



High Performance Liquid Chromatography



Specification:

Description:

HPLC System suitable for Pesticide formulations analysis by both isocratic and Gradient elution, usable solvent types should include both organic and aqueous solvents, with Auto sampler, column, (silica, RP C-18,C-8) UV –Vis Spectrophotometric Detector Computer based data station with suitable software / interface / colour monitor, accessories, spares etc. conforming to the following specification as required.

Pump Specifications

- Quaternary low pressure gradient on lone vacuum degasser
- Number of solvent delivery should be four or more
- Capable of performing Linear, step and exponential gradients
- Flow rate range 0.0001 to 10ml/min or better
- Flow rate precision – Less than 0.06 % RSD

- Flow rate accuracy - $\pm 1\%$
- Operating pressure –Minimum 400 bar or more
- Composition accuracy + 0.5% absolute, independent of back pressure
- Leak sensor should be available.
- Should have the facility to calibrate the flow and readjust the real time flow values

Degassing unit

On line degassing unit to be offered to with 5 line or more to remove the dissolved gases in the mobile phases.

Detector Specifications (UV-Vis Detector)

- Wave length range-190-680 nm
- Wave length accuracy - $\pm 1\text{nm}$
- Wave length repeatability $\pm 0.1\text{nm}$
- Noise level – $0.5 \times 10^{-5}\text{AU}$
- Drift - $< 0.4 \times 10^{-4}\text{AU/h}$ / $+ 2 \times 10^{-4}\text{AU/h}$
- Linearity range – 2.5 AU or more
- Light source –Deuterium

Slit width – 1nm or better

Should have the lamp health check facility to track the usage of lamp

Should have self-diagnostics to check the system function and calibration

Should have an easy operation to calibrate the system

Auto sampler

- Auto sampler should be able to do full volume injection and variable injection without any sample loss.
- Sample injection volume- 0.1micro litre to 100 micro litres
- Sample capacity- minimum 100 x1.5 ml vial
- Carry over- less than $< 0.005\%$
- Injection precision less than 0.3 % RSD or better
- Needle wash must be standard and needle aspiration speed must be variable.
- Flow line rinse capability both before and after aspiration should be possible

Column Oven

- Temperature setting range- below 10°C of Ambient to 85°C
- Temperature accuracy - $\pm 1^\circ\text{C}$
- Temperature Precision - $< \pm 0.2^\circ\text{C}$

Columns

- One C – 18 column & one Silica Column

Data Handling Software and PC

- Workstation software for controlling all modules of HPLC system should be offered.
 - Windows based software with multitasking and capable of performing the functions like acquire, store, process and reproduce the data.
 - The personal computer with latest processor/configuration with 21" LED monitor and Laser jet Printer should be supplied along with the instrument.
 - The latest software which is compatible with the chromatography software should be supplied.
- Latest windows software which is compatible with the chromatography software be supplied with

system.

- The chromatography software should be of latest version and be able to collect the data from two Detectors simultaneously.
- The software should facilitate easy method building, data integration and custom report generation.
- The Software should facilitate manual as well as auto integration of the data.
- The software should have all the features required for audit trail under GLP/GMP with a password locking facility.
- The software should have a real time display of the chromatogram and the process sample details.
- Should be able to report the results in % of active ingredient in the report generation.

Chromatography software :

- Single Keyboard control of entire system.
- Parameter validation management.
- Compatibility with diode array , UV/Vis, RI and
- Fluorescence detectors
- Should be able to process signals from minimum two wavelengths.
- Auto start up, auto shut down, base line stability, auto judgment, auto validation, auto purge etc. must be available from the touch of a button
- Compatibility to import and export the data.
- Ability to acquire and analyze and store spectral library.
- Flexible report publisher to make report in desired format.

GLP compliance.

Training

- Training and application training to the personnel at site immediately after installation as per terms and condition

Accessories:

- 100 No each vial sets
- 100No Septa PTFE/Silicone
- Solvent rack and Solvent bottle (minimum 5No)
- Manual syringe -10 microlitere
- Necessary tools and kits

A declaration of System Validation Certificate

A declaration of Conformity certificate

SYSTRONICS (INDIA) LIMITED

**B/116-129, 1ST Floor, Supath II Complex, Nr. Juna Wadaj Bus
Terminus, Ashram Road, Ahmedabad - 382330.**

Phone: 079-27557072, 27557075; Fax: 079-27552902

Web: www.systronicsindia.com