

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
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ACTIVITIES OF INTERNATIONAL ORGANIZATIONS RELEVANT TO THE WORK OF CCFO

The EU Vegetable Oil and Proteinmeal Federation (FEDIOL)

Introduction

FEDIOL is the European federation representing the interests of the vegetable oil and protein meal industry. FEDIOL members are 12 national associations of oilseed crushers and refiners. In countries where there is no association present or where the existing association is not a member of FEDIOL, individual companies can apply for associate membership. Currently, this is the case in six more countries, extending the scope of FEDIOL to 18 EU Member States.

Directly and indirectly, FEDIOL covers about 150 processing sites that crush oilseeds and/or refine crude vegetable oils and fats. These plants belong to around 35 companies. It is estimated that over 80% of the EU crushing and refining activity is covered by the FEDIOL membership structure.

The oilseed processing activity is spread over 18 Member States with a concentration of plants with crushing and refining activities in countries such as Germany, the Netherlands, France, Spain, UK, Italy, Czech Republic, Poland, Belgium, Hungary and Romania.

FEDIOL, overview of activities

Many issues in the areas of food and feed safety, nutrition and labelling, environment, trade and access to raw materials, sustainable consumption and production are actively worked upon by FEDIOL and its members.

With the highlights below, FEDIOL would like to illustrate such work, rather than providing an exhaustive list of such activities, in the frame of providing information, which might be of interest to the CCFO:

Food Quality and Safety

FEDIOL members are committed to the quality and safety of all the products they deliver to the market as a first priority. Collectively, FEDIOL develops **codes of practice**, which aim to ensure that a high level of product safety and quality is achieved and maintained at all stages along the supply chain. For example, such codes can target the prevention or limitation of occurrences of contaminants or other undesirable substances, or anticipating and adapting to a changing market environment, such as in the area of transport.

Recent examples are:

- [FEDIOL Code of Practice](#) for the management of mineral oil hydrocarbons presence in vegetable oils and fats intended for food uses.

- [FEDIOL Code of Practice](#) on the safety of vegetable oil and fat products for feed and food with regard to dioxin and dioxin-like PCBs.

- [FEDIOL Code of Practice & Quality Assurance Agreement](#) on the purchase conditions of Fresh Bleaching Earth and Filter Aids for vegetable oil and fat refineries and integrated plants.

In parallel, FEDIOL continues to engage in a wide **variety of food and feed safety issues**:

- On MCPD esters and glycidyl esters, FEDIOL continues to work in (1) understanding the formation pathways of these compounds and the development of robust analytical methods, in (2) monitoring the occurrence of such compounds in vegetable oils and fats under its remit, in (3) researching and implementing viable mitigation methods to reduce levels of MCPD esters and glycidyl esters, in (4) following risk assessment of such compounds both at EU and international level (e.g. JECFA), in (5) monitoring developments in the area of risk management and (6) disseminating information and sharing knowledge on the issue with relevant authorities and stakeholders.

- On pesticides, FEDIOL further works on the setting of EU harmonized processing factors for vegetable oils and fats. FEDIOL also monitors the EU downwards revision of Maximum Residue Limits (MRLs) and is particularly concerned about considerable divergences in the implementation of MRLs because of the impacts this can have for trade and for the supply of the industry.

- On transport and previous cargoes, in addition to the development of a [FEDIOL Code of Practice](#), a [FEDIOL list of foodstuffs](#) is regularly updated. Such list restricts the definition of what is entitled as a “foodstuff” under the ambit of its code. FEDIOL continues to strive for a harmonisation between the different lists of acceptable previous cargoes (CODEX List, EU List and FOSFA List).

Nutrition and Labelling

FEDIOL is also involved in nutrition and labelling developments linked to vegetable oils and fats in the overall health and diet arena.

Such issues include for example the fatty acids composition of products. Hence, FEDIOL is actively working on the issue of *trans* fatty acids (TFA) in the context of the current EU discussions towards an EU legislation or in the Codex Alimentarius discussions. Recent FEDIOL documents include: FEDIOL views on an EU legislation on TFA ([here](#)) and FEDIOL comments on the Canadian discussion paper on a TFA free claim ([here](#)).

FEDIOL also contributes to the understanding of vegetable oils and fats through brochures. Recent developed documents can be found [here](#) on *what are edible vegetable oils and fats* and [here](#) on *why do we need oils and fats in our diet*.

Vegetable oil and fat fatty acid profiles and related standards

FEDIOL closely follows developments related to fatty acid profiles of vegetable oils and fats to ensure a continuous and uniform supply. This can lead to setting FEDIOL specifications, where relevant, as an example: FEDIOL specifications for grapeseed oil ([here](#)).

To ensure harmonisation at global level, FEDIOL regularly participates in a number of Codex electronic groups under the frame of the Standard for Named Vegetable Oils. Since the start, FEDIOL has provided input and data to the discussions within the sunflower oil and peanut oil electronic groups. FEDIOL also follows discussions around standards for high oleic soybean oil and high oleic palm oil.

Federation of Oils, Seeds and Fats Associations International (FOSFA International)

Introduction

FOSFA is the recognised association body for the international trading of oils and fats and oilseeds, and has observer status for the Codex Committee on Fats and Oils. The activities of the Federation may be summarised as follows.

- The issuance of internationally recognised and accepted contract forms.
- The organisation and administration of an effective arbitration service.
- The administration and management of an education and training programme.
- The provision of information and advisory services concerning contract forms, trade practices, technical matters and arbitration procedures.
- The administration of Schemes for Member Analysts and Member Superintendents associated with the development of methods of sampling and analysis to meet the demands of the trade and increasingly national regulations.
- Liaison with kindred bodies, governments, etc., to standardise practices for the good of the international trade.

FOSFA has over 1,100 members in 89 countries. It currently has 56 contracts, and it is estimated that over 85% of the international trade in oilseeds and oils and fats is carried out using these contracts. This has the benefit of allowing traders to agree the three major issues of quantity, date of delivery and price, the contract forms covering the right of the necessary terms. These other terms, such as which party organises the ship, which party insures the cargo, which party is responsible for taking samples and conducting analyses of the cargo, etc are well understood by both companies, being established globally. The contracts are readily available for use, and trading parties do not need to be a member of FOSFA to use the contracts, as the above figure indicates. However, should a dispute arise between the trading parties, this is taken to arbitration, organised by the Federation, avoiding taking matter to the courts. This is so that the dispute can be resolved by those active in the trade for a reasonable cost before resorting to the legal profession and the associated costs. Most cases are settled in this way.

Current work

The Federation continues to maintain and adapt its contracts and other terms to the changing business conditions through the decisions and recommendations of its various committees, but always endorsed at Council level (Directors).

FOSFA has for many years, published a Code of Practice for Member Superintendents on their role of surveying the loading and unloading of its commodities. This code includes such vital aspects as tank inspection as well as weight determination. Following the adoption of belt weighing and draft survey provisions within the majority of the Oilseeds Contracts, this Code of Practice was amended to cover these provisions.

Fatty Acid Methyl Esters (FAME) contracts have been added to the FOSFA contracts list, and more recently Flexitank terms included (2016).

Over the past 25 years, FOSFA has provided secretarial services for the International Organization for Standardization Committee ISO/TC34/SC11 -- Animal and vegetable fats and oils. This helps to ensure that the methods for the sampling and analysis of the commodities which are required by the trade and industry for the checking and maintenance of quality at loading, during transportation and at delivery, as applicable, are included in the work of the Committee.

The ongoing deliberations of the International Maritime Organisation also form part of the watching brief of the Federation. This body regulates the types of ships which are required to carry edible oils and fats across the oceans as well as many of the procedures which must be followed to maintain the safety of seamen and the quality of the maritime environment. The FOSFA commodities, oils and fats, are now regulated cargoes under the MARPOL Annex II regulations.

FOSFA's work associated with CCFO

FOSFA was heavily involved in the drafting of the Code of Practice for the Transportation and Storage of Fats and Oils back in the 1980s leading to the 1987 publication and again in the 1990s major updating exercise (1995) and since.

FOSFA has retained a watching brief on many of the standards now for over 30 years, contributing from a trade point of view, representing the global market.

One area of complexity has been the risk management of previous cargoes on ships in association with the Carriage of Oils and Fats. The list concepts, Banned and Acceptable, developed through FOSFA, continue to provide the basis of trade practices, extending into European Union regulations, and other government or trading bodies regulations and of course Codex.

For those not familiar with the concepts and history a reference is attached as an Appendix headed 'FOSFA's Role in Reducing Contamination Risk via Prior Cargoes'. It will prove helpful to 'list' discussions when on the CCFO meeting Agenda.

FOSFA's work has done much to reduce the risk of contamination, minimalised the incidents evident in the 1980s as bulk shipment of oils increased, and promoted practices that the shipowners and operators, and the vegetable oil trade are able to declare safe.

Summary

FOSFA contributed significantly to the original Code of Practice for the Storage and Transport of Edible Fats and Oils in Bulk. It has contributed to the updates to that document and was an active member of the group which developed the Codex criteria for acceptable previous cargoes. The Federation is willing to continue to support the work of the Codex Committee on Fats and Oils in the areas of storage and transport, and where appropriate food safety.

FOSFA's Role in Reducing Contamination Risk via Prior Cargoes

It has been accepted for many years that the biggest risk to food safety within the international trade of oils and fats is the transporting of the cargo by sea from the producing country to the consuming country. The management of this area of risk forms a major part of all FOSFA contracts and is described in the document 'Qualifications and Operational Procedures for Ships Engaged in the Carriage of Oils and Fats in Bulk for Edible and Oleo-Chemical Use'. It is accepted by most countries that the use of dedicated freight space is uneconomic, inefficient and environmentally unfriendly and thus, other cargoes may be carried as previous cargoes before the loading of edible oils. Over the decades of modern trade, it had been found that some cargoes should never be allowed as previous cargoes due to either their extreme toxicity, their intense bad flavour/smell characteristics, the difficulty in cleaning them out of the tanks or other problematic properties. Thus, when the contracts were revised in the mid-1980s with the increased awareness of food safety, and bulk parcels became more popular, a list of these products was drawn up and designated as 'the banned list'. Thus, under these standard 'banned list' terms of contract, the receiver would accept the cargo as long as the previous cargo was not on the banned list i.e. a known toxic or non-compatible (in foodstuffs) substance.

However, with the increase in the sophistication of consumers together with the increased value of branding and the fear of litigation, some companies wished to further reduce the risk of the consequences of a contamination from previous cargoes. Thus, in the early 1990s, a list of common previous cargoes which would cause few problems, if any, were there any carry-over was drawn up within FOSFA and other trade bodies. These were cargoes which were typically very water soluble or highly volatile, very easily cleaned, were not toxic and were easily detectable by chemical analysis. This list became known as the acceptable list of previous cargoes. Thus, by the addition of an optional clause to the contract, agreed between the parties, it became an 'acceptable list' terms contract where the receiver would accept delivery of the cargo as long as the previous cargo was included in the acceptable list.

Thus, the two lists are never applicable together within one trading contract. Depending on the terms of the contract, either the previous cargo must not be on the banned list (the standard position), or the previous cargo must be on the acceptable list (when specifically agreed). These conditions are always checked by the receivers' superintendents as instructed by their principals (see www.fosfa.org).

In 1993, the European Union decreed that all foodstuffs were destined to be transported in dedicated freight from 1995. However, in 1996, after representation from the industry, oils and fats were granted a derogation to this rule, but at the same time, it was decided that all previous cargoes for imports into the EU must be on the EU acceptable list. At that time, the EU broadly adopted the FOSFA acceptable previous cargo list, but since then, both bodies have added some new cargoes and removed some others. In 2009, the European Commission asked the European Food Safety Authority (EFSA) to evaluate these new items and, following the adoption of the Codex list, the items which were on the current list. EFSA were also asked to include the criteria which were adopted by Codex for determining acceptable previous cargoes. Following these evaluations, the EU issued a new list in May 2014. The FOSFA trade list and the EU list are, in the main, the same.

The only other country to adopt legislation which required all previous cargoes to be on the acceptable list is China, in 2013. The list they used was the Codex list of acceptable previous cargoes. No other region has yet adopted the same type of legislation as the EU for oils and fats. However, it should be noted that the trading rules used extensively for imports into the USA (the National Institute of Oilseed Products, NIOP, rules) also require that all previous cargoes are on the NIOP List of acceptable previous cargoes, which is essentially the same as the FOSFA list. But this is not USA legislation.

In summary, while it is not FOSFA's role to dictate the terms of trade between parties, the contracts do offer them a method by which they can reduce the risk of serious consequences from contamination of their products by previous cargoes. There are obviously many products which do not appear on either list. In general, these products may be more toxic than those on the acceptable list, may be more reactive with oils and fats and may not be removed by further processing. Nevertheless, with good management of the ships' tanks (cleaning, inspection loading etc.) they would cause very few problems during the shipping part of the supply chain, while allowing greater flexibility in ship utilisation and voyage planning. It is also worth noting that the quality of the fleet used by the edible oils industry has continually been upgraded over the past two decades via the revision of their rules by the International Maritime Organisation.

International Olive Council (IOC)

The **International Olive Council (IOC)** is a Madrid-based, intergovernmental organisation created in 1959 to administer the International Agreement on Olive Oil and Table Olives. This legal instrument was set up under the auspices of the United Nations to safeguard and develop olive cultivation and olive products. Its chief objectives are:

- To ensure regular international trading in olive products
- To develop international cooperation and to improve olive production
- To champion the quality of olive products
- To encourage consumption of olive oil and table olives

At the time of drawing up this report the following are Members of the Council: Albania, Algeria, Argentina, Egypt, the European Union (Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom), Iran, Iraq, Israel, Jordan, Lebanon, Libya, Montenegro, Morocco, Tunisia, Turkey and Uruguay. These 43 countries or 16 Members account for 93% of world production, 71% of global consumption, 95% of exports to the world market (excluding intra-EU trade) and 20% of world imports (again excluding intra-EU trade).

January 2017 marks the entry into force the new International Agreement which, unlike the previous one, encourages the participation of importing countries as members of the Organisation.

One of the activities assigned to the IOC to expand international trade is to draw up and adopt trade standards for olive oil and olive pomace oil, and for table olives, and to devise methods for testing their physico-chemical and organoleptic characteristics. The crucial point is that these international trade standards are mandatory for IOC Members. Hence, given the share of the world market held by IOC Members, they carry a great deal of weight.

When developing its testing methods and standards, the IOC draws on the cooperation of international bodies, both intergovernmental like Codex Alimentarius and non-governmental like the International Organization for Standardization (ISO), the American Oil Chemists' Society (AOCS) and the International Union of Pure and Applied Chemistry (IUPAC). Methods of analysis that are specific to olive oil are assigned a special reference: COI/T.20 and are recommended in the IOC trade standard. All this information about the IOC can be accessed on the IOC website at <http://www.internationaloliveoil.org/estaticos/view/157-structure-of-chemistry>

The team of chemists who collaborate with the IOC are all experts nominated by their respective governments. They conduct research and inter-laboratory tests to develop or finalise methods for IOC approval, aimed at preventing fraud and promoting olive oil quality. Some experts from non-IOC Members or from industry organisations also attend as observers or for very specific subjects. Since 2014, the agenda of the chemistry expert meetings has been made public in order to facilitate written input from expert-stakeholders who would not usually be invited to the meetings. The aim of doing so is to reinforce the remit of the IOC as a global forum for olive oil matters. Another example of this international role of involving experts from non-IOC Members is the work carried out in 2014 with experts from the Food & Drug Administration of Taiwan on methods for the identification of copper pyropheophytin in olive pomace oils. Ongoing and completed work covers a range of subjects:

- Revision of IOC-referenced methods;
- Drafting of new IOC-referenced methods;

- Coordination of research on testing methods to find solutions to problems generated on the international market;
- Organisation of annual check tests for IOC recognition of physico - chemical and sensory testing laboratories;
- Detection of extraneous oils in olive oils;
- Organisation of ring tests for the validation of testing methods;
- Organisation of ring tests for the determination of contaminant residues and pesticides;
- Evaluation of the oxidative status of olive oil;
- Detection of the addition of deodorised olive oil to extra virgin olive oil;
- Study of volatile compounds and reference materials;
- Organoleptic assessment of virgin olive oils (COI/T.20/Doc. No 15);
- Organoleptic assessment of table olives (OT/WG 1-01/Doc. No 4-2);
- Methods for testing oil-olives;
- Labelling;
- Organisation and participation in eWG on different subjects;
- Harmonisation of olive oil testing methods issued by standards institutions;
- Harmonisation of the Codex olive oil and table olive standards with IOC standards and preparations for upcoming Codex sessions.

Progress or developments since the last CCFO held in February 2015 in several noteworthy areas are reported below:

• **Method for the determination of diacylglycerols and triacylglycerols (COI/T.20/Doc. No 32):**

IOC adopted a Decision recommending its Members to apply this method provisionally until the IOC chemists take a stance on the limits for triacylglycerols.

A ring-test was organised to validate this determination. The IOC experts do not consider it advisable to fix a limit for diacylglycerols because extra virgin olive oil reaches thermodynamic equilibrium after a year, in which case this parameter would be of no use. Triglycerides determination enables detection of certain types of oils (palm, high oleic, etc.) but only when added individually; it is not effective if more than one extraneous oil is added.

• **Global method for the determination of extraneous oils (COI/T.20/Doc. No 25/Rev.1):**

This method was provisionally adopted by the IOC in 2006 for the detection of potential adulterations. Work continued with a view to its definitive adoption and countries were requested to forward relevant data (obtained using propionitrile). It was definitively adopted in May 2013 for entry into force on 1 January 2014. However, due to difficulties in its application, the chemistry experts decided at their meeting in March 2014 to review some sections of the method, which has not been included as a compulsory method in the IOC standard. The work on this method with new samples from different countries confirmed that an additional ring test was needed to validate each kind of extraneous oil.

• **Increase of the K270 limit for refined olive oil and olive oil:**

In July 2016 the IOC Council of Members adopted a new K270 limit of ≤ 1.25 mg/kg for refined olive oils and ≤ 1.15 for olive oils on the basis of a study carried out by IOC experts in recent years because the previous limit did not afford sufficient guarantees for overall world production.

• **Direct method for the determination of stigmastadiene:**

Research is currently underway to validate a direct method for the determination of stigmastadiene. Ring tests were organised for this purpose at the beginning of 2015 and 2016.

• **Reduction of the linoleic acid limit and increase of the heptadecanoic, heptadecenoic and eicosanoic acid limit:**

In 2015, after a study carried out by the IOC, the linoleic acid limit was decreased to 2.5%.

At the 27th extraordinary session of the IOC Council of Members, the IOC Technical Committee adopted a proposal to increase the C17:0 acid limit to 0.40%, C17:1 to 0.60% and 0.50 % in order round the limits to two decimals and align them to world production.

A method for the determination of peroxides (COI/T.20/Doc. No 35) and a method for the determination of free acidity (COI/T.20/Doc. No 34) were recently adopted and included in the IOC trade standard in 2015 and 2016.

The revision of the method for the determination of UV absorbance COI/T.20/Doc. No 19/Rev. 3 adopted in 2015.

Definitive limit of ethyl esters (for extra virgin olive oil only) on the basis of the study of the evolution of this parameter:

As of May 2013, the determination of total alkyl esters has been replaced by that of solely ethyl esters. The following limits and timing were approved for their application:

≤40	mg/kg	in	2013/14
≤35	mg/kg	in	2014/15
≤30	mg/kg	from	2015/16
FAEE + FAME < 75 mg/kg during the 2012/13 crop year			

Several research projects are underway to determine how this parameter changes in extra virgin olive oils over time.

The conclusion of the IOC experts to maintain the limit at ≤35 mg/kg was adopted in July 2016.

Study of the environmental and health security of the solvents used in IOC methods:

A progressive study following a pre-established priority order will be conducted by the IOC.

Method for the organoleptic assessment of virgin olive oil:

This method underwent extensive revision in 2007, in particular to amend the median of the defect predominantly perceived between the extra virgin and virgin categories of olive oil, which was raised to 3.5 on taking into account the uncertainty of the method. The method and accompanying standards are reviewed on an ongoing basis as research makes advances. The most recent revision was adopted in 2015 to improve panel harmonisation.

Compositional survey of olive oils with anomalous parameters:

In 2008, the IOC Council of Members decided to set up a restricted working group on olive oil composition and varietal identification to investigate the cases of authentic olive oils produced from autochthonous varieties for which certain parameters did not comply with the limits fixed in the IOC trade standard.

Producer countries were requested to complete a questionnaire and to ship samples of off-standard oils for a survey designed to gain an insight into such cases and to propose the application of decision trees as a solution while maintaining the existing limits in order to guarantee product authenticity and to prevent potential fraud.

The results and conclusions of this three-year survey, which concerns olive oils with off-limit campesterol or delta-7-stigmastenol values, will be presented at the upcoming session of the Codex Committee on Fats and Oils (Malaysia, February 2017). Decision trees for such oils have been included in the IOC trade standard in order to strike a balance between the need to respect genuine virgin olive oils and the need to avoid facilitating fraud because the two parameters concerned – campesterol and delta-7-stigmastenol – are evidence of the addition of specific seed oils.

Composition of olive oils obtained from various varieties:

Adoption of decision trees to guarantee oil purity while allowing trading of authentic products that do not fully comply with the standards.

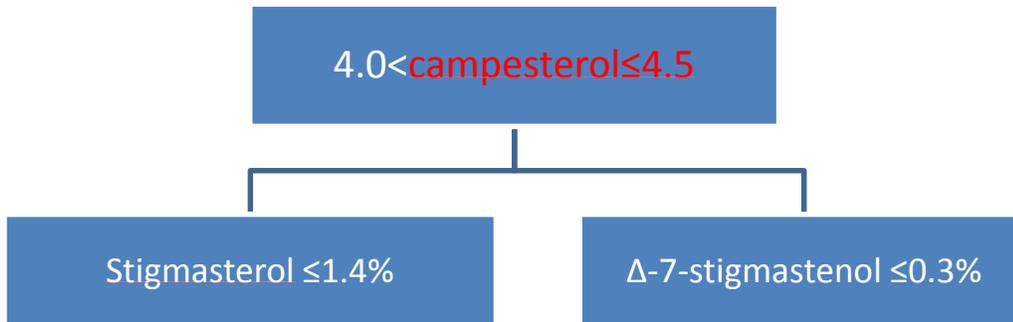
In May 2013 it was decided to adopt three decision trees:

- One for virgin and extra virgin olive oils with campesterol values between 4.0 and 4.5%
- One for virgin and extra virgin olive oils with delta-7-stigmastenol values between 0.5 and 0.8% and

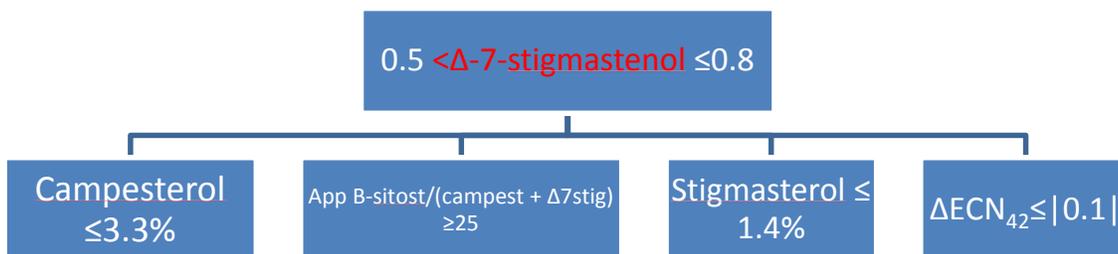
- One for olive pomace oils with delta-7-stigmasterol values between 0.5 and 0.7%

The rest of the parameters must comply with the limits fixed in the IOC standard, particularly the new stigmasteradiene limit (0.05mg/kg).

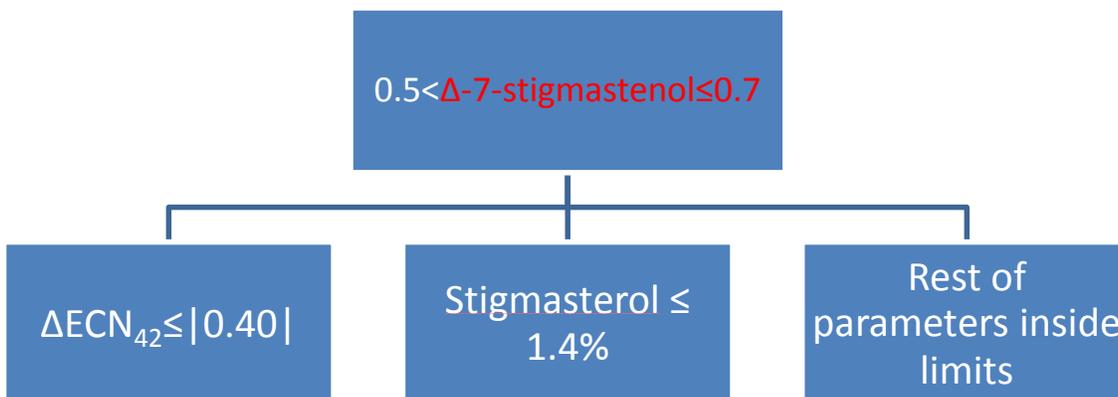
Campesterol decision tree for virgin and extra virgin olive oils:



Delta-7-stigmasterol decision tree for extra virgin and virgin olive oils:



Delta-7-stigmasterol decision tree for crude and refined olive pomace oils:



Harmonisation of the Codex standard for table olives with the IOC standard:

The Executive Secretariat submitted a proposed revision of the Codex standard in 2008 in order to bring it into line with the IOC trade standard for table olives. This revision was included in the Codex list of priorities. After the work carried out by the electronic working group set up especially for this purpose, the revision was approved at the session of the Codex Committee on Processed Fruits and Vegetables (CCPFV) on 15–19 October 2012 and definitively adopted by the Codex Alimentarius Commission in July 2013.

- **Harmonisation of IOC methods with ISO standards:**

Cooperative ties between the two institutions have been strengthened in recent years with a view to harmonising ISO standards with the testing methods cited in the trade standard of the IOC, which is the specialist international intergovernmental agency for olive products.

- **IOC recognition of chemical and sensory testing laboratories:**

The IOC runs annual collaborative tests to check the proficiency of olive oil chemical and sensory testing laboratories. Laboratories that obtain satisfactory test results and prove that they have been awarded accreditation by a national laboratory or accreditation body are granted IOC recognition for the relevant one-year period (from 1 December of one year to 30 November of the next).

In all, 77 chemical testing laboratories and 70 olive oil tasting panels from a spectrum of IOC Member and non-Member countries participated in the ring tests to earn entitlement to IOC recognition for the period from December 2016 to November 2017. The decisions for the agreement were also revised in 2015 for organoleptic assessment and in 2016 for laboratories in order to establish three different levels of recognition.