

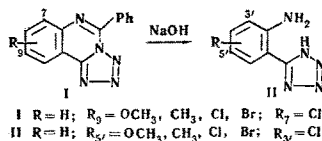
ALKALINE CLEAVAGE OF 5-PHENYL-7(9)-R-TETRAZOLO[1,5-c]QUINAZOLINES

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We have observed that 5-phenyl-7(9)-R-tetrazo[1,5-c]quinazolines (I) containing substituents R of different kinds in the benzene nucleus of the quinazoline moiety* readily undergo cleavage on being boiled with alkali with the formation of 5-(2'-amino-3'(5')-R-phenyl)tetrazoles (II):



The structure of 5-(2'-amino-5'-bromophenyl)tetrazole (II, R = 5'-Br) has been considered in detail in a previous paper [2]. Compound II (R = H) proved to be identical (mixed mp) with the 5-(2'-aminophenyl)tetrazole obtained by another method (its synthesis and a proof of its structure are given in the literature [3]). Compounds II, each containing a reactive primary aliphatic amino group, may be regarded as the starting materials for the preparation of various 5-phenyltetrazole derivatives, the synthesis of which by other methods is difficult.

5-(2'-Amino-3'(5'-R-phenyl)tetrazoles (II)

R	Mp, °C	Empirical formula	Found, %			Calculated, %		
			C	H	N	C	H	N
5'-CH ₃	191-2	C ₈ H ₈ N ₅	54.70	5.46	40.08	54.84	5.18	39.98
3'-Cl	197-9	C ₇ H ₆ N ₅ Cl	43.40	3.29	35.65	42.98	3.10	35.80
5'-Cl	192-4	C ₇ H ₆ N ₅ Cl	43.20	3.26	35.88	42.98	3.10	35.80
5'-OCH ₃	162-3	C ₈ H ₉ N ₅ O	51.07	4.92	37.60	50.26	4.74	36.63

5-(2'-Amino-3'(5')-R-phenyl)tetrazoles (II). A mixture of 0.002 mole of I and 10 ml of 10% aqueous NaOH was boiled until the solid matter had dissolved completely (from 1 to 4 hr for different substituents). After neutralization of the alkaline solution, the II precipitated. It was filtered off and crystallized from water. Yield 50-60% of theoretical (see table).

REFERENCES

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3. I. Ya. Postovskii and N. N. Vereshchagina, KhGS [Chemistry of Heterocyclic Compounds], 3, 944, 1967.

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*These compounds were obtained as described previously [1].