

**DR. RAJENDRA PRASAD CENTRE FOR OPHTHALMIC SCIENCES**  
**All-India Institute of Medical Sciences**  
**Ansari Nagar, New Delhi-29**

Ref. No.SO/RPC/Proprietary/Automated Single/2014-15

Dated: 04.06.2014

**Subject: Purchase of equipment Automated Single Channel Flash Chromatography System – 01 No. for Dr. R.P.Centre at AIIMS, New Delhi-29 on proprietary basis- Inviting comments thereon.**

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The request received from respective faculties of Dr. R.P.Centre AIIMS for the purchase of subject cited equipment from M/s. YAMAZEN Corporation, Japan on proprietary basis. The proposal submitted by M/s. YAMAZEN Corporation, Japan and PAC certifications are attached & uploaded on website.

The above documents are being uploaded for open information to submit objections, comments, if any, from any manufacturer regarding proprietary nature of the equipment/item within 15 days from the date of issue/uploading of the notification giving reference **SO/RPC/Proprietary/Automated Single/2014-15**. The comments should be sent to Stores Officer, Dr. R.P.Centre at AIIMS on or before **25.06.2014 upto 12.30 P.M.**, failing which it will be presumed that any other vendor is having no comment to offer and case will be decided on merits.

**Yours faithfully,**

**STORES OFFICER (RPC)**

**Encl: Related documents enclosed.**

- 1. PAC Certificate enclosed.**
- 2. Specification of equipment.**

## **SPECIFICATION**

- Should have automated gradient optimization facility where TLC Rf value and solvent mixture ratio are to be input for eluting the sample at 4 column volume position to minimize the solvent use and waste disposal.
- Should have an option of automatically calculate and set the optimum parameters for the selected column
- Inject column should be capable of eliminating the sample loss and contamination while sample loading.
- The software must provide the maximum sample load information for the selected column/catridges
- Should have powerful UV detector with a detecting range of 0.08-5.12 AUFS or better.
- Should have low concentration gradient. Gradient with the polar solvent as low as 1-7% or better.
- Should have real time monitor of the line pressure and pressure-moderating system for safe operation.
- Should have the option for automatic method setup for Reverse Phase Chromatography
- Should provide Laptop or desktop with USB-RS232 converter cable

### **Application Software**

- Should have Real Time Control
  - Should have simple and easy change of method parameters on the fly
  - Should have automatic method Set-up based on TLC Rf value for the single target compound and /or multiple targets.
  - Should have visual indication to predict where and when the target compound will elute.
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# YAMAZEN CORPORATION

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10<sup>TH</sup> APRIL 2013

**TO WHOM SO EVER IT MAY CONCERN**  
**SOLE SOURCE JUSTIFICATION / PROPRIETARY CERTIFICATE**  
**Yamazen EPCLC – Smart Flash AI-580S**

TLC IMAGE DRIVEN AUTOMATED FLASH PURIFICATION SYSTEM MODEL EPCLC SMART FLASH – AI-580S IS MANUFACTURED BY US AND IT IS A PROPRIETARY ITEM PARTICULARLY WITH REGARD TO ITS UNIQUE SPECIFICATION, DESIGN AND CONSTRUCTION, IT INCORPORATES THE FOLLOWING SPECIFICATIONS AND TLC IMAGER AND SOFTWARE IS PATENT UNDER UNITED STATES PATENT 7,169,308 B2, JAPANESE PATENTS 3423707 AND 4087395

- Yamazen's proprietary Rf Gradient is designed on the true theory of chromatography,  $R_s = \frac{\text{square root of } N/4 \times \alpha}{1/\alpha \times k'/1 + k'}$ . Rf Gradient fully controls the eluting position of the target compound. N: Theoretical plate number of the column Alpha ( $\alpha$ ) : Separation factor, which is decided by the column packing material. k': Capacity factor or retention
- **Safety-conscious design:** Open & Modular, open flow-path, and automatic pressure modulation
- **Fast purification in 4CV,** low use of solvents & time-saving 50% shorter time and 1/3<sup>rd</sup> Solvent Usage
- Unique design with a **valveless ceramic reciprocal pump** on each channel – quiet and no user maintenance required
- Solenoid valve & single reciprocal pump design for accurate purifications: **excellent for slow gradient purification** using very polar solvent like Methanol
- **Patented Software:** PC-aided auto setup of chromatographic method based on the Rf value on TLC: simple and easy application of basic parameters to chromatography (good correlation to Si columns). Easy changes of chromatographic parameters on the fly.
- **Standard 4 solvent hook up** and simple change-over of solvents during run
- Powerful UV detection: great performance, superb optical design and detection capability. **OD: 4.0+**
- **Use an external computer (Win XP or Win 7) as standard** – large screen and low cost replacement
- **In-line glass filter:** safe-guard the flow cell and pressure surge situation
- **Prepacked and empty glass columns available**
- **Add-ons: ELSD, RI detector, TLC Reader**

We remain at your service for any further clarifications or further information you may require on this matter.

Yours Truly,  
For YAMAZEN CORPORATION

**IKUJI SADAMURA, GENERAL MANAGER**



US007169308B2

(12) **United States Patent**  
**Ohkura**

(10) **Patent No.:** **US 7,169,308 B2**  
(45) **Date of Patent:** **Jan. 30, 2007**

(54) **LIQUID CHROMATOGRAPH CONTROL APPARATUS, METHOD FOR PERFORMING LIQUID CHROMATOGRAPHY AND COMPUTER PROGRAM FOR CONTROLLING A LIQUID CHROMATOGRAPH**

(75) Inventor: **Kihachiro Ohkura**, Osaka (JP)

(73) Assignee: **Yamazden Corporation** (JP)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 358 days.

(21) Appl. No.: **10/504,637**

(22) PCT Filed: **Feb. 14, 2003**

(86) PCT No.: **PCT/JP03/01522**

§ 371 (c)(1),  
(2), (4) Date: **Aug. 12, 2004**

(65) **Prior Publication Data**

US 2006/0231471 A1 Oct. 19, 2006

(30) **Foreign Application Priority Data**

Feb. 15, 2002 (JP) ..... 2002-037722

(51) **Int. Cl.**  
**B01D 15/08** (2006.01)

(52) **U.S. Cl.** ..... **210/656; 210/659; 210/143;**  
**210/198.2; 436/161; 422/70; 702/30**

(58) **Field of Classification Search** ..... **210/635;**  
**210/656, 659, 198.2; 436/161, 518; 702/30;**  
**422/70**

See application file for complete search history.

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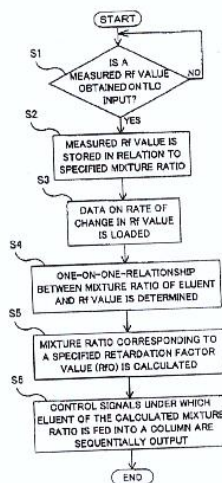
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(57) **ABSTRACT**

A liquid chromatograph control apparatus (1) includes a measured value storage (25a) that stores a measured retardation factor (Rf) value of a sample (3), which is obtained when components of the sample are separated on thin layer chromatography using eluent (4) containing a plurality of ingredients at a specified mixture ratio, in association with the specified mixture ratio, a rate-of-change-in-Rf-value storage (25b) that stores a rate of change in the Rf value of the sample (3) with respect to variation in mixture ratio of ingredients of eluent (10), a mixture ratio calculator (22a) that determines a mixture ratio of the eluent (10) at which a specified retardation factor value (RfO) of the sample is obtained, based on the measured Rf value corresponding to the specified mixture ratio stored in the measured value storage (25a) and on the rate of change in the Rf value stored in the rate-of-change-in-Rf-value storage (25b), and a mixture ratio controller (22b) that outputs a control signal to control the mixture ratio of the eluent (4) fed into a column (18) so that the Rf value of the sample (3) can be equivalent to the specified retardation factor value (RfO), based on calculated results by the mixture ratio calculator (22a).

**4 Claims, 7 Drawing Sheets**



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