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Stable isotope analysis for control of declared geographic origin of Austrian and Slovak apricots: The IDARPO-Interreg-Project (AT-SK)

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Food products of certain geographic origin are more valued by consumers than the same commodities from other regions. Therefore, there is the risk and fear that incorrect labelling and declaration of geographic origin can occur to increase profit. Thus, a control of declared geographic origin is required to ensure correct labelling and to identify fraud.

For this purpose, apricot samples of the recent vintage (2019) are investigated to differentiate samples from different apricot-producing regions in Austria, Slovakia and other countries. The isotope composition of the elements hydrogen (H), carbon (C), nitrogen (N) and oxygen (O) of fruit pulp (H, C, N, O), fruit stone (H, C, O) and fruit juice (O) is analysed to find appropriate parameters for the differentiation of geographic origin. The investigation of different sample tissues (pulp, stone, juice) supports a better differentiation of geographic origin due to different seasonal intervals influencing the respective commodities.

Within the frame of the project 3 vintages will be investigated and analysed for stable isotopes as well as other analytical techniques (molecular markers). The combination of all sample data (including previously accumulated data, e.g. Horacek 2017, Horacek 2019) will lead to an improved differentiation and identification of geographic origin.

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References:

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