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# Phosphorus, Sulfur, and Silicon and the Related Elements

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# THE SYNTHESIS OF THIENO[2,3 C]ISOTHIAZOLE AND DERIVATIVES

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### THE SYNTHESIS OF THIENO[2,3 c]ISOTHIAZOLE AND DERIVATIVES

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The major product formed by the action of phosphorus pentasulphide on 2 ethoxally1 4,4 diethoxybutyronitrile has been shown to be 3 ethoxy-carbonylthieno[2,3 c]isothiazole (1,  $R=COOC_2H_5$ ).

Hydrolysis of this ester and decarboxylation of the resultant acid gave thieno[2,3 c]isothiazole (1, R=H).

$$\mathbb{R}$$
 $\mathbb{N}$ 
 $\mathbb{N}$ 
 $\mathbb{N}$ 
 $\mathbb{N}$ 

Confirmation of these structures has been obtained by alternative synthetic routes involving 3 mercapto isothiazoles.