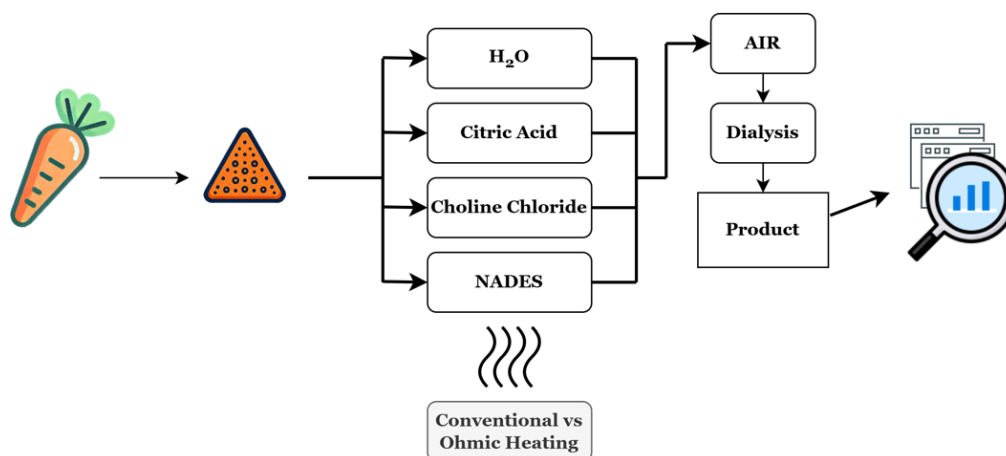


## OHMIC HEATING AND ITS POTENTIAL APPLICATION IN POLYSACCHARIDE EXTRACTION FROM AGRICULTURAL WASTE

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Ohmic heating is a well-known and eco-friendly technique that consists in passing an electric current through food materials, generating internal heat due to their electrical resistance. In this way, food components as well as the final products can be pasteurized. The advantage of this method is the rapid and uniform heating of the environment, which can be used in a new way, i.e. to increase the efficiency of the extraction process of natural products, including pectins from plant biomass, moreover in a shorter time with lower energy consumption [1]. In the presented studies, Ohmic heating was used as a factor supporting the extraction of pectins from carrot root pomace. The biomass selected for the experiments is a by-product of juice extraction and, as is known, is rich in polysaccharides, which are also present as fiber. Unfortunately, it is most often used as an additive to animal feed [2], and the potential for producing pectins from these pomace, which have a much higher market value, is not used. The aim of the experiments was to assess the potential of using Ohmic heating to obtain pectins from carrot root, when the process will be examined in Natural Deep Eutectic Solvents (NADES), eco-friendly, biodegradable solvents made from natural compounds, offering an effective, low-toxicity solution for extracting wide range of bioactive compounds from various sources [3]. The results of experiments were compared to those conducted in water and in the water solutions of each of NADES ingredients, and when the heating source was conventional.



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