DETERMINATION OF THE CONCENTRATIONS OF *Zn*, *Se*, *Rb* AND *Fe* IN BLOOD SERUM

S. Marinkov
Faculty of medical Science, Novi Sad

L. Marinkov, I. Bikit and D. Pećanac
Institute of Physics, Faculty of Science, Novi Sad

D. Cvjetičanin and A. Kukoč
Boris Kidrič Institute, Vinča

Serum samples from one healthy person (A) and from two patients suffering from diabetes (B,B') were examined. The analysis was performed by the neutron activation method. The samples were placed in quarz ampoules and irradiated ten days in a neutron flux of 10^{13} n/cm^2•s. The gamma activity of the samples was measured by a *Ge(Li)* detector five days after the end of the irradiation. The results obtained are shown in tab. 1.

TABLE 1.

	CONCENTRATIONS (μg/mℓ)		
	A	B	B'
Se	0.060(3)	0.061(4)	0.076(4)
Rb	0.20(1)	0.27(2)	0.31(2)
Fe	2.6(3)	1.0(1)	1.5(1)
Zn	1.18(3)	1.10(3)	1.15(3)

From these data values of the dimesionless quantity

$$P = \frac{C(Zn) \cdot C(Se) \cdot C(Rb)}{[C(Fe)]^3}$$

were calculated. As shown in tab. 2. the values of P are si-

TABLE 2.

	A	B	B'
$P \times 10^3$	0.8(3)	18(6)	8(2)
P/P_A	1	22(11)	10(4)

gnificantly enlarged for the samples B and B'.