

PREPARATION OF 7,7'-DIMETHYL-8,8'-DIQUINOLYL AND OF 5,5',7,7'-TETRAMETHYL-8,8'-DIQUINOLYL

Sir:

The possibility of optical isomerism in substituted diquinolyis has been suggested by Mascarelli [*Gazz. chim. ital.*, **58**, 627 (1928)]. The preparation of such compounds has been under way at this Laboratory for nearly two years.

7,7'-Dimethyl-8,8'-diquinolyl was made by coupling two molecules of 3-nitro-2-iodotoluene by means of copper powder. The resulting dinitro-dimethyldiphenyl was reduced and converted by a Skraup synthesis to 7,7'-dimethyl-8,8'-diquinolyl. It is a white solid, melting at 213–215°. It is insoluble in water, but soluble in dilute acids and in alcohol, benzene and ether.

5,5',7,7'-Tetramethyl-8,8'-diquinolyl was made by coupling two molecules of 5-nitro-4-iodo-1,3-dimethylbenzene with copper powder. The resulting dinitrotetramethyldiphenyl was reduced and converted by a Skraup synthesis to 5,5',7,7'-tetramethyl-8,8'-diquinolyl. The substance is a white solid similar in properties to the dimethyldiquinolyl. The preparation of larger quantities of these and other substituted diquinolyis is now under way and attempts are being made to resolve the compounds.

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THE STRUCTURE OF ALPHA-PENTAACETYLFRUCTOSE AND ALPHA-CHLOROACETYLFRUCTOSE

Sir:

In 1915 Hudson and Brauns [*THIS JOURNAL*, **37**, 1283, 2736 (1915)] described two crystalline pentaacetates of fructose which they believed to constitute an α,β -stereoisomeric pair.

In 1920 Brauns [*ibid.*, **42**, 1846 (1920)] prepared from tetraacetylfructose two chloro compounds which he assumed to be α - and β -stereoisomers. Subsequently his designation of the two forms was reversed at the suggestion of Dr. Hudson and now the substance showing $[\alpha]_D -161^\circ$ in chloroform solution is known as β -chloroacetylfructose whereas the one with $[\alpha]_D +45^\circ$ is assigned the α -configuration.

Using the rotations of these chloro compounds to determine the applicability of the principle of optical superposition to derivatives of the ketone sugars, Dr. Hudson [*ibid.*, **46**, 477 (1924)] calculated the rotations of the fructose pentaacetates. From his results he concluded that the compound with the positive rotation is probably not the true α -form. This conclusion is supported by the differences in properties of the two known pentaace-