Transportation of wine and EVO oil

TransFrigoroute International Meeting 2019

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Clara Ricozzi – OITA President

What and who is OITA

Osservatorio **I**nterdisciplinare **T**rasporto **A**limenti:
Interdisciplinary Observatory on Food Transportation

Founded in 2016, the Observatory is a **consultative and proactive hub** that investigate the issues related to the transportation of food, fresh products in general and those that need to be kept at a controlled temperature (pharmaceuticals and cosmetics)), as well as live animals. OITA's aim is **guaranteeing safety and quality** throughout the supply chain, also via the definition of shared protocols for ATP transportation certification.

Within this framework, **OITA is committed to identifying new areas of controlled temperature transportation application**, and to study and promote **new technologies** that contribute in preserving the quality of the goods transported in all their aspects: organoleptic, nutritional, health.

Qualified representatives of the academic world, the economy, institutions, associations and of the media that operate in the productive, logistic and food and beverage transport sectors, all participate in the works of OITA.

Activities

Research for companies in the transport sector, food, beverages and pharmaceutical and cosmetic products

Stakeholder awareness building

Certification of temperature-controlled transportation

Inter-ministerial coordination

Tools

Promotion of specific research at universities and other institutions, including through the funding of degree and Ph.D theses.

Dissemination of study topics through participation in meetings with stakeholders and the public

Creation of Working Tables on issues of emerging interest (e.g. transportation of Wine and Olive Oil)

Publication of periodical publications (Bulletin) and on specific topics (Quaderni and Dossier), ex. *ATP Rules*, *Vehicles for Controlled Temperature Transportation*

Wine and olive oil in Italian and European economy*

Italy is the leading producer, 2nd exporter both in terms of volumes and turnover, the 3rd largest wine consumer in the world

310,428 companies produce wine in Italy as of year 2017.

13 billion euros is the total turnover of all the wine making activities of the wine industry in Italy.

526 Geographical Indications, 408 PDO and 118 PGI. Italy is the first country for wine origin certifications.

Italy is the second largest olive oil exporter in the world after Spain.

Italy is the world's leading olive oil importer.

3 billion euros is the turnover of the olive oil industry in Italy.

825,201 olive oil producing farms in Italy.

4,036 olive oil mills in Italy. 72% of the mills use less than 500 metric tons of olives per year.

The Italian production covers on average 15% of the world one, the Spanish 40% of the same.

*data from Ismea Report 2018

The OITA's Wine and Extra Virgin Olive Oil Working Table

In June 2019 OITA, following its own analysis and the solicitation of various stakeholders, established a Wine and EVO Oil Working Table to study in an interdisciplinary way the logistics and transportation of these products, of great importance for Made in Italy food.

The aim of the table is to seek and identify the factors that can endanger the quality of consumer products, and identify technologies and solutions, organizational and procedural factors, suitable for mitigating or eliminating those risk factors.

Representatives of all the links in the supply chain of the two sectors involved were called upon to join the Table, from production to transportation and retail distribution, as well as on-board sensor manufacturers, quality certification bodies and the MIPAAF (Italian Ministry of Agricolture and Food Production).

Preliminary research and Table's first results

Oil and wine are liquid foodstuffs sensitive to environmental conditions (light, temperature, vibrations), which affect their conservation and the maintenance of the original organoleptic and nutritional characteristics.

For wine, this has been known empirically since time immemorial: *T. Stevenson, The Sotheby's Wine Encyclopedia:* "When subjected to temperatures above 25° for long time periods, the wine is degraded and it "cooks" ". Recent research (eg Alma Mater Studiorum Bononia, "The Wine Journey") has allowed to quantify the effects of environmental conditions on the quality of different types of wine, also taking into consideration the vibration factor.

Preliminary research and Table's first results

Oil and wine are liquid foodstuffs sensitive to environmental conditions (light, temperature, vibrations), which affect their conservation and the maintenance of the original organoleptic and nutritional characteristics.

For EVO oil, scientific research is less unanimous. Prudentially, ASSITOL (Italian Oil Industry Association)recommends preserving the EVO oil in a temperature range between 16 and 20 degrees Celsius to guarantee the preservation of nutritional characteristics (preventing the precipitation of polyphenols) and organoleptic characteristics (separation and degradation of the fats components). It follows that both the important overrun and for prolonged periods of time of these limits, involve an unrecoverable loss of quality.

Wine and EVO oil: regulations

These altering conditions are more likely to occur during the transportation phase. However, there are NO specific national, EU or international regulations that regulate this phase for wine and EVO oil.

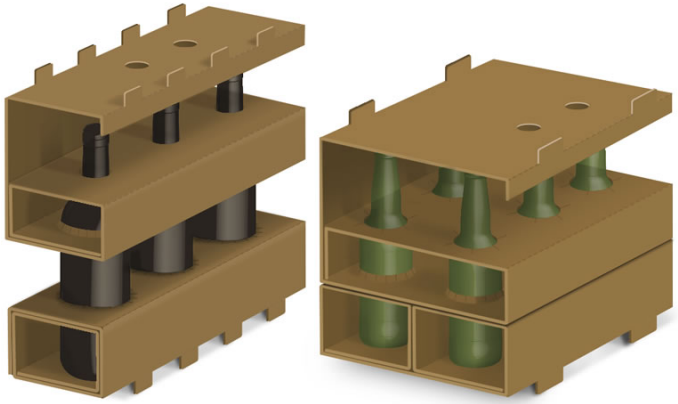
Even the recommendations on the label, for example for oil “Keep away from light and heat sources", are optional.

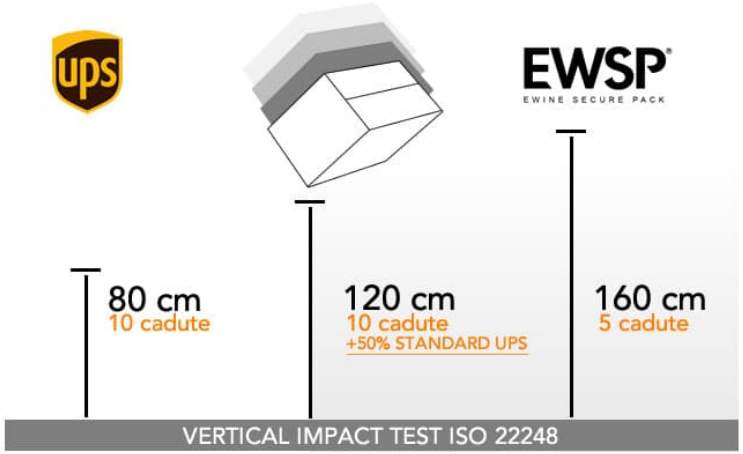
WHY THIS?

The alteration of oil and wine causes a loss of qualitative characteristics, not a degradation that leads to health consequences. For this reason, they are considered by the legislator different from the many food products for which transportation is instead regulated to assure health safety for consumers.

Consequences in the logistics chain

At the transportation level, the attention of the operators is at best concentrated (e.g. express couriers) on the integrity of the first level packaging (bottle), and omits that of the product. This occurs both for short-medium haul trips and for long-term and very long-term routes (transportation in shipping containers).





Consequences in the logistics chain

In terms of distribution logistics for large-scale retailers, it emerged from the Working Table that «To date, no particular measures have been adopted for the management of oil and wine products, both in terms of storage inside Distribution Centers (DiCe) and for transport from DiCe to points of sale. We must also point out that the delivery by suppliers to DiCe is also made with "normal" vehicles at room temperature. To sum up, the entire supply chain for oil and wine is similar to that of grocery products."

Transportation phase organization

According to Milan Polytechnic data (2017*), in Italy:

for all products in the alcoholic beverage sector, 100% of the transport is entrusted to third parties;

the degree of outsourcing of the entire logistics process for the same category products is 78%, and 37% is entrusted to a single supplier;

for wine, however, characterized by a high percentage of medium-small production companies, the degree of outsourcing of the logistics process is 67% and only 16% is entrusted to a single supplier, thus allowing for ample margins of growth.

*Osservatorio Contract Logistics, Sept. 2017

Consequences for trade and consumers

The absence of strict rules is connected to the absence, or lack of knowledge, of health consequences, even in terms of loss of constituent elements, deriving from qualitative alterations of EVO oil and wine.

Fonte: Osservatorio Contract Logistics, sett. 2017

Consequences for trade and consumers

The regulators don't take into due account the economic and image damages caused during transportation to the producing companies, but also to the retailers, from oil and wine that have lost their original organoleptic characteristics.

The pulverization of responsibility in the transportation phases, especially in the final one, involves additional risks, such as to the integrity of the container and the label.

Consequences for trade and consumers

Fonte: Osservatorio Contract Logistics, sett. 2017

Preliminary proposals

From the first results of research on literature and emerging from the work of the Table, OITA believes it is necessary to intervene with the **DEFINITION OF MINIMUM GUIDELINES** intended for those who **pack and transport** wine and EVO oil, tailored for each type of routes, even short-range, and taking into consideration **second and third level packaging** (bottle individual gloves and protections, boxes, shipping containers).

Fonte: Osservatorio Contract Logistics, sett. 2017

Further evolutionary proposals

The next step could be the **extension of the applicability of the ATP standards** (controlled temperature) to wine and EVO oil, or definition of special recommendations such as those existing in the pharmaceutical field. **In a first phase these rules would be voluntary**, later they will become the **basis of proposals for mandatory regulations**, valid on the domestic market and in the European/ international context.

Given the importance of the two products for different EU and associated countries, the transportation of wine and EVO oil, could be part of an **"EU ATP"** with additional contents in respect of the current proposals for simple uniformity of the implementation rules (renewals, duration etc).

THANK YOU FOR YOUR ATTENTION

Questions?

www.oita-italia.com

segreteria@oita-italia.com