy LCMS operation by synthesis chemists and other researchers with no LCMS experience, PsiPort Browser has a simple and intuitive graphical user interface with data input and results display in Microsoft Internet Explorer®.
- The Administrator is responsible for setting the LC/MS methods, which means multiple users can acquire data with minimal training.

## PsiPort™ Browser FlowChart

### Office

- Data browsing
- Status confirmation
- Sending and receiving mail



Client PC



Client PC

EtherNET LAN

### Laboratory

Client PC

Server PC

LCMS system

Notification by mail

Work input

Analysis results output

PsiPort™ Direct Access

PsiPort™ Browser

- Schedule execution with minimum work procedures

- Registering and executing analytical/ preparative schedules
- Data browsing
- Purity evaluation of target compounds
- Reports



LCMSsolution

- Control of LCMS instrument
- Data processing
- Detailed report output

d software, running on the LCMS-2010A workstation LCMSsolution, that allows multiple users to use composition checks and fractionation).  
the MS conditions, allowing multiple users to conduct analysis and view the results with operations similar

### Easy Operation

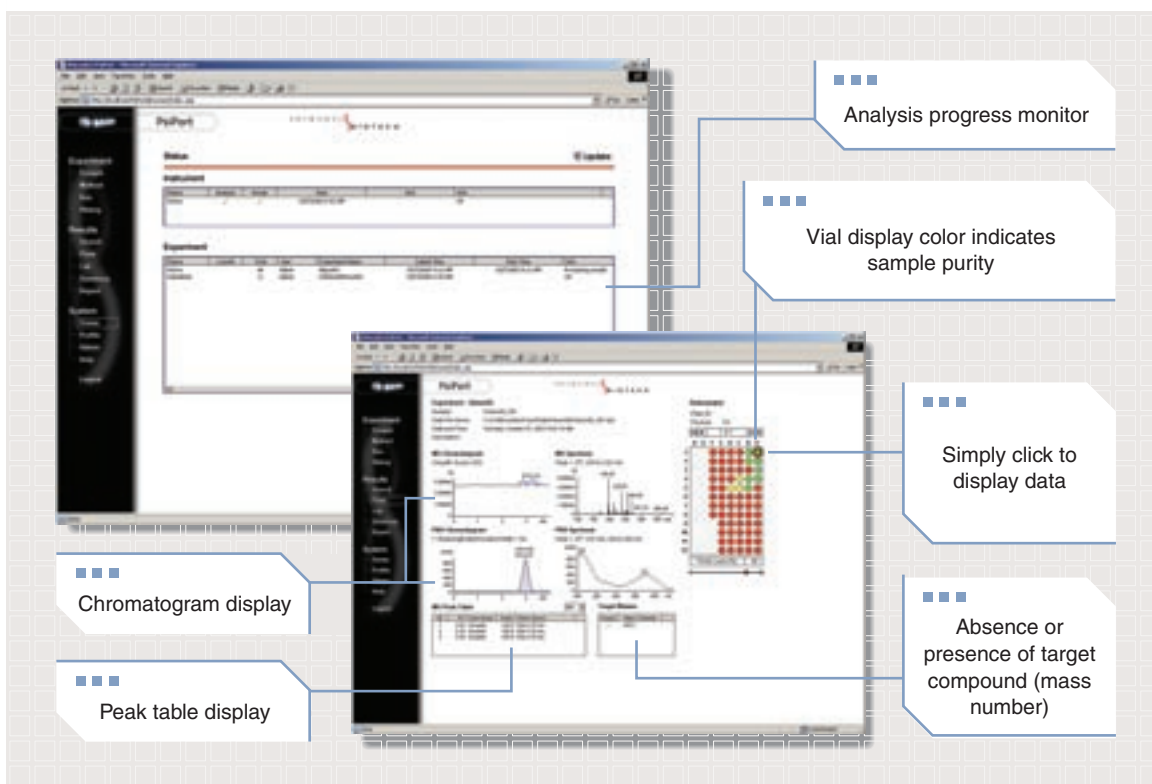
- Simply insert the sample, set up and run the analysis with a few simple steps and retrieve the results.
- Tracks the injected-sample vials and allows browsing of the related MS and UV (PDA) data. Similar operation for fractions.
- Compatible with all Shimadzu HPLC components. Change the system composition for applications from high-throughput analysis to automatic preparative purification.

### LAN Environment

- HTML and Java Script technologies permit operation on intranets.
- Permits browsing of analysis results and confirmation of analysis progress from a remote location.
- Notification by e-mail when analysis is complete.
- Simply install Internet Explorer in the client PC.

### Integration with External Database

- Supports Microsoft Access and Oracle data base.



## High-throughput Analysis

PsiPort Browser offers comprehensive functions for high-throughput analysis, such as composition check and purity evaluation on multiple samples. Simply load a sample schedule or select one already prepared. Microtiter plate injector (MTP) and fraction collector support simplify multi-sample processing on 215 Liquid Handler.

### Features of PsiPort (for High-throughput Analysis)

- Supports high-throughput analysis of synthetic compounds and target compounds in natural substances.
- Identifies absence or presence of target compounds according to detected mass numbers. Also evaluates their purity.
- Handles a range of tasks including sample analysis, results display, and report output using an easy and general approach.
- Use Excel to edit and import sample analysis schedules.
- Wizard aids simple editing of analysis schedules.
- Input target mass numbers for up to ten compounds or input formula and program calculates correct mass automatically.
- Displays chromatograms and spectrums for various Shimadzu LC detectors, including MS, UV, ELSD, and PDA.
- Sample tracking function allows easy matching of injected samples and analysis data.

### Features of High-throughput Analysis System

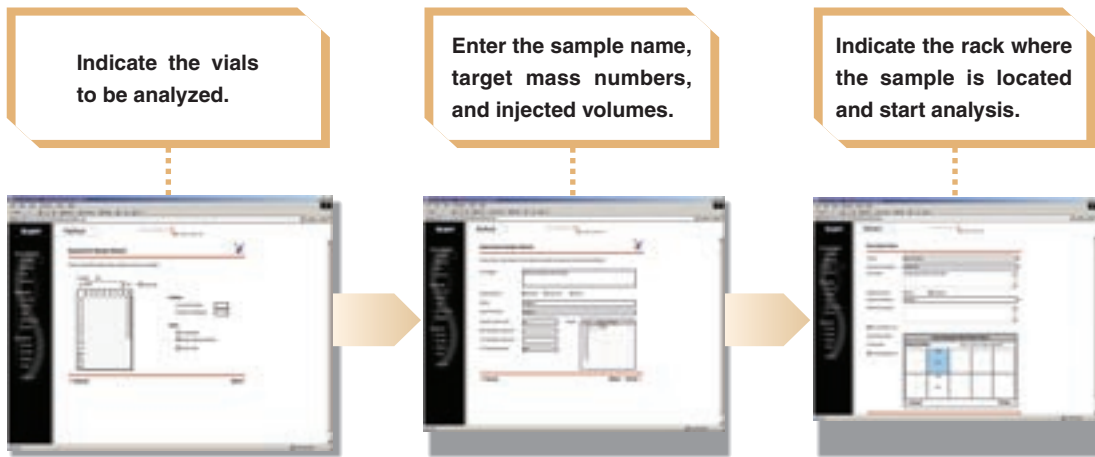
- Supports Shimadzu LC components for flexible system configuration to meet all needs.
- Supports SIL-HT, renowned for its low carryover and high-throughput injection.
- Compatible with the wide-sample-bed Gilson 215 Liquid Handler.
- Accommodates various sample vials (1.1 mL, 1.5 mL, 4 mL, 96-well MTP (Deep Well), 384-well MTP)

※Consult Shimadzu for the compatibility with other vials.

Operators of the PsiPort Browser are broadly classified as system administrators and users. The system administrator manages projects, analysis methods, and security levels. The users register sample information and perform analysis with methods set by administrator.

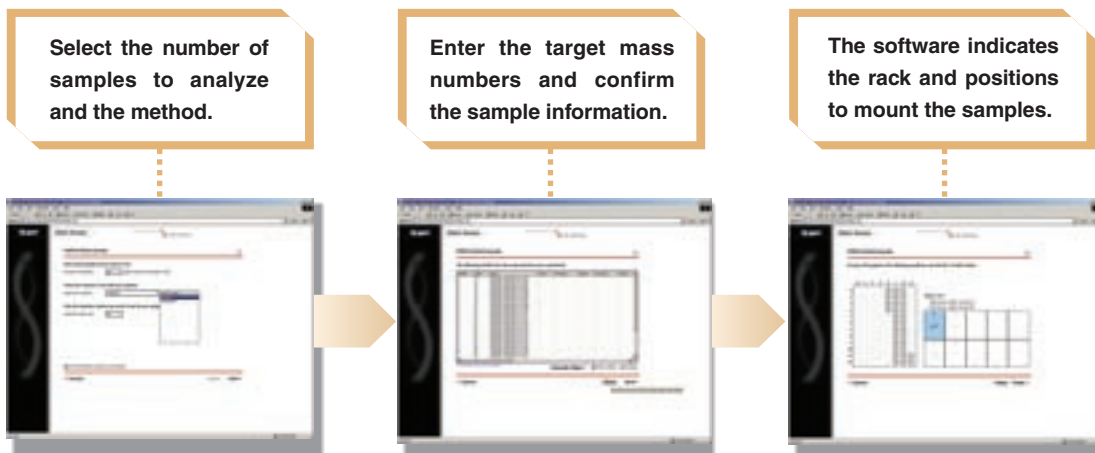
## PsiPort Browser

The PsiPort Browser Wizard makes it simple to register samples and start analysis. A Microsoft Excel spreadsheet can be used to register a large number of samples.



## PsiPort Direct Access

The PsiPort Direct Access function makes it easy for different users to share a rack, or run a rush sample without disrupting the rest of queue. The software automatically evaluates the positions available and notifies the user where to place the sample. This function reduces the number of steps required to register and analyze samples. Simply insert the samples in the positions indicated and start the analysis.



## Peak Fractionation with the MS/UV Trigger

Increased productivity and enhanced purity of synthetic compounds are vital in today's market. The purity of the synthesized compounds affects the results from the subsequent screening steps. The PsiPort MS (UV) trigger purification function enables easy but reliable fractionation of the target components. The Gilson 215 Liquid Handler is controlled as a fraction collector and auto injector. The microtiter plate (MTP) simplifies multi-sample processing and working with large numbers of vials. Scaling up from analysis to fractionation is easy.

### Features of PsiPort (for Fractionation)

- Peak fractionation with the mass-number trigger (peak recognition by level or slope)
- Input mass-number triggers for up to ten compounds (can be input as chemical formulas).
- Handles SIM/Scan measurements.
- Logic triggers (AND/OR) on multiple analog signals (UV, MS signals, etc.) ensure reliable fractionation.
- Sample tracking function allows easy matching of injected samples and fractions.

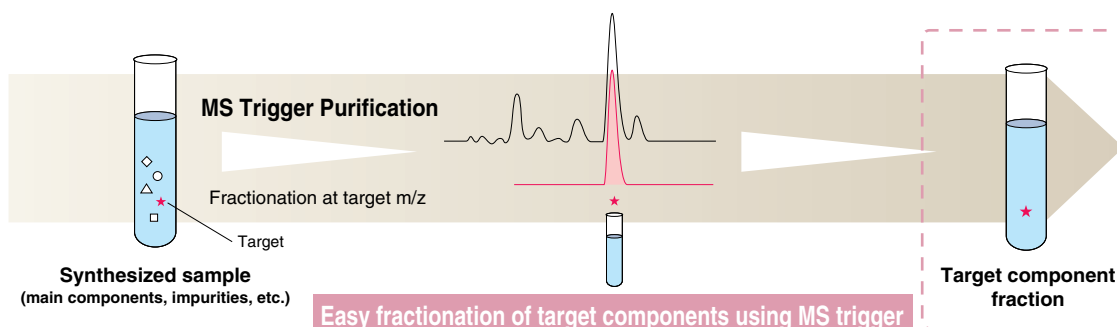
### Features of Fractionating System using MS/UV Trigger

- Compatible with Shimadzu LC components for flexible system configuration to meet all fraction scales.
- Switching valve enables incorporating analysis and fractionation functions in a single system.
- A single Gilson 215 Liquid Handler can be used as a fraction collector and auto injector.
- The Gilson 215 Liquid Handler supports dual injection ports to prevent cross-contamination between analysis and fractionation modes.
- Supports the Shimadzu Active Splitter (split ratio settings from 100:1 to 100,000:1).

## LC Purification using the MS Trigger

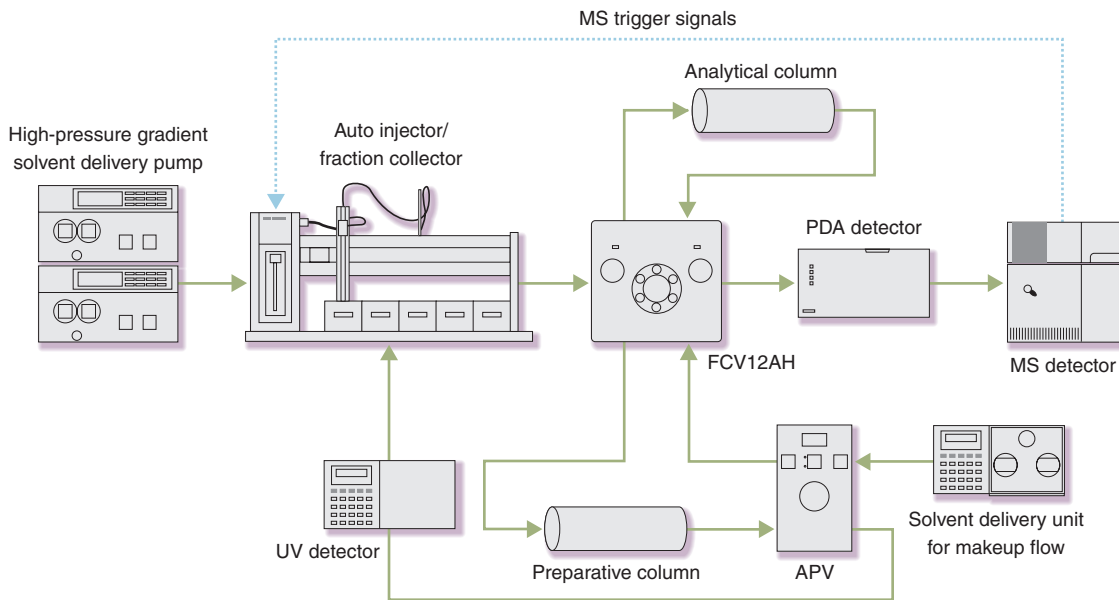
Fractionation at the Mass Number ( $m/z$ ) predicted from the Compound Structure

ex.  $C_{22}H_{42}N_{10}O_7$ , MW = 558.3 ► Excludes superfluous fractions by fractionating the target component using  $m/z$  559.3 ( $M+H$ )<sup>+</sup> as the MS trigger. With Scan measurement, MS information for non-fractionated components can be acquired simultaneously.

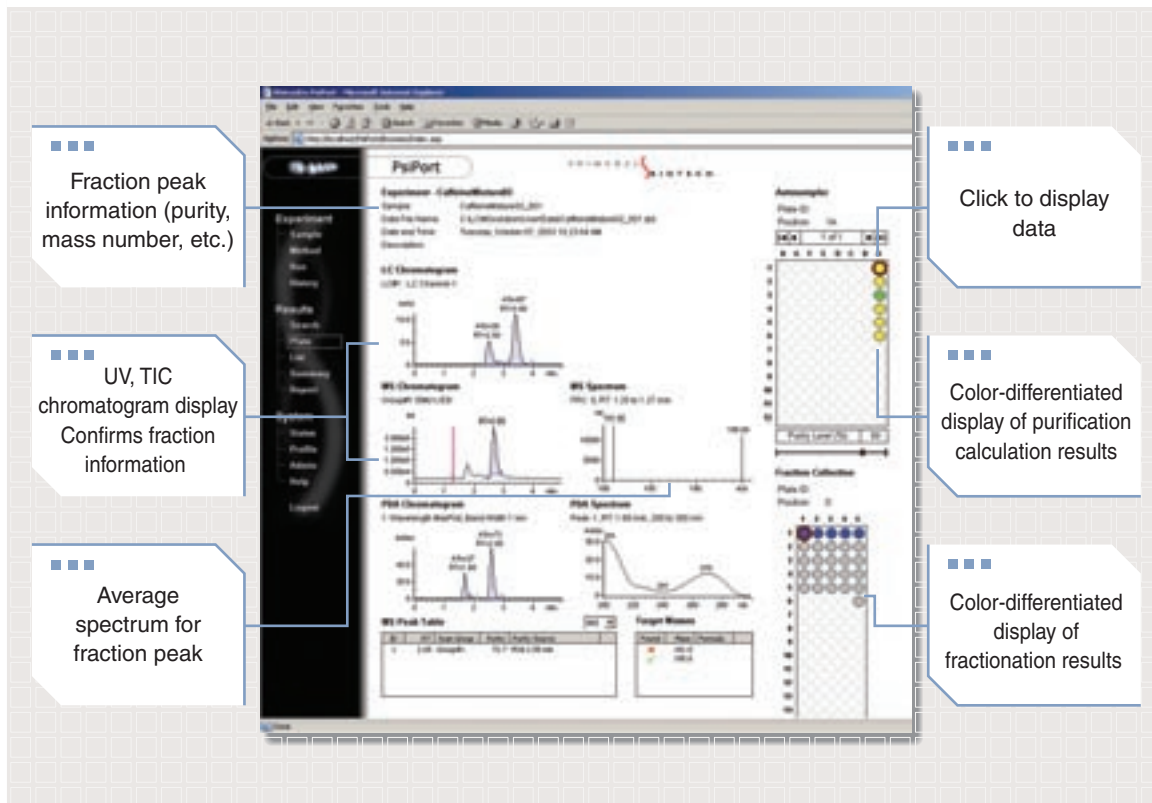


## Example of Fractionating System Configuration

### System with Single Gilson 215



## Display of Fractionation Results



High-throughput analysis system basic configuration	MS unit	LCMS-2010A
	LC unit	SCL-10A <sub>VP</sub>
		LC-10AD <sub>VP</sub> (2 units)
		SPD-10A <sub>VP</sub> / SPD-M10A <sub>VP</sub>
		CTO-10A <sub>VP</sub>
		Gilson 215 Liquid Handler / SIL-HT*
		DGU-14AM
Analytical/preparative system using MS/UV trigger basic configuration	MS unit	prepLCMS-2010A
	LC unit	SCL-10A <sub>VP</sub>
		LC-8A (2 units)
		LC-10AD <sub>VP</sub> (1 unit)
		PC31L (2 units)
		Gilson 215 Liquid Handler
		SPD-10A <sub>VP</sub> / SPD-M10A <sub>VP</sub>
	Common units	Preparative kit
APV splitter		
Software	LCMSsolution	Version 2.05
	Operating system	Windows 2000 (SP3, or later)
	Browser	Internet Explorer Ver. 5.5, or later
	PC	Memory: 512 MB min.
		CPU: Intel Celeron 1.7 GHz min.
		Hard disk: 40 GB min.
Other software	Microsoft Excel 2000, or later	

\*SCL-10A<sub>VP</sub> is not required when using the SIL-HT.



**SHIMADZU CORPORATION. International Marketing Division**  
 3. Kanda-Nishikicho 1-chome, Chiyoda-ku, Tokyo 101-8448, Japan Phone: 81(3)3219-5641 Fax: 81(3)3219-5710

**SHIMADZU SCIENTIFIC INSTRUMENTS, INC.**  
 7102 Riverwood Drive, Columbia, Maryland 21046, U.S.A.  
 Phone: 1(410)381-1227 Fax: 1(410)381-1222 Toll Free: 1(800)477-1227

**SHIMADZU DEUTSCHLAND GmbH**  
 Albert-Hahn-Strasse 6-10, D-47269 Duisburg, F.R. Germany Phone: 49(203)7687-0 Fax: 49(203)766625

**SHIMADZU (ASIA PACIFIC) PTE LTD.**  
 16 Science Park Drive #01-01 Singapore Science Park, Singapore 118227, Republic of Singapore  
 Phone: 65-6778-6280 Fax: 65-6779-2935

**SHIMADZU SCIENTIFIC INSTRUMENTS (OCEANIA) PTY. LTD.**  
 Units F, 10-16 South Street Rydalmere N.S.W. 2116, Australia  
 Phone: 61(2)9684-4200 Fax: 61(2)9684-4055

**SHIMADZU DO BRASIL COMERCIO LTDA.**  
 Rua Cenzo Sbrighi 25-Agua Branca-Sao Paulo-SP-Brazil-CEP 05036-010  
 Phone: (55)11-3611-1688 Fax: (55)11-3611-2209

**SHIMADZU (HONG KONG) LIMITED**  
 Suite 1028 Ocean Center, Harbour City, Tsim Sha Tsui, Kowloon HONG KONG  
 Phone: (852)2375-4979 Fax: (852)2199-7438

**Overseas Offices**  
 Istanbul, Beijing, Shanghai, Guangzhou, Shenyang, Chengdu, Moscow

**URL <http://www.shimadzu.com>**

