

## STUDIES ON THE POSSIBILITIES OF AUTHENTICATING THE GEOGRAPHICAL ORIGIN OF WINES

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### Abstract

For some food products, as is the case with high-quality wines, the maturation and aging period determines their "ennoblement" with the development of the most refined qualities, but with consequences also on the economic value (price), a fact that requires the identification of the date (year) of obtaining. The purpose of this work is to complete the databases regarding the authentication of the geographical origin of the wines due to the specific conditions that the place of origin of the grapes gives the wines specific qualities and characteristics. A mapping of the provenance of a certain type of wine can thus be done.

The authentication of geographical origin can be investigated through a wide range of procedures, but there is no universal, direct scientific method, only indirect methods. Very faithful results are obtained only by corroborating several analytical techniques, followed by statistical processing and interpretation of the obtained results. The multifactorial approach through chemometric methods of processing the information provided by the instrumental analysis ensures the most rigorous results. The authentication and detection of possible fraud involve the completion of three important stages: sampling, analytical control, and data processing and interpretation. Fraudulent use of geographical indications is harmful to both legitimate producers and consumers. That is why the development of efficient (modern) investigative techniques for authenticating the geographical origin of food products is a challenge from an analytical point of view, which is currently being given special attention.

Interest in the authentication of food products has continuously increased, and is currently more current than ever, due to consumer pressure, as a result of animal diseases and the appearance of transgenic products on the market. To be able to confirm the authenticity of a product, considering its great diversity and the very small differences depending on the species and variety, it is indispensable to have a database (bank) where the main characteristics of the products sold can be found. The databases (banks) must be continuously dynamic and also correlated with the changes that occur in agriculture (climatic, biochemical, agrotechnical, etc.) and raw material processing technologies.

**Key words:** Authentication, Database, Wine, Quality, Geographical origin.