[Jour. Indian Chem. Soc., Vol. 44, No. 11, 1967]

NOTES

Synthesis of ∝-benzamido-β-(3, nitro-4-methoxyphenyl) and β-(3, 4-methylenedioxyphenyl)-acrylohydrazides and their condensation products with various carbonyl compounds

Satyendra Kumar and R. P. Mahesh

Hydrazones of many hydrazides especially that of isonicotinic acid with various ketonic compounds have been extensively studied for bacteriostatic activity. Recently Kametani et al.[1] have reported anticancer properties in some substituted phenylcarboxylic and phenylacetic acid hydrazides and their hydrazones.

During the course of some other work we obtained ∝-benzamido-β-(3-nitro-4-methoxyphenyl) and β-(3,4-methylenedioxyphenyl)-acrylohydrazides. It was considered dered worthwhile to prepare their hydrazones.

∝-Benzamido-β-(3-nitro-4-methoxyphenyl) and β-(3,4-methylenedioxyphenyl)-acrylohydrazides were prepared by the action of hydrazine hydrate on 2-phenyl-4-(3-nitro-4-methoxybenzylidene)-2-oxazolin-5-one and 2-phenyl-4-(3,4-methylenedioxybenzylidene)-2-oxazolin-5-one. These oxazolones were obtained by heating m-nitroanisaldehyde and 3, 4-methylenedioxybenzaldehyde with hippuric acid, anhydrous sodium acetate and acetic anhydride.

Hydrazones—A solution of hydrazide (0.01M), carbonyl compound (0.01M) and a drop of sulphuric acid in ethanol was heated on water bath for 1 hr. After cooling the solid hydrazone was filtered and crystallised from ethanol-acetic acid. They are repor ed in the Tables.

TABLE I

Hydrazones of ∝-benzamido-β-(3-nitro-4-methoxyphenyl)-acrylohydrazide

S. No.	Carbonyl compounds	m.p.°	Formula	Nitrogen	
				Found	Required
1.	2-Hydroxy-A	260	$C_{25}H_{22}O_6N_6$	10.80	11.81
2.	4-Hydroxy-A	270	$C_{25}H_{22}O_6N_6$	11.79	11.81
3.	2-Hydroxy-3-methyl-A	280	$C_{26}H_{24}O_6N_6$	11.50	11.47
4.	4-Hydroxy-5-methyl-A	278	$C_{26}H_{24}O_6N_4$	11.45	11.47
5.	2-Hydroxy-5-chloro-A	188	$C_{25}H_{21}O_6N_4Cl$	11.10	11.01
6.	2,4-Dihydroxy-A	265	$C_{25}H_{22}O_7N_6$	11.95	11.42
7.	2,4-Dihydroxy-5-bromo-A	262	$C_{25}H_{21}O_7N_4Br$	9.70	9.82
8.	2,4-Dihydroxy-5-nitro-A	160	$C_{25}H_{21}O_9N_5$	13.10	13.08
9.	2, Hydroxy-4-methyl-5-chloro-A	215	$C_{26}H_{23}O_6N_4Cl$	10.55	10.71
10.	2, Hydroxy 4,6-dimethyl-5-chloro-A	187	$C_{27}H_{25}O_6N_4Cl$	10.30	10.43

1. Kametani *et al.*, Ya Kugaku Zasshi, 1963, **83**, 838, 844. 847, 851.

TABLE II

Hydrazones of α-benzamido-β-(3,4-methylenedioxyphenyl)-acrylohydrazide

S. No.	Carbonyl compounds	M.P.°*	Formula	% Nitrogen Found	% Nitrogen Required
1.	2-Hydroxy-A	173	$C_{23}H_{21}O_5N_3$	9.50	9.48
2.	4-Hydroxy-A	197	$C_{23}H_{21}O_5N_3$	9.51	9.48
3.	2-Hydroxy-3-methyl-A	225	$C_{24}H_{23}O_5N_3$	9.15	9.19
4.	4-Hydroxy-5-methyl-A	192	$C_{24}H_{23}O_5N_3$	9.17	9.19
5.	2-Hydroxy-5-chloro-A	183	$C_{23}H_{20}O_5N_3Cl$	8.62	8.79
6.	2,4-Dihydroxy-A	215	$C_{23}H_{21}O_6N_3$	9.21	9.15
7.	2,4-Dihydroxy-5-bromo-A	240	$C_{23}H_{20}O_6N_3Br$	7.87	7.80
8.	2,4-Dihydroxy-5-nitro-A	225	$C_{23}H_{20}O_8N_4$	11.19	11.11
9.	2-Hydroxy-4-methyl-5-chloro-A	200	$C_{24}H_{22}O_5N_3Cl$	8.60	8.54
10.	2-Hydroxy-4,6-dimethyl-5-chloro-A	221	$C_{25}H_{24}O_5N_3Cl$	8.30	8.38

* All melting points are uncorrected.

N. B. A denotes acetophenone.

The authors are grateful to (late) Dr. D. S. Deorah, Department of Chemistry, University of Rajasthan, Jaipur, for his valuable guidance and to Dr. G. L. Maheshwari, Principal, S.S.V. College, Hapur for providing research facilities. The financial assistance sanctioned to one of them (R.P.M.), by U. G.C. New Delhi is gratefully acknowledged.

Department of Chemistry,
S. S. V. College,
Hapur (U. P.).

Received, September 4, 1967.