



INSTRUMENT USAGE SHEET
HPLC – SHIMADZU SCL-10 AVP CE (LV)

General Information

Instrument: HPLC – Shimadzu SCL-10 AVP CE (LV)

Manufacturer: Shimadzu

Location:

- CRIETT – Cubo Building
- Via Valleggio 9, Como, Italy
- Floor: 2

Instrument Manager

- Dr. Davide SPANU
Email: davide.spanu@uninsubria.it
Phone: +39 031 238 6428

Authorized Users

Dr. Gabriele Carugati
Prof. Sandro Recchia
Dr. Davide Spanu

Training Requirements: Yes*

* Independent operation of the instrument is permitted. Practical training consists of an individual training session (typically one day, with the exact duration determined by the instrument manager). For the theoretical component, the manager will provide instructional material covering the operating principles of the instrument.

Internal tickets can be viewed on the intranet page (access with university credentials): <https://intranet.uninsubria.it/areadocumenti/ticket-strumenti-criett-utenti-interni>

The fee schedule for external users can be viewed on the website:
www.uninsubria.it/criett



Acknowledgment of CRIETT Services in Scientific Publications (See CRIETT Regulations, Article 11): Any scientific publication resulting from the use of CRIETT equipment must acknowledge the instrument according to the following statement:

“The scientific support from CRIETT centre of University of Insubria (instrument code: XXX) is greatly acknowledged”.

Instrument Code: MAC05

Access Procedures

1. Direct Access (Self-Service)

Who: Only authorized users who regularly operate the instrument have completed the required training and have been approved by the instrument manager.

Procedure: Trained users may independently access and operate the instrument after making an online reservation.

2. Access with Scientific Technician (Full-Service)

Who: Research groups that use the instrument occasionally, external users, or users without qualified personnel.

Procedure: Access is provided through the assistance of dedicated technical staff, who manage both the booking and operation of the instrument.

3. Occasional/Temporary Users

Occasional or temporary users may access the instrument under the supervision of the Instrument Manager or an Authorized User.

Description and Functions

The Shimadzu SCL-10 AVP CE (LV) is a High-Performance Liquid Chromatography (HPLC) system used for the separation, identification, and quantification of organic and inorganic compounds in a wide range of sample matrices.

The instrument can operate in both reverse-phase and normal-phase modes and is equipped with a **Diode Array Detector (DAD)**, allowing simultaneous acquisition of UV-Visible spectra for the identification of separated compounds.

Technical Specifications

- Modular HPLC system controlled by the SCL-10 AVP control unit
- Pumping system capable of handling up to four solvents
- Operation in both isocratic and gradient elution modes
- Compatible with reverse-phase and normal-phase chromatographic columns
- DAD detector for multi-wavelength UV-Vis analysis
- Manual sample injection system
- Column oven for temperature-controlled separations
- Dedicated software for instrument control, chromatographic data acquisition, and data processing

⚠ Safety Warnings

- Operate the instrument only after completing the required training.
- Use solvents and reagents in accordance with laboratory safety regulations.
- Verify the compatibility of solvents, columns, and the DAD detector before analysis.
- Filter and degas mobile phases and samples before use.
- Thoroughly flush the system and chromatographic column after completing analyses.
- Shut down the instrument following the correct operating procedure.

In case of doubts, malfunctions, or anomalies, contact the technician or instrument manager.

Operating Notes

- Instrument booking is mandatory through the internal management system (Google Calendar).
 - Self-service operation is permitted only for trained, registered, and authorized users.
 - Any malfunction must be promptly reported to CRIETT personnel.
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Materials and Accessories Provided by CRIETT

- HPLC-grade solvents, including:
 - Ultrapure water
 - Isopropanol
 - Acetonitrile
 - Hexane
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Materials and Accessories to Be Provided by the User

- Chromatographic columns
- Syringes for manual sample injection
- Any additional materials and accessories not specified in the previous sections.