

# Synthesis of 5-(1,2,3-Thiadiazol-4-yl)-2-methylfuran-3-carboxamides

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**Abstract**—Acetylation of 2-methylfuran-3-carboxamides with acetic anhydride in the presence of magnesium perchlorate yields the corresponding 5-acetyl derivatives; their carboethoxyhydrazones have been synthesized via the reaction with carboethoxyhydrazine. The carboethoxyhydrazones undergo cyclization into the 5-(1,2,3-thiadiazol-4-yl)-2-methylfuran-carboxamides upon treatment with thionyl chloride under conditions of the Hurd–Mori reaction. In the case of (2-methyl-3-furoyl)proline esters, the optical activity is retained after the described transformations.

**Keywords:** furancarboxamide, acetylation, magnesium perchlorate, hydrazone, the Hurd–Mori reaction, (1,2,3-thiadiazol-4-yl)furan

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