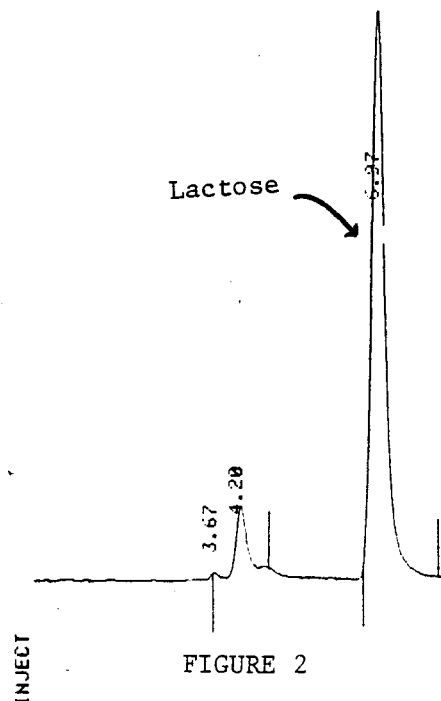
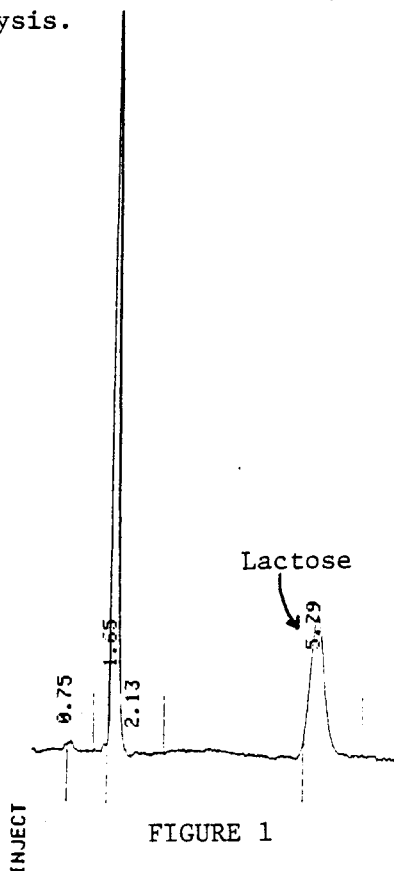


LACTOSE IN MILK ANALYSIS ON μ BONDAPAKTM CARBOHYDRATE AND SUGAR-PAKTM I COLUMNS

Figures 1 and 2 represent injections of the same extract of lactose from milk on the μ BONDAPAK Carbohydrate and the Sugar-PAK I columns, respectively. The systems were both calibrated to calculate the lactose content which is reported to be 4.9% in a mixed herd sample of milk. The sample (10 ml) was extracted first with 60 ml of acetonitrile to precipitate the protein. To the acetonitrile layer water was added to bring the final volume to 100 ml. The lactose content was determined to be 4.62% in Figure #1 and 4.52% in Figure #2. The increased response of the Sugar-PAK I column indicates that a ten-fold dilution could have been used to minimize contamination of the column. However, if condensed milk were to be evaluated, the added sucrose would co-elute with the lactose on the Sugar-PAK I column and the μ BONDAPAK Carbohydrate Column would have to be employed to quantitate both lactose and sucrose. Clearly the application will determine the best approach for the analysis.



Sample: 20 μ l 10% Milk Extract
Column: μ BONDAPAK Carbohydrate
Mobile Phase: Acetonitrile/H₂O (70/30)
Detection: R401 @ 8X

Sample: 20 μ l 10% Milk Extract
Column: Sugar-PAK I
Mobile Phase: H₂O
Detector: R401 @ 16X

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