Huygens Institute - Royal Netherlands Academy of Arts and Sciences (KNAW)
Citation:
Romburgh, P. van, On the essential oil from the leaves of Alpinia malaccensis Rosc, in: KNAW, Proceedings, 3, 1900-1901, Amsterdam, 1901, pp. 451
This PDF was made on 24 September 2010, from the 'Digital Library' of the Dutch History of Science Web Center (www.dwc.knaw.nl) > 'Digital Library > Proceedings of the Royal Netherlands Academy of Arts and Sciences (KNAW), http://www.digitallibrary.nl'

Chemistry. — "On the essential oil from the leaves of Alpinia malaccensis Rosc". By Dr. P. VAN ROMBURGH.

In a communication 1) on the occurrence of methyl cinnamate in the rhizomes of Alpinia malaccensis, I incidentally mentioned that the leaves of this plant yield an essential oil, which is likewise rich in this substance. Since then, I have prepared this oil in larger quantity and investigated the same jointly with Dr. TROMP DE HAAS, Assistant to the Agric. Chem. Laboratory of the Government Botanical Gardens at Buitenzorg.

From 700 Kilos. of fresh leaves, with the stalks attached, 1100 c.m. of oil were obtained. The yield is, therefore, 0.16 percent. The sp. gr. at 26° was 1.02. Rotation + 6.5°. When treated with aqueous soda 25 percent of the oil are not attacked, forming a liquid compound, the bulk of which boils from 160°—170°. This liquid may be isolated in a still more simple manner by treating the essential oil with steam; it then readily distils over whilst the methyl cinnamate, of which the oil consists to the extent of 75 percent, remains behind in a practically pure condition, and forms beautiful crystals on cooling.

By fractional distillation, the liquid portion yields a liquid, boiling from 158° — 160° , having a sp. gr. of 0.857 at 26.5° . In a 200 m.m. tube it showed a rotation of 43° 20' to the right. The analysis and the vapour density agreed with that of a substance of the composition C_{10} H_{16} .

This hydrocarbon clearly belongs to the pinene group; with nitrosyl chloride it yields a compound which 2), by the action of piperidine, gives pinene nitrolpiperidine melting at 118° — 119°.

Chemistry. — "On the action of nitric acid on the esters of methyl-phenylaminoformic acid." By Dr. P. VAN ROMBURGH.

Some years ago, I have shown that by the action of nitric acid on the esters of phenyl-aminoformic acid, under definite circumstances, two or three NO₂-groups simply enter the benzene nucleus without any substitution of NO₂ for the amino-hydrogen, or liberation of the formic acid-residue taking place.

¹⁾ Report of ordinary meeting Kon Akad v. Wetensch 23 April 1898.

²⁾ This nitrosylchloride compound does not, however, melt at 103° but at 108°. I also found that melting point for an analogous compound from the terpene from the leaves of Myristica fragrans.