Optical Rotatory Power of *l*-Menthol in Heavy Methyl Alcohol.

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The author⁽¹⁾ measured specific rotatory power of *d*-tartaric acid in ordinary water and 2.15% heavy water and obtained the results given in Table 1.

Table 1.

Solvent	$[\alpha]_D^{29.0}$	$[\alpha]_D^{26.9}$
2.15% Heavy water	8.84°	8.56°
Ordinary water	8.89°	8.60°

This difference was explained quantitatively by the decrease of hydrogen ion concentration under the assumption that the degree of dissociation of *d*-tartaric acid in heavy water is the same as acetic acid.

Biilmann, Jensen, and Knuth⁽²⁾ observed the specific rotatory power $[\alpha]_D^{20} = +0.40°$ in 2-deutero-camphane.

The present author⁽³⁾ carried out the following experiments: 2.5 g. of *l*-menthol was dissolved in 7 c.c. of ordinary methyl alcohol or 27.5% heavy methyl alcohol. No difference in specific rotatory power was observed (Table 2).

Table 2.

Solvent	α	$[\alpha]_D^{14.4}$
Ordinary methyl alcohol	17.49°	48.63°±0.03°
27.5% Heavy methyl alcohol	17.49°	48.63°±0.03°

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(1) *Tech. Repts. Kyushu Imp. Univ.*, **11** (1936), 21.

(2) *Ber.*, **69** (1936), 1031.

(3) *Tech. Repts. Kyushu Imp. Univ.*, **12** (1937), 169.

From these results it is concluded that the difference of specific rotatory power in pure heavy methyl alcohol is at most 0.10° and the isotopic effect in hydroxyl bond has little influence upon the field of asymmetric carbon atom.

Recently H. Erlenmeyer and H. Schenkel⁽⁴⁾ observed remarkable differences in specific rotatory power in *l*-mandelic acid and *d*-atrolactic acid namely 5.83° ± 0.26° and 1.19° ± 0.2° respectively. In these cases the isotopic effect upon the field around asymmetric carbon atom are remarkable as compared with camphane or menthol. This is probably due to cyclic nature of latter molecules.

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(4) *Helv. Chim. Acta*, **19** (1936), 1199, 1381.