



INTERNAL CORRESPONDENCE

VC Analytical Methods

CHEMICALS AND PLASTICS

P. O. BOX 8361, SOUTH CHARLESTON, WEST VIRGINIA 25303

To: (Name) Mr. G. P. Bigelow, NYO
Mr. R. M. Arnold, 515
Mr. R. A. Bleidt, 511
Dr. J. C. Chaty, 515
Dr. T. L. Dawson, 511
Mr. M. E. Eisenhour, 515
Mr. C. E. Fry, 514
Mr. A. E. Gabany, 511
Mr. M. E. Griffith, 514
Mr. D. E. Hardman, NYO
Mr. G. E. Herpich, 312
Dr. J. B. Johnson, 511
Dr. C. N. Merriam, 312
Dr. L. P. McMaster, 312
Mr. G. S. Peacock, 312
Mr. K. E. Ross, 515
Mr. G. T. Scott, NYO
Mr. G. F. Tacquard, 515
Mr. W. E. Whitehurst, 511
✓ Mr. R. N. Wheeler, 514

Date September 16, 1975
Originating Dept Research and Development
Subject Modification of WC-326-6-1:
Determination of Residual Vinyl
Chloride Monomer in Vinyl Resins

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SEP 17 1975
R. N. WHEELER, JR.

Dear Gordon:

During the adaptation of WC-326-6-1 to routine plant control use, the Texas City Plant Laboratory developed a modified column backflush technique which significantly reduced the analytical time required to elute the solvent from the chromatographic column and reestablish a stable base line. The alternate procedure employs a four-foot section of the twenty-foot analytical column as a precolumn. No sacrifice in analytical sensitivity results from this change.

The use of this alternate technique reduces overall analytical time, and thus makes the method much more useful for the routine analysis in the Plant Control Laboratory. It is also of value for others who may wish to use this standard method.

The following changes in WC-326-6-1 have been reviewed by Bob Arnold, Buddy Griffith, Al Gabany and Bob Bleidt, who agree that the modifications are highly desirable.

(1) After Section 5a of the current method include the following:

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Page Two
September 16, 1975

NOTE 1: An alternative backflush technique can be employed which significantly reduces the analytical time required to elute the solvent from the column and reestablish a stable base line. In this procedure, a four-foot section of the twenty-foot analytical column is employed as a precolumn, with the remaining sixteen-foot section functioning as the analytical column. The columns may be connected to the backflush valve as described in Section 2b of this method or to a 6-port rotary valve. Flow schematic diagrams for both valves are shown in Figures IV and V.

The sample of vinyl chloride monomer in THF is carried directly in the 4' precolumn from the heated injection port with the backflush valve in the Inject position. After approximately 1.0 minute, the VCM monomer elutes from the precolumn into the analytical column. The valve is then switched to the Backflush position to flush the THF (which remains in the precolumn) to vent.

(2) Add the attached Figure IV and Figure V to the method (after Figure III).

Comments from the recipients of this letter are welcomed. If there are no objections, we suggest that the modifications be incorporated into WC-326-G-1 and the revised method be issued by October 15, 1975.

Regards,

J. John Brezinski
J. John Brezinski

JJB:cj

Attachments

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FIGURE IV
Schematic of Flow System Utilizing
Bendix 8-Port Sliding Plate Valve

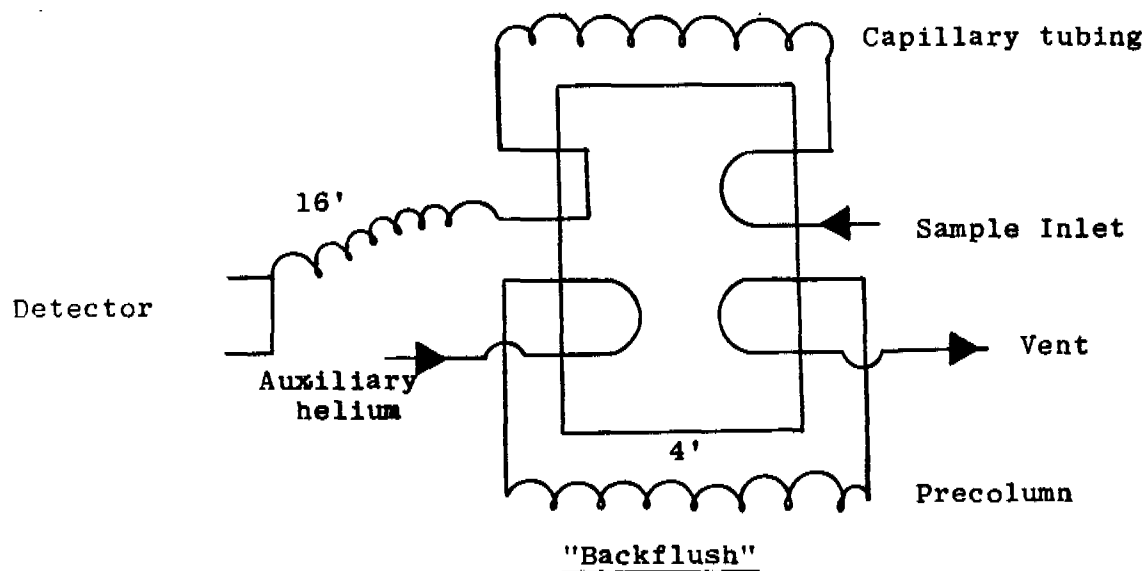
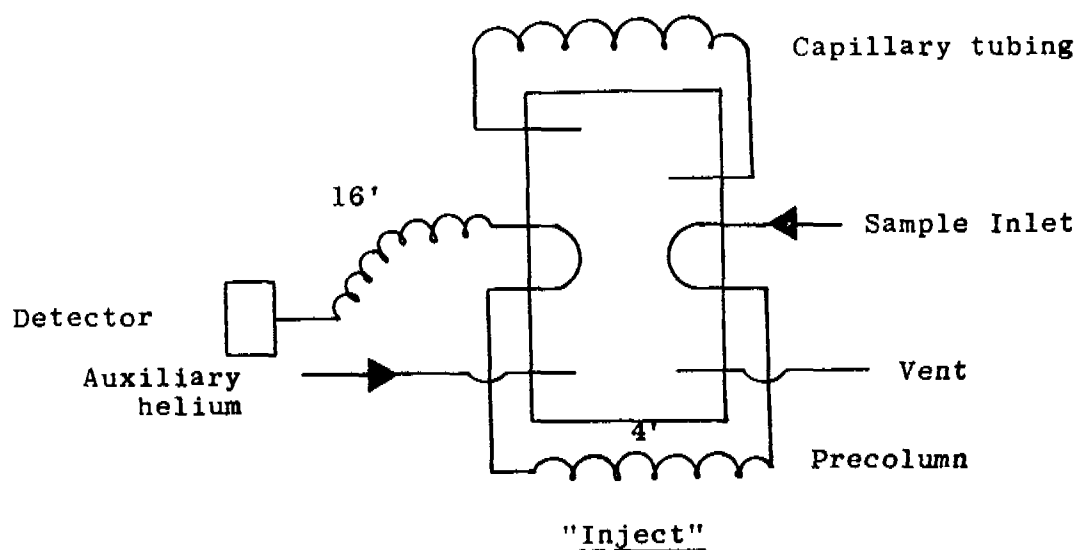
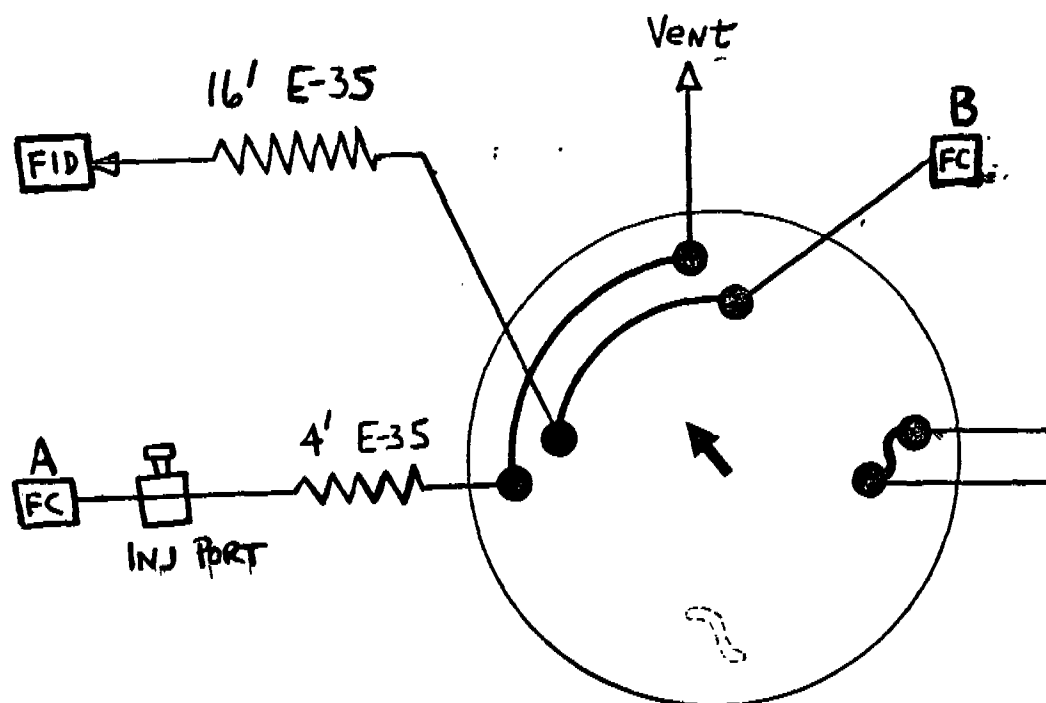
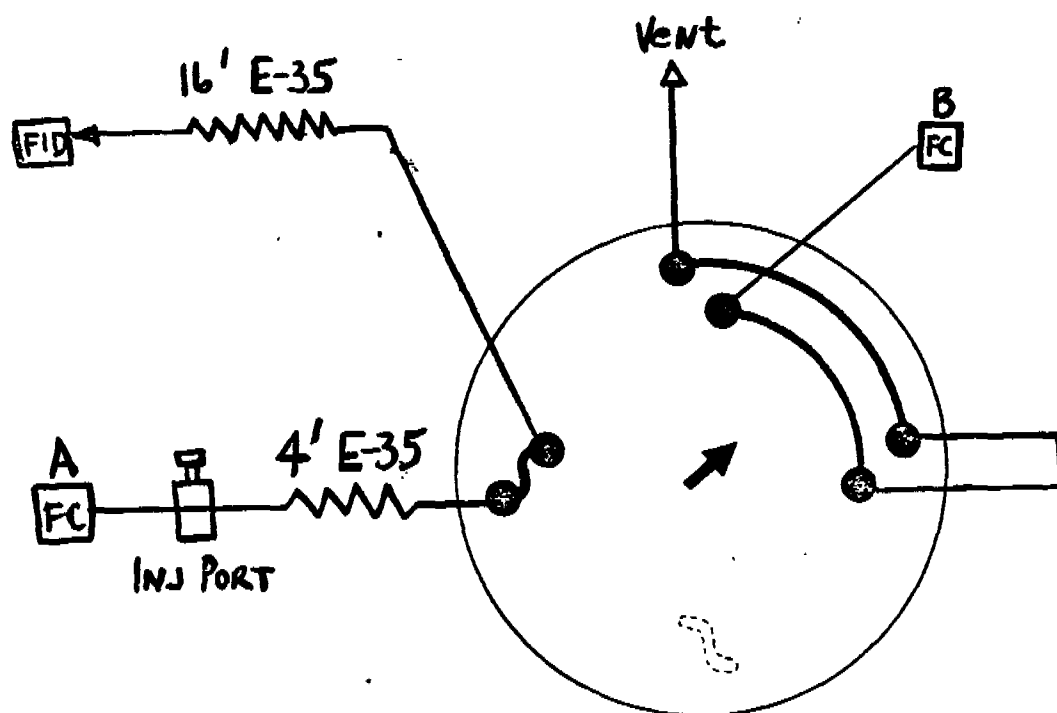


FIGURE V

Schematic of Flow System Utilizing the Valco*
6-Port Rotary Valve



POSITION A
BACKFLUSH



POSITION B
INJECT

*Valco Instruments,
Houston, Texas

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