

using commercial ^{131}I -Triolein.

To summarize, the present study, clinical

and experimental, indicates the necessity of the purification of commercial ^{131}I -Triolein.

Studies on D. Berkowitz's Method (The 3rd Report) Special Reference to Pediatric Field

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The Triolein and Oleic Acid Test has been incorrect, because of impurity of the commercial products.

They were assayed on the paper chromatogram and thin layer chromatogram. It was concluded that the test was correct if it was performed during a week after the assay.

We applied this method on children. The

normal criteria of the triolein and oleic acid test ranged from 8% to 16% at 4 or 6 hrs.

The children showed no significant influence on the data without any restriction of the pre-operative food intake, although it is desired that the test is performed with the stomach empty or after intake of the cold meal.

Absorption of Fatty Acids of Different Chain Lengths and Medium Chain Triglyceride

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The absorption of oleic acid, linoleic acid, palmitic acid and sodium trioctanoate labeled with ^{14}C in the carboxyl position were measured in rats and the form of administered glyceryl trioctanoate-1- ^{14}C (MCT) in the liver and in the portal blood were studied in dogs by the gas chromatography and the thin-layer chromatography.

Medium chain fatty acid (C_8) fed to rats was absorbed about 80 per cent but long chain fatty acids less than 50 per cent in one hour.

In vivo experiments using isolated loops of dog intestine in accordance with the blood vessel distribution in the mesenterium were carried out. MCT was administered into the isolated loops and the venous blood was con-

tinuously collected with polyethylene tube. This experiments indicated that MCT was more absorbed in the middle portion of the intestine of the dogs.

The largest part of the ^{14}C -activity in the lipid of portal blood was found in the fatty acid fraction and agreed with the administered lipid (C_8).

Half of the ^{14}C -activity of the lipid in the liver was in the phospholipid, 35 per cent in the triglyceride but low in the fatty acid fraction.

In 75 minutes, 21~25 per cent of the administered dose and 27~32 per cent of the absorbed dose of radioactivity were recovered as the expired $^{14}\text{CO}_2$ in the rats.