An amino acid-free peptidase preparation from a bacillus, closely related to but not identical with, *Bacillus brevis*, was found to split glycylglycine (GG), LGG and a number of other di- and tripeptides. If GG was incubated at pH 7.4 with this enzyme preparation the reaction could be followed titrimetrically. Tests from the incubation mixture, as well as reference tests of glycine and GG were simultaneously placed on a Whatman No. 1 paper and chromatographed with butanol — acetic acid. It was found that the colour strength of the spots, after developing with ninhydrin, run parallell with the titration values, but that the glycine spot could be detected on the paper on a very early stage of the incubation when the titration values had not altered perceptibly. It is also easily possible to follow the reaction at very short intervals, as the incubation can be made in a capillary pipette, from which drops can be placed on the paper with an interval, if desired, of only a few seconds.

If, in the manner outlined here, LGG was incubated with the same enzyme preparation, only leucine and GG could be detected on the paper but no glycine. Apparently the liberated leucine inactivated the GG-splitting capacity of the enzyme preparation. This was confirmed by incubating GG together with varying amounts of leucine, when it was found that also very small quantities of leucine reduced the velocity of the splitting of GG.

The same enzyme preparation as well as guinea pig liver homogenate has been studied by this method also with other di- and tripeptides. In every case it was found that the ninhydrin spots of the split products could be detected before the titration values had altered and that the colour strength of the spots was proportional to the titration values.

The Conversion of [1-^{14}C] Cetyl Alcohol into Palmitic Acid in the Intestinal Mucosa of the Rat

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The mechanisms involved in the intestinal absorption of the higher aliphatic alcohols are still very little known.

Stetten and Schoenheimer [1] feeding deuterium labeled cetyl acetate to rats found that the cetyl alcohol was well absorbed, and they were also able to isolate deuterated fatty acids from the carcass.

In order to investigate whether cetyl alcohol is converted into palmitic acid already during the passage through the intestinal mucosa, 0.5 ml of a 5 % solution of [1-^{14}C] cetyl alcohol in olive oil has been administered to rats with a thoracic duct fistula.

The amount of isotope in the fecal lipids was determined and the amount of isotope absorbed was calculated. The lymph fat was subjected to chromatography on silicic acid according to Borgström [2]. A method was worked out for separating free cetyl alcohol from neutral fat.

From 63 to 96 % of the fed activity was absorbed. These results confirm earlier investigations that cetyl alcohol is well absorbed in the rat [1,3,4].

In four experiments from 31 to 64 % of the absorbed activity was recovered in the lymph lipids. The major portion of the activity in the lymph lipids was recovered in the neutral fat. After saponification and recrystallisation with inactive palmitic acid it was found that all the activity in the neutral fat fatty acids could be accounted for as palmitic acid. The oxidation of the cetyl alcohol must largely have taken place during its passage through the intestinal mucosa.

About 15 % of the absorbed cetyl alcohol passed unchanged through the intestinal mucosa and could be isolated as free cetyl alcohol in the lymph lipids. The remainder of the activity in the lymph lipids was present in the phospholipid fatty acids. The proportions of the activity between neutral fat and phospholipids were those characteristic for palmitic acid.

From the results of this investigation it is thus apparent that there is an intense metabolic activity in the intestinal mucosal cells. During the absorption of cetyl alcohol most of this compound is oxidized to palmitic acid that is subsequently incorporated into glycerides, phospholipids and cholesterol ester.

A full report of this work will be published in *Acta Physiologica Scandinavica*.

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