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Agricultural Economics (Zemědělská ekonomika)

Economic evaluation and design of control mechanisms to determine the concentration of juices

Hron J., Macak T.:

Agric. Econ. – Czech, 60 (2014): 539-545

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There is a significant attention paid to food analysis in the context of authenticity monitoring in the food industry. Although this has focussed increasingly on food safety and authenticity, the agro-food sector has also instituted requirements for the product identification, differentiation and historical monitoring. For the design and evaluation of the control mechanism,

here is used the common approach for the design of experiments (DOE), specifically the “full factorial” design. The uniqueness of the solution lays in a geometric interpretation of the large variability the impedance, due to the samples provided by different producers. The presented solution consisted of the linearization variable zone by the Taylor polynomial. In the next step, there was conducted fuzzification of the electric impedance to determine the mechanism for identifying of juice concentrations.

Keywords:

control mechanism, design of experiments, electrical impedance, food quality, net present value

[[fulltext](#)]

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