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Facile Synthesis of Hydantoin Derivatives under Microwave Irradiation

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**Abstract:** The rapid and highly efficient synthesis of hydantoin derivatives 3(a-f) was achieved under microwave irradiation by using a domestic microwave oven from the reactions of cyanohydrin derivatives 2(a-f) with ammonium carbonate. The reaction proceeded rapidly (2-5 min.), and as a result a series of hydantoin derivatives 3(a-f) were obtained in high yields. All of the synthesized compounds were fully characterized by their melting point,  $^1\text{H-NMR}$ , FTIR spectroscopy and elemental analyses. Cyanohydrin derivatives 2(a-f) were also prepared from the ketone derivatives 1(a-f) with potassium cyanide in the presence of sodium metabisulfite in an additional reaction.

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