some vitamin E-like activity and is also strongly active in the hæmolysis test. This substance has been identified[6] as 2-(6-hydroxy-2-methoxy-3,4-methylenedioxyphenyl)-benzofuran and is clearly distinguishable from substance 282 on chromatographic and spectral evidence. In fact, these are not the only two fluorescent substances in the non-saponifiable fraction of bakers' yeast: yet a third non-reducing substance, strongly fluorescent, is present and has chromatographic properties almost identical with those of α-tocopherol.

It is interesting that substance 282 occurs in bakers' yeast and also in the mushroom (*P. campestris*), both of which contain very little ubichromenol. *Torula* yeast, on the other hand, which contains much ubichromenol (preceding communication), contains no detectable substance 282.

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Electrophoretic Behaviour of Rat Serum Amylase

Determinations of the electrophoretic behaviour of human serum amylase[1] showed that the largest amount of amylase migrated with the albumin fraction and that a significant amount also migrated with the γ-globulins. Our preliminary observations[2] indicated that this was not the case for rat serum. The Delcourts[3] found that this was also not true for mouse serum, where about 75 per cent of the total serum amylase migrated with β_1- and β_2-globulins.

Sera were obtained from both normal rats and those suffering severe liver damage from treatment with N-nitrosodimethylamine[2,4]. The proteins of these sera were separated by paper electrophoresis with a Spinco paper electrophoresis apparatus, Model *R*, using a new filter paper, Schleicher and Schuell 2043*A gl*, thinner than the Whatman paper previously used[1]. The protein fractions were eluted with 0·9 per cent sodium chloride and analysed for amylase by a micro modification[1] of Van Loon's amyloclastic method[5].

As indicated in Table 1, the largest fraction of the serum amylase recovered was that associated with the β-globulin (70 per cent) and a lesser amount (about 25 per cent) with the γ-globulins, a pattern somewhat similar to that found for mouse serum[3]. The leading fractions contained amounts so small as to be almost insignificant. With sera from rats with liver damage, the amylase in the β- and γ-globulin fractions was reduced to less than 30 per cent of that in the normal sera, while the very small amounts in the albumin and α-globulin fractions remained essentially the same as in the normal.

Table 1. Distribution of Amylase in Rat Serum

Serum fraction	Amylase units/100 ml. serum	
	Normal*	N-nitrosodimethylamine* treated
Albumin	24	35
α_1-Globulin	19	19
α_2-Globulin	31	26
β-Globulin	1,012	287
γ-Globulin	337	93
Total of all fractions	1,443	460

* Five animals in each group. Duplicate determinations on each animal.

The fact that liver damage leads to marked reduction in the amylase of the β- and γ-globulin fractions might be interpreted as indicative that the amylase normally found in these fractions is produced in the liver. Because of the uncertainties in the interpretation of measurements of paper electrophoresis caused by protein–protein and protein–paper interactions, we would be cautious about making this interpretation unequivocally from these data alone. However, this interpretation would strengthen our previous conclusion from other data[2,6,7] that the liver is a source of amylase production.

Whatever the conclusions concerning the relationship of the liver to serum amylase, we wish to point out that the distribution pattern of serum amylase may vary from one species to another. That for the rat is definitely different from that for man.

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Identification of 3,4,5-Trimethoxyphenylacetic Acid as the Major Metabolite of Mescaline in the Dog

Mescaline (3,4,5-trimethoxyphenylethylamine), an alkaloid obtained from *Anhalonium lewinii* and *Trichocereus terscheckii*, has been the subject of many investigations. After oral administration of mescaline to dogs, Slotta and Müller[1] were able to isolate 38 per cent of the mescaline as 3,4,5-trimethoxyphenylacetic acid but were unable to detect any of the parent compound in the 24-hr. urine. These results could not be confirmed by Cochin and co-workers[2], who reported that only 'trace' quantities of 3,4,5-trimethoxyphenylacetic acid were excreted in this species, but that 28–46 per cent of a dose, administered parenterally or orally, was excreted as the parent compound. Others[3–6] have reported similar findings of unchanged mescaline in the urine of human beings receiving the drug. The metabolism of this drug was re-investigated in the dog employing 8-^{14}C mescaline.