

niederen Fettsäureestergemisch besteht. Gutzeit³⁾ erhielt folgende Fraktionen: (a) 195~210°, 58.6%; (b) 233~240°, 29.3%; (c) 240~270°, 12.1%. Auch Schimmel *et al.*⁴⁾ erwähnen, dass dieses Öl grösstenteils aus Capronsäure besteht.

Hiermit könnte das Fruchtol von *Heracleum lanatum* Michx. in Japan wohl an Stelle von Pastinac Öl benutzt werden, nur ist es darauf zu achten, dass diese Pflanze in Form und Farbe ganz ähnliche Früchte tragende zwei Varietäten darstellen — die eine das ätherische Öl enthaltende und die andere nichts davon.

Pharmazeutisches Fakultät
Universität Kumamoto
Oe-machi, Kumamoto

Atsushi Fujita (藤田 穆)
Yoshio Hirose (広瀬良男)
Tanomu Matsumoto (松本 央)

den 6. Februar, 1956

3) *Ibid.*, **177**, 372(1875).

4) Schimmel *et al.*: Ber., **1908**, 96.

U.D.C. 547.554:542.941.7

A Modified Emde Degradation Reaction

It was found that Raney nickel alloy can advantageously be employed in the Emde degradation reaction in place of sodium amalgam for the reductive fission of quaternary ammonium salts resistant to Hofmann degradation. The reaction proceeds under milder working conditions, in shorter time, and in better yield of the product than the usual Emde degradation. Reductive fission of benzyltrimethylammonium salt will be given as a typical example.

The quaternary chloride (5 g.) in 50 cc. of water was mixed with aq. sodium hydroxide solution (20 g. of 50%), and to the resultant turbid solution was now added powdered Raney nickel alloy (1.5 g.) in small portions during 30 minutes, with stirring and cooling to keep the temperature within 25°. After being stirred for an additional hour at 25°, the product was collected in ether, dried, and distilled. Yield of toluene (b.p. 110~111°) was 2.2 g. or 90%. Trimethylamine was recovered as its hydrochloride, m.p. 274~276° (decomp.), which weighed 2.45 g.; yield, 95%.

The detail and some other examples will appear in the forthcoming number of this Bulletin.

Pharmaceutical Institute
Medical Faculty
University of Tokyo.
Hongo, Tokyo

Shigehiko Sugasawa (菅沢重彦)
Hisayuki Matsuo (松尾寿之)

March 15, 1956