

EXTRACTION METHODS OF NATURAL PIGMENTS FROM STAMEN OF SAFFRON FLOWER

R. Roohani^{1*}, S. Einafshar²

¹⁾ Msc Student of Agricultural Engineering, Food Science & Technology, Ghoochan Azad University Young Researchers Club, Ghoochan, Iran

²⁾ Assistant Professor, Department of Agricultural Engineering Institute, Khorasan Agricultural And Natural Resources Research Center, Mashhad/Iran, P.O.Box: 91735-488

In Iran annually produce high amounts of petal, sepals and stamen of saffron flower as by product, that waste without any use. The measure of fresh saffron's stamen is 7.645%. If we use them to produce natural pigments like anthocyanin, carotenoid or natural antioxidant, we optimizing them and the agricultural pollution of these by products is not happening. Stamen of saffron contains many kinds of valuable components such as antioxidants, phenolic compounds, carotenoids and anthocyanins. The saffron's flower is native in Iran specially at north east, in the region that named Khorasan. The possibility of extraction and applying of natural pigments from stamen to hope will use this pigments in food industry as natural pigments, is the purpose of this paper. The extraction of pigments was done by different solvents in an ultrasound apparatus at different times (5-15 minutes) and intensities (20-100%). Results showed that the stamen contains three components of natural pigment: soluble and insoluble water carotenoids and anthocyanin. The best time and intensity of ultrasound with the highest yield and antioxidant activity were introduced. The measuring showed that, the best sample in all of the exams was the sample that extracted in 10 minutes and 100% of sound intensity.

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* Corresponding author: Roxaneh_roohani@yahoo.com