

STUDIES IN CHLORAL AMIDES

Part VII. Reactivity of the α -OH Group in Chloral Bromo Salicylamides and Their Methyl Ethers

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IN continuation of the work on bromo chloral salicylamides¹ the reactivity of α -OH group in chloral 3-bromo salicylamide, chloral 5-bromo salicylamide, chloral 5-bromo 2-methoxy benzamide, chloral 3: 5-dibromo salicylamide and chloral 3: 5-dibromo 2-methoxy benzamide has further been studied on lines described in a previous paper.²

The action of acetic anhydride in the alkaline medium gave anhydro compound (*cf.* Ref. 2); while the acidic medium gave completely acetylated products.

Benzoyl chloride as expected gave the simple benzoyl derivatives; while dimethyl sulphate gave completely methylated compounds.

The yields are more or less quantitative throughout.

Experimental

The methods used for the preparation of various derivatives were the same as used previously (*cf.* Ref. 2).

¹ Hirwe, Patil and (Miss) Gavankar, *Proc. Ind. Acad. Sci. (A)*, 1940, **11**, 512.

² Hirwe and (Miss) Gavankar, *J. Univ. Bombay*, 1937, **6**, Part II, 123.

Compound	Solvent	Crystalline nature	M.P.	Molecular formula	Found percent	Required percent
Chloral 3-bromo- α -2-diacetoxy benzamide	alcohol	clusters of needles	119–20°	$C_{13}H_{11}O_8NCl_3Br$	halogen 42.0	41.7
Chloral 5-bromo- α -2-diacetoxy benzamide	"	needles	151–52°	$C_{13}H_{11}O_8NCl_3Br$	halogen 41.9	41.7
Chloral 5-bromo- α -acetoxy-2-methoxy benzamide	"	"	134–35°	$C_{12}H_{11}O_4NCl_3Br$	halogen 44.4 N 29.0	44.5 3.3
Chloral 5-bromo- α -2-dibenzoyloxy benzamide	methyl alcohol	plates	97–100°	$C_{23}H_{15}O_3NCl_3Br$	halogen 33.2	32.6
Chloral 5-bromo- α -benzoyloxy-2-methoxy benzamide	alcohol	prisms	145–46°	$C_{17}H_{13}O_4NCl_3Br$	halogen 38.0 N 3.0	38.7 2.9
Chloral 5-bromo- α -2-dimethoxy benzamide	"	cubes	160°	$C_{11}H_{11}O_3NCl_3Br$	halogen 47.9 N 3.5	47.8 3.6
Anhydro (5-bromo-2-methoxy chloral benzamide)	"	"	149–50°	$C_{20}H_{16}O_5N_2Cl_6Br_2$	halogen 50.4	50.6
Chloral 3 : 5-dibromo- α -2-diacetoxy benzamide	"	needles	155–57°	$C_{13}H_{10}O_5NCl_3Br_2$	halogen 51.1 N 2.6	50.6 2.7
Chloral 3 : 5-dibromo- α -acetoxy-2-methoxy benzamide	"	"	117–19°	$C_{12}H_{10}O_4NCl_3Br_2$	halogen 52.8	53.3
Chloral 3 : 5-dibromo- α -benzoyloxy-2-methoxy benzamide	acetone	plates	124–26°	$C_{17}H_{12}O_4NCl_3Br_2$	halogen 46.7	47.5
Chloral 3 : 5-dibromo- α -2-dimethoxy benzamide	alcohol	rhomboids	108–09°	$C_{11}H_{10}O_3NCl_3Br_2$	halogen 56.9 N 3.0	56.6 3.0
Chloral 3 : 5-dibromo- α -methoxy-2-hydroxy benzamide	"	parallelo epipodes	176–77°	$C_{10}H_8O_3NCl_3Br_2$	halogen 58.9 N 3.1	58.4 3.1
α -Anhydro-(3 : 5-dibromo-2-methoxy chloral benzamide)	"	cubes	136–37°	$C_{20}H_{14}O_5N_2Cl_6Br_4$	halogen 59.8	59.7

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