

The Electrical conductivities of some plant extracts

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Aim of the study: In recent years, biological molecules appear to be frequently used in biosensor studies. Therefore, it is important to know the electrical conductivity properties of phenolic compounds. The purpose of this study is to determine the electrical conductivity of some plant extracts.

Material and Methods: The electrical conductivities of plant extracts were determined with respect to various variables. For this, the extracts of the solid phase of 6 different plants were compressed under a pressure of about 0.76 bar. The extracts were pelleted to a diameter of 13 mm. For each of these materials, the electrical conductivities were measured at temperatures ranging from 200 K to 304 K in 1 K.

Results: The electrical conductivities of plant extracts were determined depending on various variables of the selected sample. Furthermore, whether the considered extracts are semiconducting or not is investigated depending on the temperature. The resistance of element A1 decreased up to 0.89 ohms at 282 K. In the material A2, it is considered to exhibit semiconductor behavior in the range of 320-302 K.

Keywords: Electrical conductivity, resistivity, phenolic

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