Stereoselective Syntheses of Alkyl Z-2-(2-amino-4-oxo-1,3-selenazol-5(4*H*)-ylidene)acetates in Solvent-Free Conditions, X-Ray Single Crystal Structure Analysis of Ethyl Z-2-(2-amino-4-oxo-1,3-selenazol-5(4*H*)-ylidene)acetate

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Selenourea reacts with dialkyl acetylenedicarboxylates under solvent-free conditions to form 1:1 adducts, which undergo a cyclization reaction to produce alkyl Z-2-(2-amino-4-oxo-1,3-selenazol-5(4*H*)-ylidene)acetates, in good yields. The stereochemistry of the ethyl Z-2-(2-amino-4-oxo-1,3-selenazol-5(4*H*)-ylidene)acetate was established by X-ray single crystal structure analysis. The reaction is completely stereoselective.

Key words: Selenourea, Acetylenic Ester, Michael Addition, Stereoselectivity, 1,3-Selenazol