ANTIOXIDANT AND ANTIMICROBIAL PROPERTIES OF STEVIA LEAVES EXTRACTS AND SILVER NANOPARTICLES COLLOIDS

Iryna Laguta^{a*}, Teteiana Fesenko^a, Oksana Stavinskaya^a, Oksana Dzjuba^b, Lesya Shpak^b

^aChuiko Institute of Surface Chemistry of National Academy of Sciences of Ukraine, 17, General Naumov Street, Kiev-03164, Ukraine ^bM.M. Gryshko National Botanic Garden of National Academy of Sciences of Ukraine, 1, Timiryazevska Street, Kiev-01014, Ukraine ^e-mail: icvmtt34@gmail.com

Abstract. Three extracts of *Stevia rebaudiana* (Bertoni) were prepared using various types of raw materials: leaves of plants grown *ex situ*, leaves of plants grown *in vitro*, callus culture formed on damaged leaves. Composition of the extracts, their activity in the synthesis of silver nanoparticles colloids, as well as antioxidant and antimicrobial properties of the extracts and the colloids were investigated.

Keywords: Stevia leaves extract, silver nanoparticles colloid, antioxidant activity, antimicrobial properties.

Received: October 2016/ Revised final: November 2016/ Accepted: November 2016