

BIBLIOGRAPHY OF PHARMACEUTICAL RESEARCH

Compiled by A. G. DuMez, Reporter on the Progress of Pharmacy.

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THE IDENTIFICATION OF SOME HYPNOTICS OF THE BARBITURIC ACID SERIES.

BY GEORGE W. HARGREAVES AND H. W. NIXON.

Barbituric acid derivatives due to their wide-spread use as hypnotics have become of increased importance in analytical work of a toxicological or pharmaceutical nature.

Numerous qualitative tests have been proposed for barbital and other individual members of this group but no reaction has been applied to a whole series of these compounds. In most cases, only a few derivatives have been investigated. It is necessary to know in using a qualitative test whether it is specific for the substance being tested or whether it may be simulated by some related compound. For this investigation, samples of most of the widely used barbituric acid derivatives were obtained.

After a comprehensive survey of the literature, a number of reactions were selected which might provide a scheme for the detection and positive identification of any member of the group studied. It will be seen from the table of results that this purpose has been accomplished.

EXPERIMENTAL.

Solubility Tests.—The free acids are only sparingly soluble in water but readily dissolve in 5% sodium carbonate or hydroxide. The ethyl isopropyl derivative is used in the form of the calcium salt (Ipral) and is readily soluble in water. Others commonly employed in the form of their sodium salts are the diethyl; phenyl ethyl; ethyl, *l*-methyl butyl (Nembutal) and ethyl isoamyl (Sodium Amytal) barbituric