	$Me_2>Si(OEt)-Si(OEt)_2-Me$	$Me-Si(OEt)_2-Si(OEt)_2-Me$	$Me-Si(OEt)_2-Si(OEt)_3$	$Me_2>Si(OEt)-H$
bp°C (mmHg)	73 (13)	104 (24)	147 (24)	53~55(760)
d_4^{20}	0.8891	0.9222	0.9447	0.7536
n_D^{20}	1.4205	1.4174	1.4164	1.3670
MR_D Calc.	67.24	72.63	78.03	31.30
MR_D Obs.	67.4	72.66	78.23	31.04
Si % Calc.	23.73	21.07	18.94	—
Si % Obs.	23.9	20.92	18.33	—
Si−Si% (H_2 evolved)	99	99	98	96
k 30°C l/mol. sec	4.83×10^{-4}	10.7×10^{-3}	4.07×10^{-3}	19.2×10^{-3}
E Kcal/mol	16.3	12.8	15.4	12.1
log A (l/mol. sec)	8.4	7.3	9.6	7.0

(Read at the semi-annual meeting of the Institute on June 12, 1954)

Infrared Spectra of Sugars and Glucosides

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F. M. Berger and W. Bradley synthesized a large number of Glycerol ethers, of which 3-(2'-Methylphenoxy) propane-1,2-diol has been used as myostatic anesthetic under the trade name of Myanesin. The authors followed the similar procedure with glucosides instead of glycerol ethers and prepared various pairs of α,β-phenolic glucosides in order to compare their physiological actions (*J. Pharm. Soc. Japan*, **72**, 13 (1952); *ibid.* **73**, 402 (1953)). Since February 1953 the authors have carried out the research on the infrared absorption spectra of the α,β-pair of D-glucose and its glucosides, to investigate whether the infrared absorption spectra of anomeric pairs would reveal differences in each pairs, or whether comparison of them reveal common differences which are universally characteristic.

It is observed that in the 11.5μ~11.9μ region all the α-isomers of D-glucose and D-glucosides have prominent absorption bands which the corresponding β-isomer have not. Furthermore, the absorption spectra of D-sorbitol and D-mannitol which have no lactol hydroxyl radical do not reveal the absorption in the 11.5μ to 15μ region. Also the absorption spectra of β-D-mannose and α-D-galactose which are considered to have cis-configuration at anomeric carbon reveal the profound absorption at 11.8μ and 11.9μ respectively.

From the above, the authors conclude that the common absorption of the sugars and glucosides in the 11.5μ~11.9μ region is the characteristic absorption of cis-configuration at anomeric carbon.

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