



ANA LAB

ACCREDITED LABORATORY FOR TESTING THE
QUALITY AND AUTHENTICITY OF FOOD



YOUR PARTNER IN ANALYSIS



ANA LAB is an accredited laboratory specialized in testing the quality and authenticity of food.

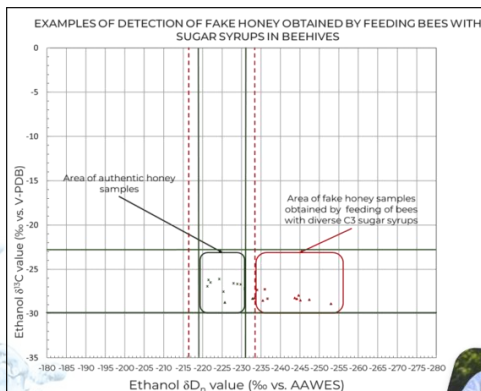
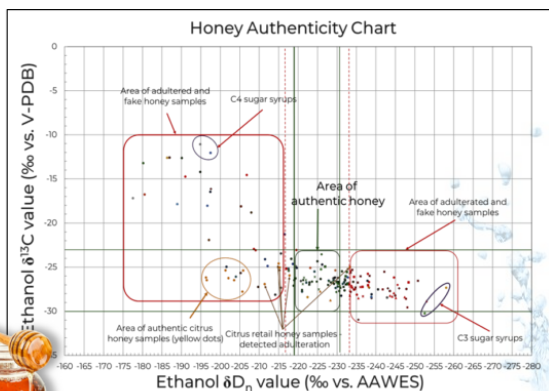
Our company provides customized food, wine and alcoholic beverage authenticity testing programs for domestic and international clients such as manufacturers, distributors, private and government laboratories, food associations, consumer protection organizations, etc. in a well-equipped laboratory space called ANA LAB with headquarters in Pančevo, Republic of Serbia



HONEY



We are able to detect the botanical origin of sugar in HONEY, regardless of whether it is a direct mixing of honey with industrial C4 and/or C3 sugar syrups or a question of bee feeding (indirect mixing of honey with sugar syrups).



HONEY TESTING SOLUTIONS:

- ⊙ Examination of the basic quality of honey,
- ⊙ Detection of added C3-sugar syrup,
- ⊙ Detection of added C4-sugar syrup,
- ⊙ Detection of oligosaccharides in honey
- ⊙ Detection of industrial enzymes in honey

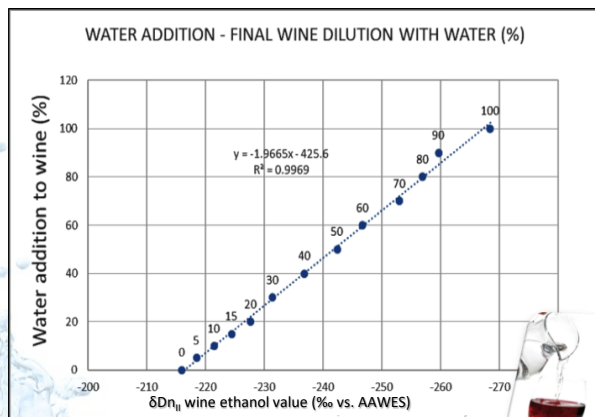
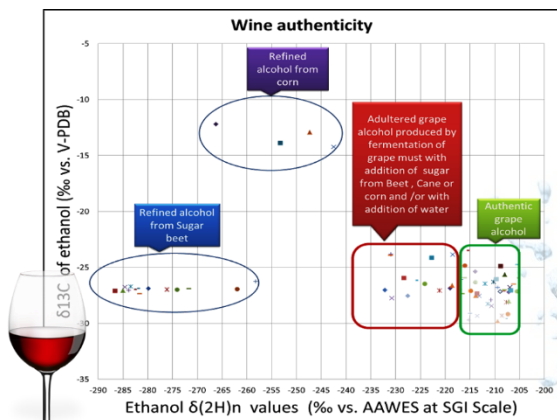




WINE



Our analytical solution for testing the authenticity of WINE includes detection of chaptalization (adding sugar to grape must before alcoholic fermentation), as well as detection of the origin of water in wine (whether water was added during the production process or dilution of the final wine with water).

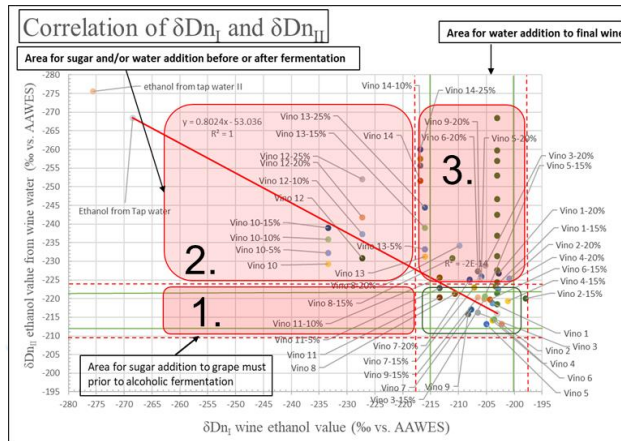


SOLUTIONS FOR TESTING WINE AUTHENTICITY:

- ⊙ Detection of added water in wine or grape must with and without geographical origin
- ⊙ Detection of added C4-sugar/ethanol in wine or grape must with and without geographical origin
- ⊙ Detection of added C3-sugar/ethanol in wine or grape spread with and without geographical origin
- ⊙ Generating an isotopic “fingerprint” of a wine product
- ⊙ Examination of the basic quality of wine



EIM technology gives us much greater possibilities compared to all currently known instrumental techniques used in the world to confirm the authenticity of wine. By correlating the dDnI and dDnII values of ethanol, we can determine exactly when the practice of adding sugar and/or water was carried out - before alcoholic fermentation (case no. 1), during alcoholic fermentation (case no. 2) or the addition of water to the final wine after the completion of alcoholic fermentation - dilution of the final wine with water (case no. 3).



SOLUTIONS FOR TESTING WINE AUTHENTICITY:

- ⊗ Detection of added water in wine or grape must with and without geographical origin
- ⊗ Detection of added C4-sugar/ethanol in wine or grape must with and without geographical origin
- ⊗ Detection of added C3-sugar/ethanol in wine or grape spread with and without geographical origin
- ⊗ Generating an isotopic “fingerprint” of a wine product
- ⊗ Examination of the basic quality of wine

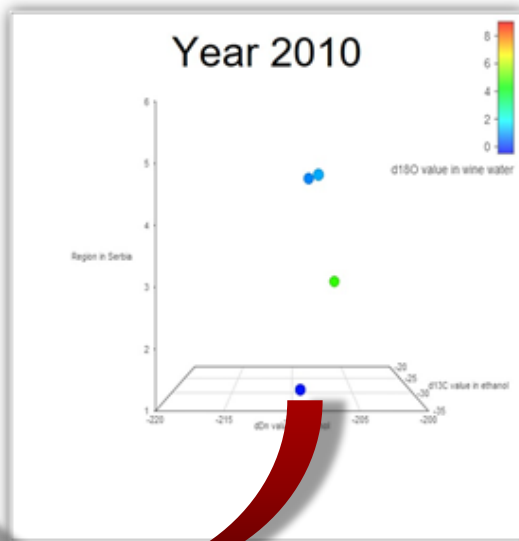


PROTECTION OF THE GEOGRAPHICAL ORIGIN OF WINE



The system of protection of the geographical origin of wine, which was developed in ANA LAB, provides phenomenal possibilities when we talk about the protection of the geographical origin of wine.

By creating isotopic databases for Serbian wines based on EIM-technology and integrating them with agroclimatic indices such as thermal index (TK), hydrothermal index (HTK), Winkler index (WI), Tgs index, heliothermic index (HI), drought index (DI) and night freshness index (CI), information is obtained on the basis of which projections can be made for future years and see where and how to react with agrotechnical measures, as well as enological means in the wine production process, or if such measures would be unnecessary.



© Determining the geographical origin of wine



FRUIT BRANDIES AND OTHER STRONG ALCOHOLIC BEVERAGES



ANA LAB is the **ONLY** laboratory in the Republic of Serbia and the region that is able to determine the botanical origin of ethanol in **FRUIT BRANDIES**. By determining the δD_{nI} value in ethanol from a strong alcoholic drink and the δD_{nII} value of ethanol from the water of a strong alcoholic drink, it is possible to separate the information about added water during the production process from the potential presence of ethanol of other botanical origin in relation to fruit ethanol that comes from fruit raw material.

Why is this important?

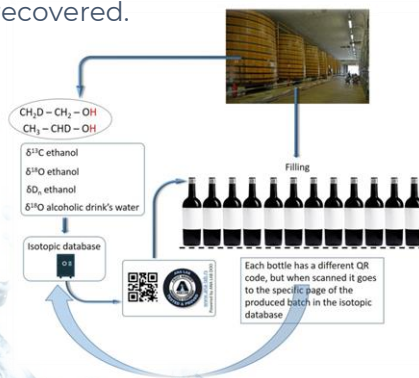
There is a lot of trade in distillates and soft brandies on the market, which are further used for the finalization or aging of distillates.

ANA LAB can now help customers to determine what they are really buying, because it **DOES MATTER** if someone buys a fruit distillate and puts it to age and age in oak barrels for 5 or more years and in the end it is determined that that distillate is not entirely made of fruit. That can be very disastrous for the producer, because all this represents tied up capital and an investment that is never small, and requires time to be commercially recovered.

That's why **ANA LAB** is a real partner in analysis, because it can help legal producers to make the right decisions and get the best possible conditions when purchasing raw materials for their production.

SOLUTIONS FOR TESTING STRONG ALCOHOLIC BEVERAGES:

- ① Detection of botanical origin of ethanol in fruit brandies and other alcoholic beverages drinks,
- ② Generation of an isotopic "fingerprint" products for strong alcoholic beverages





QR CODE PRODUCT CARD OF FRUIT BRANDY



ADD VALUE TO YOUR PRODUCTS BY PLACING THE ANA LAB LABEL ON YOUR PRODUCTS.

SCAN THE ATTACHED QR CODE AND SEE AN EXAMPLE PRODUCT CARD FOR FRUIT BRANDY.



QR Code
Kartica proizvoda / Product Card

ANA LAB
Laboratorija za ispitivanje autentičnosti prehrambenih proizvoda
(Click on the logo)

Naziv proizvoda / Product Name: RAKIJA OD DUNJE - 071 Link to Google Earth
(click on the logo)

Proizvedo / punilo /
Produced and Bottled By: Petar Petrović DO, Destilerija
Petrović, Šumadija **Logo
proizvođača**

Datum punjenja / Bottling Date	12.03.2023.
LOT Broj / LOT Number	3/2023
Datum završetka ispitivanja / End Date of Testing	21.03.2023.
Analički broj uzorka / Analytical Sample Number	AL2303-0075
Deklarisana vrednost Alk. (% vol.) / Alc. (bvco) labeled value	40.0

Botaničko poreklo etanola / Ethanol Botanical Origin	Voćno poreklo etanola Ethanol fruit origin	Testirano Tested	✓
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KONTROLISANO od strane ANA LAB
DOO Pančevo - Akreditovana
laboratorija za ispitivanje
autentičnosti prehrambenih
proizvoda /
CONTROLLED by ANA LAB DOO
Pančevo - Accredited laboratory for
testing the authenticity of food
products

● BEZ DODATOG ŠEĆERA /
NO SUGAR ADDED
● KONTROLISANO BOTANIČKO
POREKLO ETANOLA /
ETHANOL BOTANICAL ORIGIN
CONTROLLED

Napomena: Ova kartica ispitivanja se odnosi
samo na uzorak uvezen / lista - 1, 2023.
uslovljeno 74/2011 na labeli registra
proizvođača ANA LAB (DOO PANČEVO) ne
može odgovarati za bilo koje manipulacije
nakon uslovljavanja prilikom distribucije
proizvoda / Izdavanje proizvoda u promet.

Jedinstveni izotopski otisak proizvedene šarže - LOT broja
Unique isotopic fingerprint of the produced lot - LOT number

Oblik konture izotopskog otiska se dobija
specijalizovanim Key generatorom i odgovara analitičkim
vrednostima dobijenim tokom laboratorijskog ispitivanja
uzorka proizvedene šarže datog proizvoda. Ovak izotopski
otisak je jedinstven samo za uzorak proizvedene šarže i ne
može se nijednim tehnološkim postupkom kopirati ili
falsifikovati. Izotopski otisak proizvedene šarže je
deponovan u bazu podataka kod ANA LAB i služi za potvrdu
autentičnosti originalnog proizvoda.

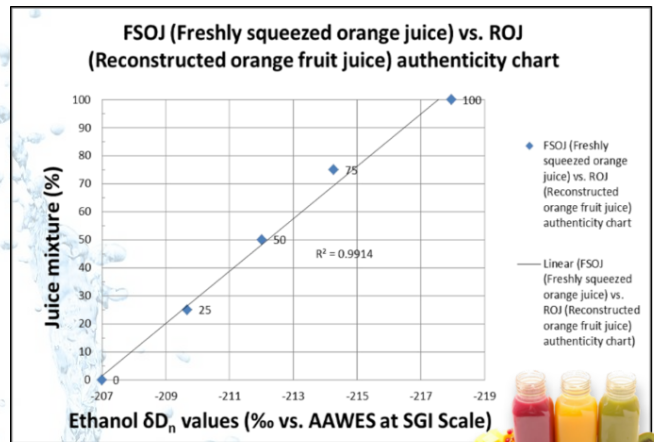
ENG: The shape of the contour of the isotopic fingerprint is
obtained by a specialized key generator and corresponds
to the analytical values obtained during the laboratory
testing of a sample of the produced batch of the given
product. This isotopic fingerprint is unique only to the
sample of the batch produced and cannot be copied or
forged by any technological process. The isotopic
fingerprint of the produced batch is deposited in the
database at ANA LAB and serves to confirm the
authenticity of the original product.

FRUIT JUICES



Testing the authenticity of **FRUIT JUICES** includes the detection of added sugar, as well as the detection of the origin of the water in the fruit juice. Detection of the origin of water in fruit juice is important from the perspective of declaring such fruit juice, considering that fruit juice can be freshly squeezed fruit juice, or reconstituted fruit juice obtained by reconstitution from fruit concentrate with the addition of water to the dry matter that was before concentration.

Wrong and bad product declaration is a direct deception of consumers, considering that freshly squeezed fruit juices are in a higher price category compared to reconstituted fruit juices.



SOLUTIONS FOR TESTING FRUIT JUICES:

- © Detection of added water in fruit juice
- © Detection of added sugar based on C3 and/or C4
- © Generation of an isotopic “fingerprint” of a product





FRUIT CONCENTRATES



ANA LAB is the **ONLY** laboratory in the Republic of Serbia and the region that is able to determine the botanical origin of sugar in **FRUIT CONCENTRATES** using advanced EIM-IRMS technology.

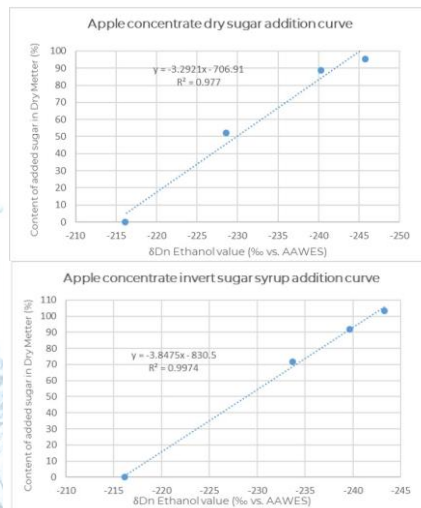
Adding sugar syrup or dry sugar to fruit juices before or during their concentration is an illegal production practice, in order to increase the percentage of dry matter and obtain the amount of the final product in the process of concentrating fruit juices.

In fact, the problem is much more significant, because the duration of evaporation process is shortened by adding sugar in the fruit juice concentration process, which is associated with lower energy consumption and shortening the time of the concentration process. In that case, such a concentrate with added sugar is difficult to detect as an illegal practice.

This can negatively affect all further steps in the production of fruit juices. Producers cannot know that foreign suppliers can cheat them and that instead of buying 100% fruit content they can be tricked into buying adulterated fruit concentrates. If the additives are detected in the final products, it would be very difficult to prove that they themselves are not responsible for the fraud.

SOLUTIONS FOR TESTING FRUIT CONCENTRATES:

- © Detection of botanical origin of sugar in fruit concentrate





FRUIT NECTARS



FRUIT NECTARS are drinks in which one part of the fruit content (from 50% to 75% of the fruit content) is replaced by sugar and water. Determining the fruit content in fruit nectars is a very important item, given that this information must be indicated on the product declaration, so that the end consumer would not be misled.

Economic frauds in fruit nectars are the most pronounced, because until now there was no analytical method that would unequivocally determine that the minimum content of fruit content for this product category was met.

Furthermore, mislabeling fruit nectar as if it were fruit juice is also a possibility, given that such statements could never be confirmed until now (detection of added water and sugar), given that fruit juices are in a higher price category compared to fruit nectars.

SOLUTIONS FOR TESTING FRUIT NECTARS:

- © Detection of added sugar based on C3 and/or C4
- © Determining the percentage of fruit in fruit nectars



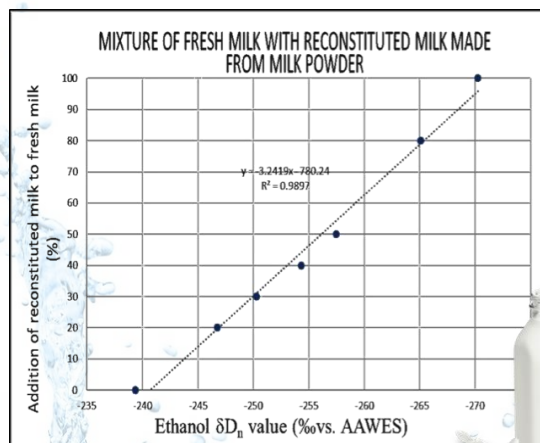
MILK



Economic adulteration of **MILK** by mixing milk components, then adding water and subsequently declaring such a product as fresh milk is the most common type of fraud on the milk market.

By determining the basic parameters of milk quality, it is not possible to determine that it is a fraud, because the freezing point is always the same for the same ratio of components in the mixture and depends only on their concentration.

ANA LAB is the **ONLY** laboratory that uses a unique isotopic method and is able to detect illegal adulteration and mislabeling of fresh milk. Since all types of milk adulteration cannot pass without the addition of water, it is now possible to detect added water in declared fresh milk.



MILK TESTING SOLUTION:

- © Detection of added water in fresh milk
- © Detection of addition of reconstituted milk to fresh milk
- © Matching the declaration with the product

FRUIT PRODUCTS "NO ADDED SUGAR"



FRUIT PRODUCTS (jams, marmalades, fruit spreads, fruit pulps, fruit porridges, fruit purees, fruit mixes, etc.) declared **"NO ADDED SUGAR"** represent a group of products with added value for a certain group of consumers.

Determining and verifying the claims of the product declaration is an additional assurance for buyers and end consumers that they are buying real value for their money.

ANA LAB is the **ONLY** laboratory in the Republic of Serbia and the region that is able to determine the botanical origin of sugar in the mentioned products using advanced EIM-IRMS technology and confirm the absence of exo-sugars.





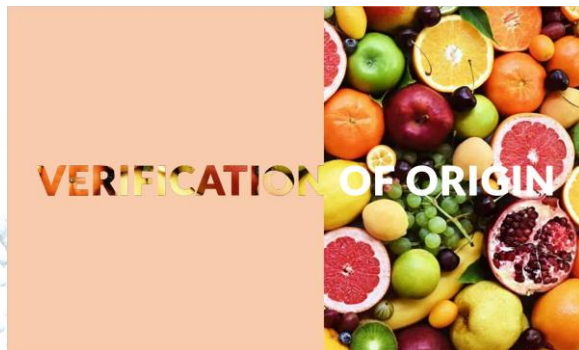
ORIGIN CHECK



"We are able to confirm the legality of your product..."

Our unique and patented analytical methods, which are accredited in accordance with ISO 17025, represent the current state-of-the-art technology and the most powerful analytical tool offered globally.

Our technology further improves accuracy in determining added sugar, water, ethanol in food products such as wine, honey, fruit juices, alcoholic beverages, coconut water, etc.





ANA LAB LABELS „CONTROLLED“

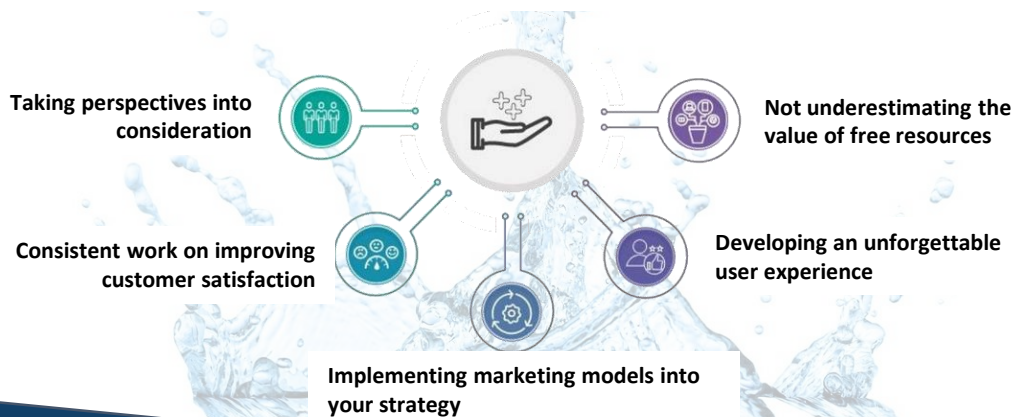


At **ANA LAB**, we have the expertise and knowledge to help our customers recognize their products as higher quality products and meet the expectations of their consumers, while still complying with government regulations.

Placing the **ANA LAB** label with the mark „**CONTROLLED**“, gives the end consumer exactly this opportunity to gain confidence in the desired product and thus establish a relationship with the manufacturer and recommend such a product further.



LET US ADD VALUE TO YOUR PRODUCT





SUPPORT FOR CERTIFICATION SERVICES AND INTERNAL CHECKS OF SUPPLIERS



The authenticity testing we provide can be used as support for certification services and internal checks of suppliers in supply chains (Audits), which cover GFSI, IFS, BCR Global, GLOBAL G.A.P. standards, etc.

The increasing complexity of the food supply chain leads to an increasing level of risk, which challenges the ability of organizations to satisfy their customers in terms of quality, safety, integrity and continuity.

The key to successfully managing the food safety process is to ensure that all risk management factors in the supply chain are covered by the program, including the increasingly important areas of responsible sourcing, environment and sustainability.



With the expertise of **ANA LAB**, we can make a difference for your business. Your success in food safety and quality certification is our top priority. The goal of food authenticity testing at **ANA LAB** is to provide our clients with the best possible support and services in certification protocols and audits.



ANA LAB

**YOUR SUCCESS IS
OUR PRIORITY**



ANA LAB has a highly qualified professional staff consisting of engineers and doctors of science in various fields of business and technical expertise. Our experts are always available at your request.

Our team members are able to provide consultation and support clients in solving issues of quality control, management systems and technological processes. We at **ANA LAB** have the expertise and knowledge to help our clients so that their products are recognized as products of higher quality and to meet the expectations of their consumers while respecting the regulations established by the state.

YOUR EXPERT TEAM of ANA LAB



ANA LAB

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QUALITY AND AUTHENTICITY OF FOOD



Dositeja Obradovića 8k (The atrium of the Tamish Gate complex),
26000 Pančevo

Tel. 013/25 80 196 ; 013/25 80 169

office@ana-lab.rs

www.ana-lab.rs