

Protein Sequencer

PPSQ-51A/53A



Protein Sequencer

PPSQ[™]-51A/53A

Greater Simplicity and Reliability in the
Determination of Amino Acid Sequences
Software Compliant with FDA 21 CFR Part 11

Analytical Stability and Higher Detection ▶ P. 4

Baseline stability
Retention time reproducibility
Higher detection

Compliance with FDA 21 CFR Part 11 ▶ P. 5

Security
User management
Audit trail
Software validation

Simple, Easy-to-Use Data Analysis Functions ▶ P. 6

Reprocessing of chromatograms
Overlay of multiple chromatograms
Automatic estimation of amino acid sequences



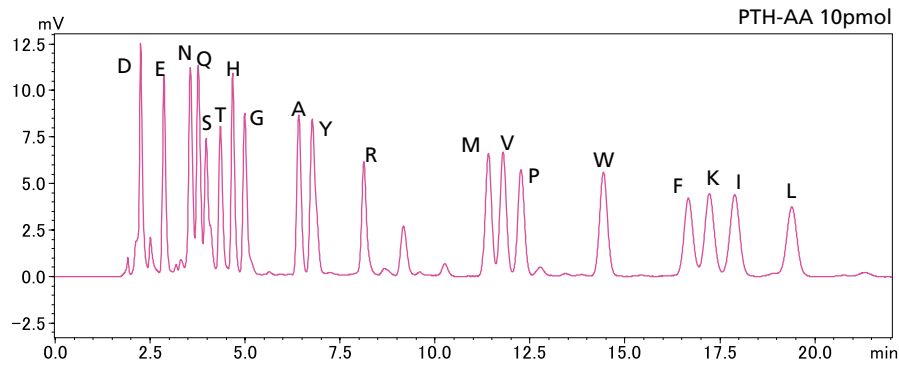
Analytical Stability and Higher Detection

Baseline Stability

PPSQ series protein sequencers separate PTH-amino acids isocratically. This improves baseline stability and allows high-sensitivity analysis of PTH-amino acids.

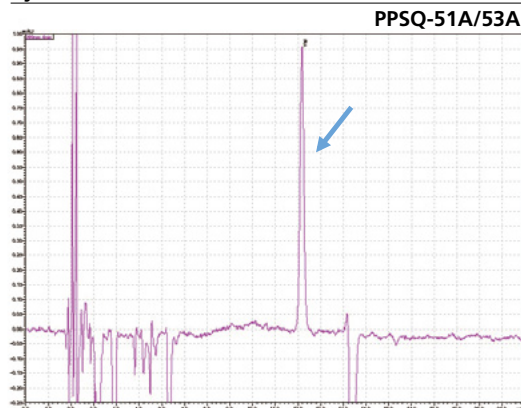
Retention Time Reproducibility

Isocratic sequence analysis provides more stable retention times. Therefore, peaks detected in previous cycles can be cancelled using substitution chromatogram processing, making it easier to identify sequences.

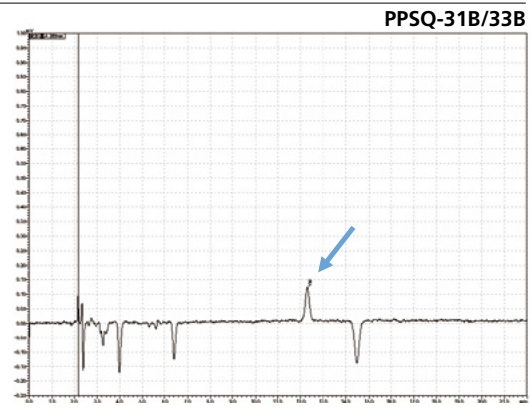


Higher Detection

Cycle 10 PTH-Val

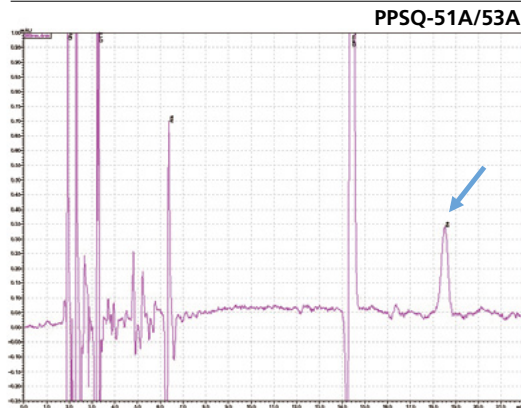


PPSQ-51A/53A

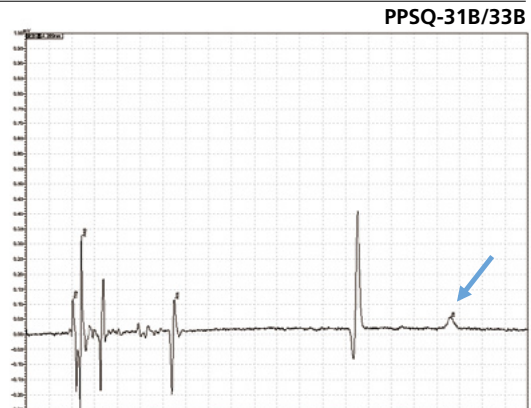


PPSQ-31B/33B

Cycle 21 PTH-Ile



PPSQ-51A/53A



PPSQ-31B/33B

Sample: Horse myoglobin 10pmol

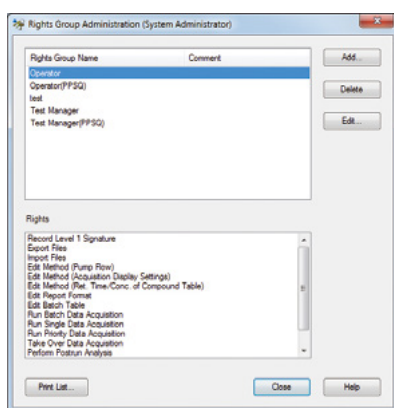
Results show the subtraction chromatograms by SPD-M30A (PPSQ-51A/53A) and SPD-20A (PPSQ-31B/33B) connected tandemly after Edman degradation.

Compliance with FDA 21 CFR Part 11

LabSolutions™ PPSQ software provides compliance with FDA 21 CFR Part 11 guidelines and enables compliance with the security, user management, and audit trail requirements specified by FDA 21 CFR Part 11.

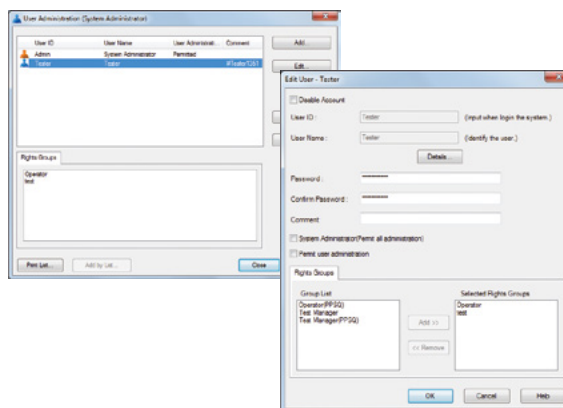
1 Security

Users are managed on the basis of groups, with each user being recognized by means of a username and password. Unique groups can be created by including persons having different access privileges. Clearly defining each user's access privileges prevents unauthorized changes to settings, instrument operation, and data access.



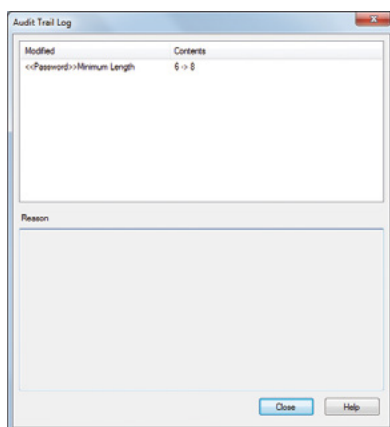
2 User Management

LabSolutions' user administration comprises the setting of rights groups and assignment of rights to users just as in Windows. Access rights required for each user can be set by assigning various levels of access to each user. This helps achieve effective user administration and more efficient laboratory operations.



3 Audit Trail

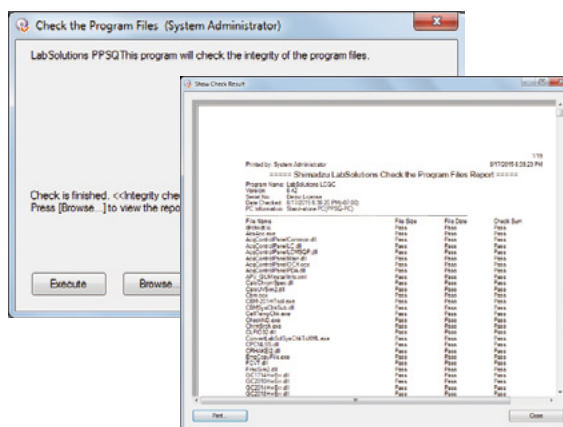
Logins and logouts to the system, changes in users and groups, and the start and completion of acquisition, together with the username and the time, are all recorded. The recorded operational log can be registered in the database to provide traceability.



4 Software Validation

The integrity of the programs that comprise the system and the raw data acquired by instruments can be checked, ensuring the reliability of the system and data.

The results of these alteration checks can be managed as printouts.



Specifications

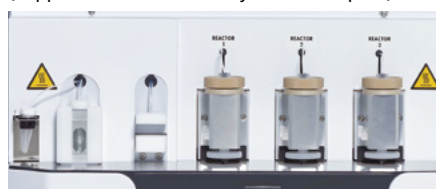
Main Unit	PPSQ-51A	PPSQ-53A
Reaction method	Edman degradation	Edman degradation
Reaction time	46.5 min/cycle	48 min/cycle
Number of reactors	1	3
Sample immobilization method	Glass fiber disk (8 mm dia.) or PVDF membrane	Glass fiber disk (8 mm dia.) or PVDF membrane
Reactor temperature control range	10 °C above room temperature to 60 °C	10 °C above room temperature to 60 °C
Converter temperature control range	10 °C above room temperature to 70 °C	10 °C above room temperature to 70 °C
Number of reagents/solvents	7	7
Reagent/solvent delivery method	Nitrogen gas pressure	Nitrogen gas pressure
Dimensions	W 510 × H 540 × D 500 mm	W 510 × H 540 × D 500 mm
Weight	43 kg	45 kg

PPSQ-51A Single Reactor



Offers highly cost-effective performance.

PPSQ-53A Triple Reactor
(Supports consecutive analysis of 3 samples.)



Using a triple reactor makes it possible to save time and effort, and gives greater freedom in the formulation of analysis programs.

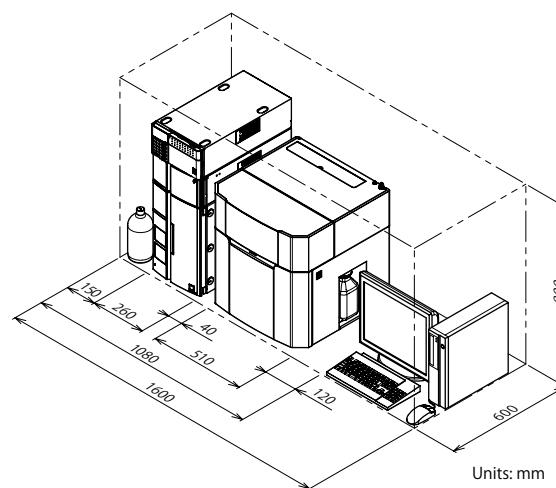
Standard Configurations

	PPSQ-51A System	PPSQ-53A System
Configuration	PPSQ-51A (main unit)	PPSQ-53A (main unit)
	LC-40D	
	SPD-M30A	
	CTO-40C	

Other Items Provided by User

Installation space	Desktop: W 1,600 × D 600 × H 800 mm min. Weight: Approx. 100 kg
Power supply	120–230 V AC, 50/60 Hz, 1,500 VA max.
Nitrogen gas	Purity: 99.9999% min. A cylinder pressure regulator and gas tubing (10 m) are provided as standard accessories.
Exhaust equipment	In order to provide an exhaust for gases produced by waste liquids, an exhaust tube must either be connected to exhaust equipment or vented outside. An exhaust tube (20 m) is provided as a standard accessory.

Installation Example



Note: The required installation space and power supply may change according to the PC and display used.

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