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Synthesis, Characterization and Antioxidant Activity of 2-Halobenzoyl Thiourea Bearing alpha- and beta-alanine

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Abstract

Six new 2-halobenzoylthiourea compounds bearing alpha- and beta-alanine have been successfully synthesized and characterized using CHNS microelemental analysis and spectroscopic methods including FTIR, UV-Vis and NMR. Microelemental analysis data of the compounds were in agreement with the theoretical values. The IR spectra showed the presence of important bands of the compounds while the H-1-NMR and C-13-NMR exhibited the expected chemical shifts. The compounds exerted weak antioxidant activity in DPPH scavenging test and moderate to good activity in beta-carotene bleaching test. The inclusion of halogen atoms has facilitated the release of hydrogen atoms and introduction of alpha- and beta-alanine have increased the beta-carotene bleaching and DPPH scavenging activities of the compounds.

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