

new Journal

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Natural Product Reports

**NATURAL
PRODUCT
REPORTS**

A journal of recent developments
in the product chemistry

Approximately 110 pages per issue
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Natural Product Reports is a new bimonthly review journal which commenced publication in February 1984. It reviews recent developments in areas of natural product chemistry previously covered by the Specialist Periodical Reports (annual or biennial reviews) entitled "The Alkaloids", "Biosynthesis", "Terpenoids and Steroids" and "Aliphatic and Related Natural Product Chemistry". Publication in journal form helps to overcome the problem of overlap and enables reports to be published much faster than is possible in an annual volume. Furthermore, an annual subscription to Natural Product Reports costs substantially less than a subscription to Specialist Periodical Reports.

Natural Product Reports, however, is more than just a continuation of subjects covered by a number of SPR titles. Coverage includes such areas as chemotaxonomy, enzymology and biosynthetic aspects of biotechnology, and also advances in physical techniques used for structure determination e.g. n.m.r., h.p.l.c., mass spectrometry, and chiroptical data.

Natural Product Reports consists of critical reviews written by groups of leading authorities, many of whom have gained worldwide recognition for their contributions to the subject area. Each issue contains approximately 110 pages covering six or seven articles; there is an author index and a subject index (cumulated annually) to facilitate location of articles dealing with specific areas.

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Flash Chromatography

A Complete Line of Columns, Reservoirs, Clamps and Packings

In 1978, Professor Clark Still and coworkers reported a simple and rapid chromatographic technique for the preparative separation and purification of organic compounds.¹

Still's *flash chromatography* is performed with a glass column which has been modified so that positive pressure (usually from compressed air or nitrogen) can be applied to the top of the column, as shown at right. The pressure is conveniently regulated with a flow controller valve. A solvent reservoir enables elution with a large volume of solvent without having to dismantle the pressurized column.

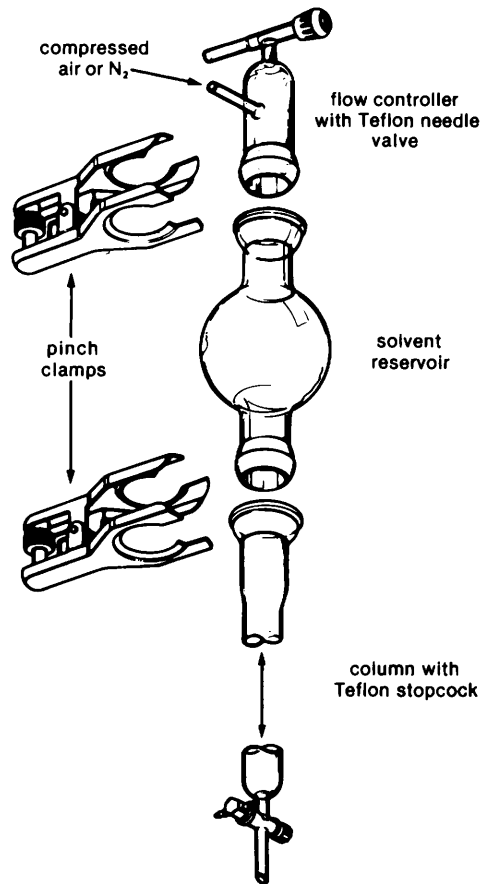
This technique offers advantages over conventional preparative column chromatography in that *separations are quick and recoveries are high* (due to minimal band tailing). Thus, it also becomes a valuable method for the preliminary purification of materials that require high-resolution HPLC separation.

Columns are generally packed dry. First, a small plug of glass wool is inserted into the narrow neck above the column stopcock. Next, a thin layer of sand is introduced, followed by the adsorbent (usually 230- to 400-mesh silica gel 60,¹ added in one portion) and finally, another thin layer of sand. The elution solvent is then introduced at the top of the column, the flow controller is attached, and the system is pressurized to force all air out of the column.² The flow controller is removed, the sample is applied to the top of the column (a 20-25% solution in the eluant is recommended¹), and pressurization is resumed. A flow rate of 2 inches/minute is usually ideal for both packing and sample elution.

Typically, the process of packing the column, applying a 10-mg to 10-g sample, and effecting clean separation and elution of compounds having $\Delta R_f \geq 0.10$ takes *less than 15 minutes!*

Aldrich offers a complete line of glass columns, reservoirs, clamps, and packing materials for all your flash-chromatography needs.

- 1) Still, W.C.; Kahn, M.; Mitra, A. *J. Org. Chem.* **1978**, *43*, 2923.
- 2) Alternatively, it has been suggested that the solvent used for packing be allowed to percolate through the column without applying external pressure: see the Labnote by J.M. Chong and I.D. Suckling in *Aldrichim. Acta* **1983**, *16*, 66.



Flash Chromatography Column (Consists of column, flow controller, pinch clamp)*				Solvent Reservoir (Requires pinch clamp in column at right)		Pinch Clamp**		Packing Materials***	
Cap.	Joint	Cat. No.	Price	Cat. No.	Price	Cat. No.	Price		
100ml	28/12	Z10,409-4	\$149.05	Z12,123-1	\$34.50	Z10,708-5	\$15.00	23,677-2	Davisil™ silica gel, grade 633, 200-425 mesh, 60Å, 99 + % 100g \$14.85; 1kg \$69.35; 10kg \$577.80
200ml	50/30	Z10,410-8	\$185.00	Z12,125-8	\$52.70	Z10,709-3	\$27.00	22,719-6	Merek silica gel, grade 60, 230-400 mesh, 60Å 100g \$18.80 1kg \$86.00; 5kg \$306.40
400ml	50/30	Z10,411-6	\$202.50	Z12,126-6	\$53.75	Z10,709-3	\$27.00	27,474-7	Glass wool, Pyrex, fiber 0.002-0.003in. diam. \$33.00/1lb pkg
600ml	65/40	Z10,412-4	\$239.70	Z12,127-4	\$71.40	Z10,710-7	\$28.00	27,473-9	Sand, Ottawa, 50-70 mesh 1kg \$5.25; 5kg \$17.40
1,000ml	75/50	Z10,413-2	\$289.05	Z12,128-2	\$92.00	Z10,711-5	\$34.00		
2,000ml	75/50	Z11,725-0	\$317.65	Z12,129-0	\$97.40	Z10,711-5	\$34.00		

*Replacement columns and flow controllers are also available. See page 1352 of the 1982-1983 Aldrich Catalog/Handbook.

Note that these pinch clamps are not identical to the pinch clamps furnished with the flash chromatography columns. When purchasing the solvent reservoir, this heavy-duty clamp must be purchased separately for use on the **lower joint of the solvent reservoir bulb. The pinch clamp supplied with the column may be used on the **upper** joint of the bulb but **not** on the lower joint.

***Other grades of silica gel are also available.



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