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## PURPLE KOHLRABI PEEL, A NATURAL MATERIAL FOR ECO-FRIENDLY SILVER AND GOLD NANOPARTICLES

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### Abstract

Green chemistry is constantly detaching itself as an important alternative to conventional chemical routes since it is environmentally friendly, cost effective, neither does it require the use of toxic chemicals nor does it produce hazardous by-products. For preparing eco-friendly silver and gold nanoparticles, numerous plants have been used and the method involves the following steps: collecting the plant, drying and finely grinding it, mixing the plant with water to obtain the aqueous extract that further reacts with the inorganic salt to form the corresponding metallic nanoparticles. Kohlrabi (*Brassica oleracea* Gongylodes group) is a versatile vegetable rich in vitamin C with a multitude of nutrients beneficial to human health: can help lower the blood pressure and the cholesterol, fights cancer, is an adjuvant in weight loss, etc. This paper presents the eco-friendly synthesis of two metallic nanoparticles, namely silver nanoparticles (AgNPs), gold nanoparticles (AuNPs) from the aqueous extract of purple Kohlrabi peel and the corresponding metallic salts at different temperatures. The qualitative and quantitative screening of phytochemicals from the aqueous extract was carried out using standard analytical methods and the formation of AgNPs and AuNPs was investigated by recording UV-Vis at different time intervals, FTIR and DLS spectra.

**Key words:** gold nanoparticles, green chemistry, purple Kohlrabi, silver nanoparticles

*Received: June, 2020; Revised final: February, 2021; Accepted: March, 2021; Published in final edited form: April, 2021*

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