

SepaBean[®] machine

Flash Chromatography System





About Santai Sciences & YMC India



Santai Sciences is a technology company founded in 2004 and focused on providing separation and purification tools and services for professionals and scientists in pharmaceutical, biotechnology, fine chemicals, natural products and petrochemical industries.

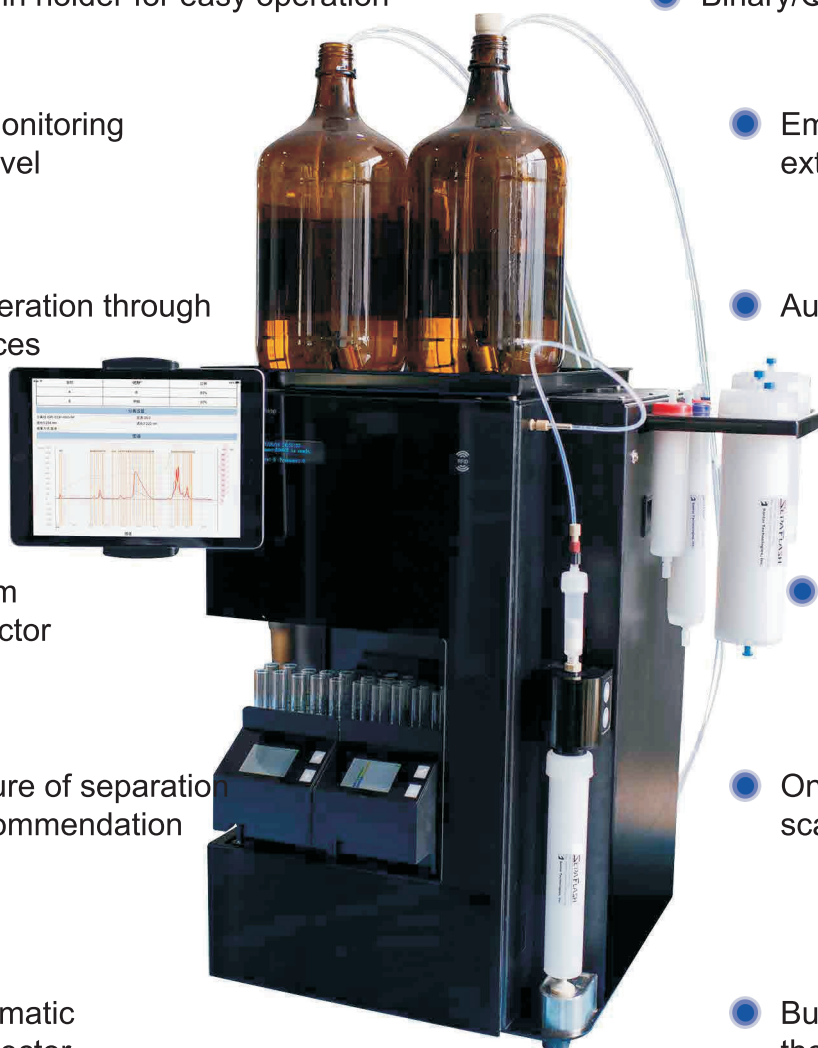
YMC India was established in 2008 with a vision to create a brand value by delivering the BEST quality product, service & support to customers. We leverage our decades of experience to provide you with the cutting edge chromatography process systems, offering custom and pre-engineered HPLC and LPLC process system.

Together, YMC India and Santai Sciences has committed to deliver the finest product of advanced technology and engineering to the customers.





SepaBean[®] machine Flash Chromatography System



- Smart column holder for easy operation
- Real-time monitoring of solvent level
- Wireless operation through mobile devices
- 200 - 800 nm UV/Vis detector
- Built-in feature of separation method recommendation
- Built-in automatic fraction collector
- Binary/Quaternary solvent elution
- Emergency stop button for extra safety and protection
- Auxiliary column holder
- Maximum pressure up to 200 Psi with built-in pressure alert module
- On-line full wavelength scanning
- Built-in air pump to purge the residual solvents



Choose the SepaBean[®] machine that's right for you

Model	SepaBean [®] machine U	SepaBean [®] machine T	SepaBean [®] machine	SepaBean [®] machine 2
				
Description	Entry level model with all the features of SepaBean control software. Meet the demands of daily separation and purification, including normal phase and reversed phase separation.	Cost effective model with all features of SepaBean control software. Binary gradient with any combinations of two solvents. Optional ELSD to cover more types of samples.	Standard version. Binary gradient with four solvent lines, high pressure mixing. Optional ELSD to cover more types of samples.	Medium pressure model which could perfectly match with SepaFlash spin-welded columns for higher separation efficiency. Binary gradient with any combinations of two solvents, 3rd solvent as modifier, able to run complex separation conditions. Optional ELSD to cover more types of samples.
Flow Range	1 - 100 mL/min (U100) 1 - 200 mL/min (U200)	1 - 200 mL/min	1 - 200 mL/min	1 - 200 mL/min
Maximum Pressure	100 psi (6.9 bar, U100) 200 psi (13.8 bar, U200)	200 psi (13.8 bar)	200 psi (13.8 bar)	500 psi (33.5 bar)
Pumping System	Highly accurate, maintenance free ceramic pump	Highly accurate, maintenance free ceramic pump	Highly accurate, maintenance free ceramic pumps	Highly accurate dual piston pumps
Gradients	Two solvents, binary	Four solvents binary with any combinations of two solvents	Four solvents binary, high pressure mixing	Four solvents binary with 3rd solvent as modifier
Detector	Fixed wavelength (254 nm, optional other wavelength) or DAD variable UV (200 - 400 nm) or DAD variable UV (200 - 400 nm) + Vis (400 - 800 nm)	DAD variable UV (200 - 400 nm) or DAD variable UV (200 - 400 nm) + Vis (400 - 800 nm) or ELSD	DAD variable UV (200 - 400 nm) or DAD variable UV (200 - 400 nm) + Vis (400 - 800 nm) or ELSD	DAD variable UV (200 - 400 nm) or DAD variable UV (200 - 400 nm) + Vis (400 - 800 nm) or ELSD
Sample Loading Capacity	10 mg - 33 g	10 mg - 33 g	10 mg - 33 g	10 mg - 33 g
Column Sizes	4 g - 330 g, up to 3 kg with adapters	4 g - 330 g, up to 3 kg with adapters	4 g - 330 g, up to 3 kg with adapters	4 g - 330 g, up to 3 kg with adapters
Other Specifications	<ul style="list-style-type: none"> • Gradient types: isocratic, linear, step • Flowcell optical path length: 0.3 mm (default); 2.4 mm (optional) • Spectral display: single/dual/all-wavelengths* • Sample loading method: manual load • Fraction collection method: all, waste, threshold, slope, time • Fraction collector: Standard: tubes (13 mm, 15 mm, 18 mm, 25 mm); Optional: French square bottle (250 mL, 500 mL) or large collection bottle; Customizable collection container • Control device: wireless operation through mobile devices** • Certificate: CE, cTUVus (in process) 			

Notes:

*All-wavelength scanning function is not applicable for SepaBean[®] machine U with fixed wavelength UV detector.

**The instrument is controlled via App on mobile device by default for SepaBean[®] machine U. iPad and related supporting stand are optional.

The Application of ELSD in the Purification of Non-UV Absorbing Compounds

In chemical synthesis, many compounds are absent with UV absorption structures. For the purification of these compounds, commonly used UV detector cannot meet the requirement of real-time monitoring for the eluting procedure. In this application note, a pharmaceutical intermediate was utilized as the sample to show the application of ELSD in sample purification.



Figure 17. The chemical structure of a pharmaceutical intermediate.

Experimental setup:

Instrument	SepaBean® machine T	
Flash Cartridge	12g SepaFlash® Standard Series flash cartridge (irregular silica, 40-63µm, 60Å, Order number: S-5101-0012)	
Detector	UV:254 nm;280 nm SEPA-FP LT-ELSD	
Mobile Phase	Solvent A: Petroleum Ether Solvent B: Ethyl Acetate.	
Flow Rate	System: 30 mL/min Split flow for ELSD: 0.5 mL/min	
Sample Load	600 mg	
Gradient	Time (CV)	Solvent B (%)
	0	0
	11	18
	15	18
	21	34
	24	34

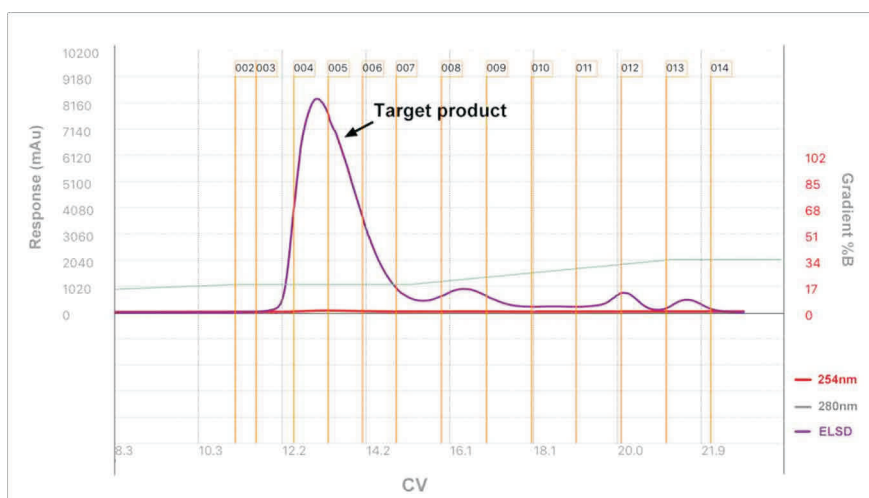
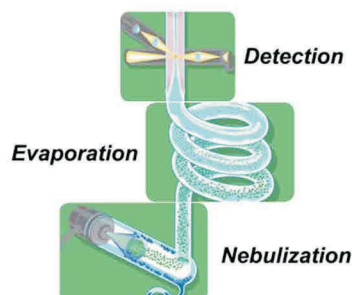


Figure 18. The flash chromatogram of a pharmaceutical intermediate.





Santai Science Inc.

SepaBean™ machine L



Highlights

- 1 Sample loading capacity up to 1kg
- 2 Flow rate up to 1000 ml/min
- 3 Sample collection module supports various container sizes
- 4 Easy to use controlling software through mobile device
- 5 Easy to scale up from laboratory method to pilot scale
- 6 Support multi-user account management
- 7 Support λ -all fraction collection method
- 8 Anti-static design
- 9 Support both liquid and solid sample loading method. Loading large volume sample through optional sample loading pump module.

Main Parameter

Model	SepaBean™ machine L	
Product number	SPBL01501000-1	SPBL01501000-2
Flow rate	50 – 1000 ml/min	
Pressure	Up to 150 psi	
Gradients	Four solvents binary with 3rd solvent as modifier	
Detector	DAD 200–400nm UV Detector	DAD 200–800 nm UV Detector
Sample loading method	Manual, Optional Sample Loading Pump module	
Fraction collector	Switching valve Sample collection module	
Air purge	Yes	
Column holder	Yes, fit for 800–3000g flash columns, with additional column holder for 5kg and 10kg flash columns	
Other specification	Control devices	Wireless operation through mobile device
	Gradient types	Isocratic, linear, step
	Flowcell optical path length	0.3 mm (default); 2.4 mm (optional)
	Spectral display	Single/dual/all–wavelengths
	Fraction collection method	All, waste, threshold, λ –all
	Fraction collector	Customizable, various sized collection containers





CBG App

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