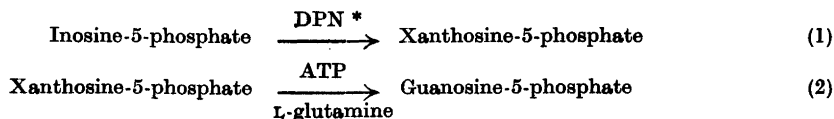


Enzymic Synthesis of Xanthosine- and Guanosine-5-phosphate

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Extracts of pigeon liver acetone powder catalyze the following reactions: ¹



Abrams and Bentley ² have independently demonstrated the occurrence of reactions (1) and (2) in extracts of rabbit bone marrow while Gehring and Magasanik found reaction (1) in *Aerobacter aerogenes* ³.

* The following abbreviations are employed: ATP = adenosine triphosphate, DPN = diphosphopyridine nucleotide, DEAE = diethylaminoethyl.

The enzyme (or enzymes) catalyzing reaction (2) has been purified by fractionation with ammonium sulfate, adsorption on C₇ gel and chromatography on DEAE-cellulose according to Peterson and Sober *et al.* ^{4,5}. The stoichiometry and mechanism of reaction (2) will be discussed.

1. Lagerkvist, U. *Acta Chem. Scand.* **9** (1955) 1028.

2. Abrams, R. and Bentley, M. *J. Am. Chem. Soc.* **77** (1955) 4179.

3. Gehring, L. B. and Magasanik, B. *J. Am. Chem. Soc.* **77** (1955) 4685.

4. Peterson, E. A. and Sober, H. A. *J. Am. Chem. Soc.* **78** (1956) 751.

5. Sober, H. A., Gutter, F. J., Wyckhoff, M. M. and Peterson, E. A. *J. Am. Chem. Soc.* **78** (1956) 756.

Incorporation of Radioactive Phosphate into Thiamine Phosphate in Yeast

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Besides thiamine diphosphate yeast contains small amounts of thiamine triphosphate. When incubating yeast with an excess of thiamine under special conditions the amount of thiamine triphosphate can be considerably increased. The incorporation of ³²P into thiamine triphosphate in yeast has been studied and compared with that into thiamine di- and monophosphate and adenosine triphosphate. The experiments have been carried out partly with yeast containing only its natural amount of thiamine phosphates, partly with yeast enriched in thiamine phosphates. In both cases ³²P was incorporated to a higher degree into thiamine triphosphate than into the other thiamine compounds. The incorporation into thiamine triphosphate was localized especially to the terminal phosphate.

Studies on a Thrombin-coagulable Protein in Blood Platelets

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Reports on the effect of thrombin on washed platelet suspensions and platelet extracts indicate the presence of a thrombin-coagulable protein ^{1,2}.

A preliminary report is given of experiments in which these observations were verified. Extraction and partial purification of the coagulable material is described, together with observations of some of its characteristics. The effects of thrombin on intact blood platelets are discussed in relation to these results.

A detailed report will be published later.

1. Ware, A. G., Fahey, J. L. and Seegers, W. H. *Am. J. Physiol.* **154** (1948) 140.

2. Schneider, C. L., Claxton, E. B., Hughes, C. H. and Johnson, S. A. *Am. J. Physiol.* **179** (1954) 236.