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**Extractives of muscle: a new iminazol phosphorus compound.**

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For the separation of the mixture of organic substances which occurs in muscle, the Kossel-Kutscher<sup>1</sup> procedure has been found to be inadequate. It causes decomposition of certain substances present, and does not satisfactorily separate the resultant decomposition products. A different method for the isolation of the extractives of muscle is therefore being developed. Before the new method can be extended, it becomes necessary to identify some of the products obtained.

One of these is a copper salt of an unstable phosphoric acid compound, of which the empirical formula obtained is  $C_{14}H_{21}O_{11}N_4P \cdot 4H_2O$ . The copper salt has been obtained nearly pure by repeated precipitation from a concentrated water solution by alcohol. It is very hygroscopic, and loses 4 molecules of water when heated at 120°.

The substance gives a strong color reaction for the iminazol ring, but no other color tests have been obtained. It does not reduce Benedict's solution, nor does it give a positive reaction for pentose. The phosphoric acid may be precipitated in the cold by alkaline magnesia mixture, although it was not removed by treatment of the compound with barium hydroxide in the process of its isolation, or by copper oxide, in the preparation of the copper salt. The evidence for the phosphoric acid being present other than as a salt, is considered, however, to be incomplete.

If, from the iminazol color reaction, the presence of carnosine in the molecule is assumed, the organic residue, other than carnosine, would then have the composition  $C_5H_6O_5$ . It would seem that this residue has come from some carbohydrate decomposition product.

This iminazol phosphorus compound therefore is a highly unstable substance, which should correlate the chemistry of carnosine and of a carbohydrate, and possible also of loosely bound phosphoric acid in muscle.

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<sup>1</sup> Isolierung von Basen aus den Extrakten der Muskeln. D. Ackermann. *Abderhalden's Handbuch der biochem. Arbeitsmethoden*, 2, 1002.