



NEWS RELEASE

International Organization of Vine and Wine (OIV) Officially Incorporates NMR Method in Compendium of International Methods of Analysis of Wines and Musts

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ETTLINGEN, Germany--(BUSINESS WIRE)-- Nuclear magnetic resonance (NMR) spectroscopy has been incorporated by the intergovernmental and International Organization of **Vine and Wine (OIV)** in its compendium of International Methods of Analysis of Wines and Musts, for the quantification of six key parameters in wine – glucose, malic acid, acetic acid, fumaric acid, shikimic acid and sorbic acid.

This press release features multimedia. View the full release here:

<https://www.businesswire.com/news/home/20210510005434/en/>

NMR FoodScreener™ platform enabling robust, quantitative wine-profiling by 1H-NMR (Photo: Business Wire)

quantify a significantly higher number of compounds in wines – simultaneously, label-free and with a single calibration.

Traditionally, several analytical techniques with individual calibrations are needed to measure these parameters. Now, 1H-NMR can very accurately

The advent of advanced techniques like 1H-NMR helps to complete the chain of authenticity in high-end wine supply chains. The 1H-NMR fingerprint contains hundreds of signals that, when combined with sophisticated statistics, allows the creation of robust databases, providing a reference for the contents, varieties, and regions of production of wines.

Bruker's NMR Wine-Profiling™ 4.0 module is based on the 400 MHz **NMR FoodScreener™ platform**. Now, 1H-NMR profiling has been accepted by the OIV, and offers the direct, label-free quantification of 53 compounds in a single,



automated measurement. This enables the verification of geographical origin, grape variety of monovarietal wines, and quality grade, e.g., of Spanish red wines. This addresses the increasing demand for assurance of the origin and integrity of wine from the vineyard to the point of sale, enhancing supply chain surveillance and protecting valuable brands.

Elena Meléndez Álvarez, Director at the Estación Enológica de Haro, La Rioja, Spain, commented: “The versatility of this equipment makes it possible to adapt the analyses to our client’s specific needs. A single analysis is enough to obtain information about over 50 wine metabolites. Until now, a wine laboratory would have had to use a combination of various methods to arrive at similar results. The NMR Wine-Profiling™ 4.0 module gives an overall view of the wine's main components, such as acidity and alcohol content and of minor ones, like polyphenols and amino acids.”

Dr. Iris Mangelschots, President of Bruker BioSpin’s Applied, Industrial and Clinical Division, commented: “The announcement of 1H-NMR as an official OIV method is an important step forward for the wine industry, and Bruker is proud to contribute high-value solutions that lead the way. Robust, quantitative wine-profiling by 1H-NMR is an easy-to-use, rapid and reliable test that provides growers and producers with the assurance of an authentication method to detect adulteration or fraud.”

Following this major milestone in NMR-based wine profiling, Bruker continues to innovate in NMR and is developing advanced food analysis solutions based on the principles of blockchain to identify adulteration in high value products such as honey, juice, spices and olive oil.

About the International Organization of Vine and Wine

The scientific and technical reference of the vine and wine world, the OIV is an intergovernmental organisation of a scientific and technical nature of recognised competence for its works concerning vines, wine, wine-based beverages, table grapes, raisins and other vine-based products. OIV's standards are adopted by many wine producing countries. For more information, please visit: <https://www.oiv.int/en/> or <https://www.oiv.int/public/medias/7590/oiv-oen-618-2020-en.pdf>

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as well as in industrial applications. Bruker offers differentiated, high-value life science and diagnostics systems and solutions in preclinical imaging, clinical phenomics research, proteomics and multiomics, spatial and single-cell biology, functional structural and condensate biology, as well as in clinical microbiology and molecular diagnostics. For more information, please visit: www.bruker.com.

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