les résultats du comptage réalisé par cette nouvelle méthode d'un chromatogramme d'une préparation brute de thyronine marquée en 3,5 par le tritium. La proportionnalité est respectée à $\pm$ 3.5 %.

Nous avons pu, à partir de ces chiffres, calculer le rendement du comptage par rapport à la radioactivité d'un corps soluble dans le mélange scintillant, correction faite du "quenching". Dans le cas du papier immergé, le rendement est de 66 % alors

TABLEAU I

COMPTAGE PAR SCINTILLATION LIQUIDE DE CORPS MARQUÉS PAR LE TRITIUM DANS DIFFÉRENTES CONDITIONS

Échantillon	*Témoins*	*Papier imprégné*		*Papier immergé*	
		trouvé	*calculé*	*trouvé*	*calculé*
1	8160	4203	—	5286	—
2	15977	8353	8406	10411	10572
3	24200	13054	12609	15393	15858

Influence de la taille du papier

Échantillon	*Surface du papier*	*Coups comptés*
1	2 × 1 cm	4272
2	3 × 1 cm	4186
3	5 × 1 cm	4152

qu'il est de 52 % pour le papier imprégné. Le rendement final du comptage est, compte tenu du compteur utilisé, de 13.2 % dans le premier cas et de 11.4 % dans le second.

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Chromatography of some lipids on polytetrafluoroethylene

Chromatographic separations of vitamins A and D and cholesterol have previously been reported from this laboratory on columns of silaned kieselguhr[1] and polyethylene powder[2]. These studies have been extended using polytetrafluoroethylene as column packing.

Teflon (obtained from E.I. Du Pont, 60–100 mesh) was packed in methanol into a column 20 cm in length and 1.1 cm diameter using a perforated disc[3]. When packed, the column was held in a state of tension by a filter paper disc on top held down by a close fitting polyethylene ring. The column was then washed with 100 ml, of degassed methanol. The methanol was displaced by water before applying the sample for analysis dissolved in 1 ml of methanol. The column was run using the gradient pump described by ARCUS[4] with 100 ml methanol in the reservoir and a mixture of 30 ml methanol and 20 ml water in the mixer. All solvents were carefully degassed before use. The column effluent was collected in 1.3 ml fractions. The ultraviolet absorption of each fraction was measured in the Beckman DU spectrophotometer at 325 mμ for vitamin A and at 265 mμ for vitamin D. Cholesterol and coprosterol were determined by the nephelometric method[2].

The separations obtained with 0.2 mg each of vitamins A and D and with 0.5 mg each of cholesterol and coprosterol are shown in Figs. 1 and 2.

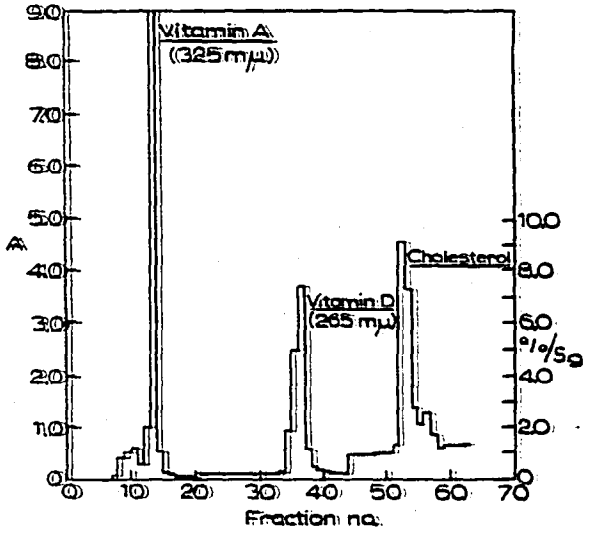

Fig. 1. Elution curve of vitamin A, vitamin D and cholesterol.

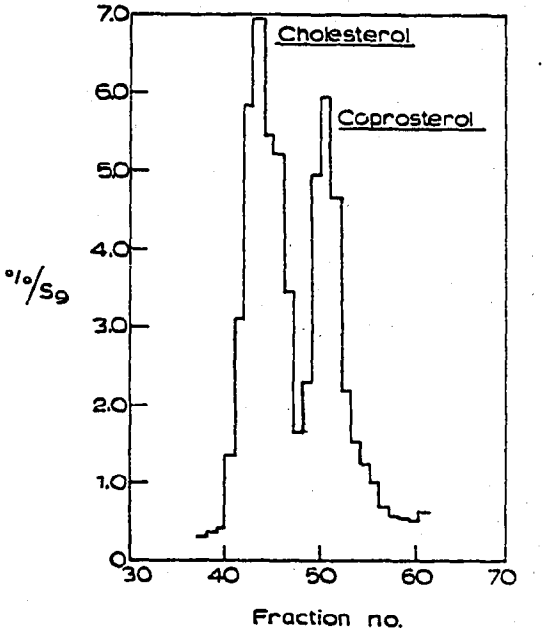

Fig. 2. Separation of cholesterol and coprosterol.

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