

**Synthesis of Phenylseleno Sugars from Epoxides and
of α,β -Unsaturated Carbonyl Derivatives for the
Study of Their Insecticidal Activity**

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ABSTRACT

This work reports the synthesis of sugar epoxides and their derivatives obtained by reaction with the dianion of phenyl selenoacetic acid. Approaches to the introduction of α,β -unsaturated carbonyl units in pyranoid systems were investigated. Preparation of a protected D-glycero-hex-3-enopyranosid-2-ulose and of a D-erythro-hex-2-enono-1,5-lactone is described. Some of the synthesized compounds possess insecticidal activity against fruit flies, house flies, and white flies.

Key Words: Sugar epoxides; Phenylseleno sugars; α,β -Unsaturated carbonyl moiety; Insecticidal activity.