

TECHNICAL SPECIFICATION FOR FLASH CHROMATOGRAPHY WITH ACCESSORIES

General:

- Compact bench top model.
- The system should have facility to run two sample simultaneously, parallelly and to be set different flow rate and different wavelength independently in each channel.
- Capable of computer-controlled delivery of four solvents in each channel for binary gradient mode and isocratic mode, 2 step Gradient and R_f gradient.
- The system to have the facility to use Inject / sample loading column with pre-packed adsorbent to trap high polar solvent without affecting the sample separation.
- The system should have facility to upgrade with the external detector like MS, ELSD or RI as and when requires.
- System should have flexibility to use any make flash columns available in the market and necessary adapters or holders should be provided by default.

Instrument:

Solvent flow rate	:	1 to 70 mL/min or above in each channel
Pumping system	:	145 psi or more
Detector	:	Dual variable wavelength UV detector in each channel
Detector range	:	200-400 nm and above
Fraction collector	:	Automatic fraction collection with fraction tracking facility with peak to tube graphical interface.
Fraction collector rack	:	Separate rack for each channel with minimum of 60 fraction collector (test tubes) or above in each channel
Operation	:	Touchscreen controlled software for operation of the machine

Computer and Software:

- Company proprietary software should be preinstalled in the branded computer, which is either all in ONE touch Pad with latest windows-based operating system, minimum 4 GB RAM or above, hard disk 100 GB or above; or Built-in touch pad with storage capacity of 100GB or above.
- Software should be simple & easy change of method parameters on the fly
 - Eluting position controllable
 - Automatic method set-up based on inputting TLC R_f value for the single target compound and/or multiple targets
 - Real time monitoring

TLC Image Reader:

- The system should be supplied with TLC Image Reader
- Equipped with a built-in UV light source and a camera

- TLC image reader should be integrated with software to calculate the R_f value automatically, store the TLC plate image in the methods for feature reference and create the chromatography gradient method automatically

Safety features:

- Rack Sensors to automatic stop of flow if the collection Rack is not in exact position and rack NOT in the fraction collector platform & filled with all test tubes.
- Over pressure indicator and system to give the error message or pressure moderating System

Accessories:

The following accessories should be quoted along with system.

- Reusable sample loader for liquid & solids along with the system with necessary fittings/adaptor & connectors/holders
 - 5 g sample size – 10 no's
 - 15 g sample size – 20 no's
 - 25 g sample size – 10 no's
- Pre-packed refillable silica column along with the system with necessary fittings/adaptor & connectors/holders
 - 40 g – Pre-packed Silica column - 10 no's
 - 5 g – Pre-packed Silica column - 10 no's
- Silica gel 40-63um (230-400 mesh) - 10kg

Warranty:

- The system should be provided with 12 months warranty and 24 months Annual Maintenance Contract (AMC).

Others:

- All other standard accessories for complete operation and maintenance of the equipment shall be supplied.
- The supplier should have supplied similar instruments to IITs, IISc, IISERs or Government (State/Central) Organizations. List of organization with contact details should be provided.
- Working demonstration of the equipment shall be arranged by the supplier at any installed site. without any additional cost
- One-day training on operation, application, calibration and troubleshooting of the equipment shall be provided by the supplier without any additional cost

Optional:

- Silica gel of 40-63um (230-400 mesh) for refilling of column