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Synthesis and Characterization Of two Novel Thiofibrates Bearing 1,3-Benzoxazole Moiety

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Abstract:In the present study two novel thiofibrates ethyl-2-(1,3-benzoxazol-2-ylsulfanyl)-2-methyl propionate and ethyl-2-[(7-amino-5-chloro-1,3-benzoxazol-2-yl)sulfanyl]-2-methyl propionate are synthesized by treating 2-mercapto benzoxazoles and 7-amino-5-chloro-1,3-benzoxazole-2-thiol respectively with ethyl 2-bromo isobutyrate in presence of anhydrous potassium carbonate. The required 2-mercapto benzoxazole is synthesized by reacting 2-amino phenol with carbon disulphide in presence potassium hydroxide and acetic acid. Whereas, 7-amino-5-chloro-1,3-benzoxazole-2-thiol is obtained from the reaction of 2,6-diamino-4-chloro phenol. The synthesized compounds were characterized by physical data (melting point, R_f) and spectral studies (IR, 1H NMR). The spectral characterization study proves the fact that the assigned structures are in good agreement.

Keywords:1,3-benzoxazole, Bioisosteres, Thiofibrates, ethyl 2-bromo isobutyrate, Hyperlipidaemia

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