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SYNTHESIS OF 2-ARYLBENZOTHIAZOLES BY THE REACTION OF *o*-AMINOTHIOPHENOL WITH BIS(ARYLMETHYL) DISULFIDES

V. Z. Shirinyan, S. Yu. Melkova, L. I. Belen'kii, and M. M. Krayushkin

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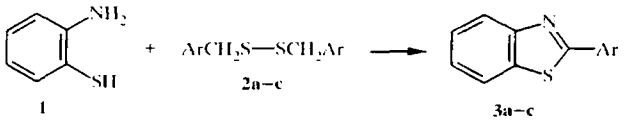
The interaction of symmetrical disulfides with thiols leads to an unsymmetrical disulfide [1]. On heating equimolar quantities of *o*-aminothiophenol (**1**) and bis(arylmethyl) disulfides **2a-c** in DMF or in N-methyl-2-pyrrolidone at 130-140°C for 8-10 h we obtained 2-arylbenzothiazoles **3a-c** in 54-73% yield in place of the expected unsymmetrical disulfides.



1 3a–c

a R = Ph; b 4-MeOC$_6$H$_4$; c 2,4-Cl$_2$C$_6$H$_3$

The scope and probable mechanism of the reaction described are the subject of further investigation.

2-Phenylbenzothiazole (3a). Yield 54%; mp 115-116°C (ethanol). Literature mp 114°C [2].

2-(4-Methoxyphenyl)benzothiazole (3b). Yield 58%; mp 131.5-132°C (ethanol). Literature mp 134-135°C [3].

2-(2,4-Dichlorophenyl)benzothiazole (3c). Yield 73%; mp 144-145°C (ethanol). Literature mp 144°C [4].

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N. D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Moscow 117913; e-mail: lb@1september.ru. Translated from Khimiya Geterotsiklicheskikh Soedinenii, No. 2, p. 268, February, 2000. Original article submitted December 17, 1999.

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