

The Availability of Elderberry Plant Color Pigments in dyeing Ceramic, Glass Metal and Plastic Materials

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Plant pigments have been used since ancient times in coloring of various materials. However, the information related to the usage of plant pigments in coloring ceramics, glass and metal materials is quite low. Artificial dyes are known to have undesirable effects in terms of human health.

The aim of this study was to develop plantal dyes which are harmless to environment and human health. In the light of determined purposes, the availability of Elderly Plant (*Sambucus nigra*) color pigments in dyeing ceramics, glass, metal and the polyethylene materials was investigated

Color pigments was extracted from the elderberry plant. Aluminum ($KAl(SO_4)_2 \cdot 12H_2O$) and ferric sulfate ($FeSO_4 \cdot 7H_2O$) were used in mordanting. At the end of the study, no color loss was found on the low temperature however, it was determined that significant color loss was found depending on the temperature rise.

Depending on the finding of the study, it was found that the Elderberry dye was not suitable for technologies, requiring high temperature: however, the plant dye can be used at low temperatures. As a result, it was determined that the elderberry color pigment can be used in dyeing of glass, metal and ceramic materials as long as the color loss depending on temperatures was prevented.

Keywords; ceramic, metal, vegetable dyes, pigment, elderberry