

graine, probably through an excessive loss of carbon dioxide. As a result of the apparent success of controlling the migraine attacks by treatment with ketogenic diets,<sup>2</sup> it seemed desirable to reinvestigate the acid-base balance of the blood of individuals subject to migraine. To date 10 cases of migraine have been followed at intervals, the blood having been taken as early in the attack as possible, at the height of an attack, and immediately after cessation of the attack. It was found that the serum pH, CO<sub>2</sub> content, chloride and total base remained within normal limits, if one excepts 2 cases in which the pH was elevated slightly, due in all probability to the accompanying vomiting. It is probably of some significance that a fairly definite elevation of the blood cholesterol occurred in 50% of the cases.

## 7251 C

### A Rapid Method for Analyzing Time-dilution Curves for Haemolytic Systems.

ERIC PONDER.

*From Washington Square College, New York University.*

The time-dilution curve obtained for most haemolytic systems, which is described by the equation

$$kt = \frac{p}{p-1} \left\{ \frac{p-1}{c^p} - (c-x)^{\frac{p-1}{p}} \right\}$$

can be analyzed by a method already described (Ponder and Yeager<sup>1</sup>). The method is somewhat laborious and the analysis is more easily carried out as follows:

One requires a piece of cellophane, about 40 cm. square. The length of the right hand side is divided in such a way that the divisions represent 12.2, 24.4, 36.6, 48.8, 61.0, 73.2, 85.4, and 100% of that side. A series of lines are drawn on the cellophane joining each of these divisions to the left hand corner.

The time-dilution curve is drawn on a large scale in the usual way, and the asymptote ( $x$ ) is marked with a horizontal line. Place the lower edge of the cellophane along the abscissa of the curve, and move it from right to left until the oblique line corresponding to

<sup>2</sup> Barborka, C. J., *J. Am. Med. Assn.*, 1930, **95**, 1825.

<sup>1</sup> Ponder and Yeager, *Proc. Roy. Soc. B.*, 1930, **106**, 506.

the 100% division passes through the point at which the horizontal line corresponding to the asymptote cuts the ordinate of the curve. The oblique lines then cut the ordinate of the curve at a series of points. From the curve, read off the time corresponding to each of these points, add up the times, and divide by the time corresponding to the oblique line for 85.4%. Call the result S. The value of  $n (=1/p)$  is found by consulting Table I.

TABLE I.

n	S	n	S
1.0	3.083	2.2	1.631
1.2	2.603	2.4	1.518
1.4	2.335	2.6	1.431
1.6	2.097	2.8	1.357
1.8	1.908	3.0	1.300
2.0	1.753		

In this way a time-dilution curve can be analyzed in less than a minute, and, if the curve is of the usual form, the value of  $n$  is obtained with an error no greater than  $\pm 0.05$ , for values not shown in the table can be found by interpolation. When large numbers of time-dilution curves are obtained in the course of an investigation, a rapid method of analysis is a great convenience, although it is often necessary to analyze the curves more carefully later on.

## 7252 C

## Effect of Heat on Vitamin G Potency of Desiccated Yeast.

FRANKLIN C. BING AND DONALD G. REMP.

*From the Department of Biochemistry, School of Medicine, Western Reserve University.*

In the course of their investigations on the nutritive requirements of the chick Elvehjem, Kline, Keenan and Hart<sup>1</sup> found that about half of the vitamin G potency of desiccated yeast was destroyed by heating at 100°C. for 6 days. With the hope of securing evidence of the supposed duality of vitamin G, as postulated by Sure<sup>2</sup> and others, we have studied the effect of heat on both the growth-promoting and dermatitis-preventing activities of dried yeast. After

<sup>1</sup> Elvehjem, C. A., Kline, O. L., Keenan, J. A., and Hart, E. B., *J. Biol. Chem.*, 1932, **99**, 309.

<sup>2</sup> Sure, B., Smith, M. E., and Kik, M. C., *Science*, 1931, **73**, 242.