

codex alimentarius commission



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**JOINT FAO/WHO FOOD STANDARDS PROGRAMME
CODEX COMMITTEE ON FATS AND OILS
Nineteenth Session
London, United Kingdom, 21– 25 February 2005**

**CONSIDERATION OF THE LINOLENIC ACID LEVEL IN SECTION 3.9 OF THE
STANDARD FOR OLIVE OILS AND OLIVE POMACE OILS**

**SURVEY OF THE ANALYTICAL CHARACTERISTICS OF EDIBLE VIRGIN OLIVE
OILS BY PRODUCING AREA OF THE PRODUCER COUNTRIES**

- Comments -

This is the document which compiled comments to CX/FO 05/19/4 submitted by Australia, European Community (EC), Mexico, New Zealand, Turkey, Venezuela.

Australia

Australia would like to thank the International Olive Oil Council (IOOC) for undertaking the survey and completion of its report prior to the forthcoming session of the Codex Committee on Fats and Oils (CCFO). As outlined by the IOOC in its survey questionnaire¹, the purpose of the Survey was “to ascertain the fatty acid composition of the edible virgin olive oils produced worldwide in order for the international standards to feature compositional ranges that are representative of world production”.

Australia is disappointed with the small number of countries that actually responded to the survey. Only 7 of a possible 35 countries responded – clearly limiting the capacity of the IOOC report to accurately represent the industry globally. The limited number of European countries that responded to the survey is particularly disappointing.

Australia notes that a proportion of olive oil production in 4 of the 7 responding countries (Australia, France, Israel and Saudi Arabia) show linolenic acid levels above 1%. These results would suggest that establishing a 1% level in the Codex standard has the potential to create a technical barrier to trade for some exports of olive oil for several countries that did respond to the survey.

Accordingly, in Australia’s view, it is imperative that it should not be assumed a larger number of countries be surveyed to strengthen the basis of the IOOC report and more accurately reflect the global picture.

¹ IOOC T.14/Doc. No. 21-1. May 2003

Australia has the following specific comments to make in relation to the IOOC report:

- The IOOC comment in relation to one Australian variety having both the highest and lowest level of linolenic acid is indicative of the high variability of acid content in that variety and that such variability must be appropriately considered in setting compositional levels.
- While the IOOC report has calculated on mean values per year, the issue is not the mean, but that a certain proportion of olive oil per year would be rejected as not being olive oil. Reference to mean values does not accurately represent the problem.
- The comment regarding "good laboratory practice not being followed" by Australia, as some results did not add up to 100.00, is relevant. Australia should have rounded these figures as appropriate to one decimal place and quoted them as 100.0%. However, this does not alter the core findings and problem.
- The lack of detail from particular regions does not detract from the fact that a proportion of samples from several countries exceed 1.0% linolenic acid. The IOOC report consistently dismisses this fact.

Since the IOOC report illustrates that a number of countries could not meet the 1% linolenic acid level, Australia believes the level in the Codex Standard for Olive Oils and Olive Pomace Oils should be reinstated at 1.5% until such time that the Committee has sufficiently robust scientific evidence based on truly global data, to support an amendment. Adopting any level based on the data of a limited survey would not be consistent with Codex developing outcomes-based standard based on sound science that protect consumers and facilitate fair practices in food trade.

Introducing a 1% limit for linolenic acid clearly has the potential to establish a technical barrier to trade for several countries. This would inhibit free trade in authentic olive oil products which would be counter to Codex General Principles² that "the Codex Alimentarius is intended to guide and promote the elaboration and establishment of definitions and requirements for foods to assist in their harmonisation and in doing so facilitate international trade." Further arguments for retention of the 1.5% value include:

- There is no clear evidence that 1.5% limit has failed in the detection of adulteration. Australia would welcome such evidence.
- The linolenic acid level is not in itself a unitary measure of adulteration with any particular edible oil and other methodologies exist to authenticate olive oil³. It has been shown that linolenic acid is a predictor of adulteration with some oils such as soy, canola, and walnut, but it is not the only useful measure for adulteration with these oils.

For the Codex standard to be truly representative of global olive oil production, Australia believes that it must allow for consistently demonstrated international compositional variance. Australia acknowledges that compositional limits established in the Codex standard are important in ensuring authenticity of product entering international trade and recognises the use of linolenic acid as one possible parameter for authenticity. However, the proposed 1% limit for linolenic acid should only be adopted on the basis of scientifically demonstrated necessity that this compositional parameter is singularly essential to identify adulteration.

On a final note, Australia would be keen for the IOOC to release all fatty acid data collected for the survey in order that it addresses the survey's identified purpose, and also to review and release data on fatty acids it has collected from member states independent of the survey.

² General Principles of the Codex Alimentarius Commission, Purpose of the Codex Alimentarius – 14th Edition, Codex Procedural Manual, page 31

³ Effectiveness of determination of fatty acids and triglycerides for the detection of adulteration of olive oil with vegetable oils. E. Christopoulou, M. Lazaraki, M. Komaitis and K. Kaselimis. 2004. Food Chemistry 84: 463-474.

Australia looks forward to working with the IOOC and other member countries at the 19th CCFO Session to achieve a consensus on this issue and other problematic composition issues so that the standard lives up to its purpose of facilitating international trade in authentic olive oil.

European Community (English) (European Community Competence European Community vote)

The European Community (EC) would like to present the following comments:

The EC (as well as the main non-European producer countries members of the IOOC) is against any modification of the proposed linolenic acid level of $\leq 1\%$.

Certain amounts of olive oils produced into the European Union and the main Mediterranean producer countries have sometimes parameters “out of rule”. Climatic conditions, olive tree varieties etc contribute significantly to such phenomenon. However, Community or IOOC standards were never dictated by occurrences of a limited extent. The importance of fighting against fraud is always considered more important than the weakening of the rules in order to accommodate limited quantities of “out of rule” olive oils.

The current level of $\leq 1\%$ in Community legislation and in the IOOC standard is a consensus achieved after several years of hard and long discussions

Any modification of the level on such a controversial parameter would reopen a hard discussion; a domino effect associating other parameters would have to be considered. In fact the linolenic acid level of $\leq 1\%$ is not an independent level, but is also linked to several fatty acids of the olive oil that are used to calculate the ECN 42. The “sterol” method proposed by Australia for fighting fraud is in any way not sufficient, because it is based only on an increase of the level of the linolenic acid.

The results of the IOOC survey in the main producer regions over the world would improve the knowledge on olive oils composition. However even these results would be just the first step for further studies and investigations that have to be considered. Scientific procedures are essential to justify any modification of the parameters.

The IOOC Executive Secretariat has received partial data from its member countries.

On the basis of the data forwarded by Australia, during the period 2002 to 2004 an average of 4,2% of olive oils was “out of rule” for linolenic acid. As the olive oil production in Australia varies between 2,500 tons in 2003 and 5,000 tons in 2004 (IOOC source), the quantity of Australian olive oil “out of rule” is 200 tons maximum. This amount represents an insignificant percentage of the world production of 2,700,000 tons in 2004/05.

The EU already made a concession (increase the parameter from 0.9 to 1%) in order to reach an agreement with the rest of the IOOC members. A further raise would seriously endanger fair practices in the trade of these products .

European Community (French)

La Communauté européenne (CE) souhaiterait formuler les observations suivantes.

La CE (ainsi que les principaux pays producteurs non européens membres du Conseil oléicole international) est opposée à toute modification de la teneur en acide linoléique proposée ($\leq 1\%$).

Certaines quantités d'huile d'olive produites dans l'Union européenne et dans les principaux pays producteurs méditerranéens présentent parfois des paramètres «hors norme», liés en grande partie aux conditions climatiques, aux variétés d'olivier utilisées, etc. Néanmoins, les normes de la Communauté ou du Conseil

oléicole international n'ont jamais été dictées par des épiphénomènes à caractère limité. Le besoin de lutter contre la fraude a toujours prévalu sur l'affaiblissement des normes afin de prendre en compte des quantités limitées d'huile d'olive «hors norme».

La teneur actuelle ($\leq 1\%$) fixée par la législation communautaire et par la norme du COI est le résultat de longues et âpres discussions menées pendant plusieurs années.

Toute modification de la teneur d'un paramètre aussi controversé rouvrirait ce débat délicat; par voie de conséquence, il faudrait aussi prendre en considération d'autres paramètres. En effet, la teneur maximale en acide linoléique fixée $\leq 1\%$ n'est pas une valeur indépendante; elle est liée à plusieurs acides gras de l'huile d'olive qui entrent dans le calcul de l'indice d'équivalent carbone 42 (ECN 42). La méthode «stérol» proposée par l'Australie pour lutter contre la fraude n'est absolument pas suffisante, car elle repose exclusivement sur une augmentation de la teneur en acide linoléique.

Les résultats de l'enquête menée par le COI dans les principales régions de production du monde permettront d'avoir une meilleure connaissance de la composition des huiles d'olive. Cependant, ces résultats ne constitueront que la première étape d'un processus d'études et d'enquêtes à envisager. Les procédures scientifiques sont indispensables pour justifier toute modification des paramètres.

Le secrétariat exécutif du COI a reçu des données partielles en provenance de ses pays membres.

Il ressort des données communiquées par l'Australie que, pour la période 2002-2004, en moyenne 4,2 % des huiles d'olive ont été considérées comme étant «hors norme» en ce qui concerne l'acide linoléique. En Australie, d'après le COI, la production d'huile d'olive est comprise entre 2 500 tonnes (2003) et 5 000 tonnes (2004), ce qui porte la quantité d'huile d'olive australienne «hors norme» à un maximum de 200 tonnes. Ce volume ne représente qu'un pourcentage minime de la production mondiale, qui s'établit à 2 700 000 tonnes pour la période 2004-2005.

La Communauté européenne a déjà fait une concession en acceptant de faire passer le taux maximal de ce paramètre de 0,9 à 1 % afin de parvenir à un accord avec les autres membres du COI. Toute nouvelle augmentation mettrait en péril l'équité des pratiques commerciales concernant ces produits.

European Community (Spanish)

La Comunidad Europea (CE) desearía hacer las observaciones siguientes:

La CE (al igual que los principales países productores no europeos que son miembros del IOOC) está en contra de que se modifique el nivel de ácido linolénico propuesto, de $\leq 1\%$.

Algunos aceites de oliva producidos en la Unión Europea y en los principales países productores del Mediterráneo presentan a veces parámetros «fuera de la norma». Las condiciones climáticas, las variedades de olivo, etc., contribuyen significativamente a que así sea. Sin embargo, ni las normas de la Comunidad ni las del IOOC han sido nunca dictadas por circunstancias de carácter local, y siempre se ha considerado más importante combatir el fraude que suavizar las normas para dar cabida a una cantidad reducida de aceites de oliva «fuera de la norma».

El nivel actual de $\leq 1\%$ fijado en la legislación comunitaria y en la norma del IOOC constituye un consenso al que se llegó tras varios años de arduas y prolongadas discusiones.

Cualquier modificación del nivel de un parámetro tan controvertido como éste reabriría un intenso debate; además, habría que tener presente el efecto dominó que repercutiría en otros parámetros. De hecho, el nivel de ácido linolénico de $\leq 1\%$ no es independiente, sino que está vinculado con varios ácidos grasos del aceite de oliva que se utilizan para el cálculo de ECN 42. De todas formas, el método «esterol» propuesto por Australia para luchar contra el fraude es insuficiente, ya que se basa exclusivamente en el incremento del nivel de ácido linolénico.

Los resultados del estudio realizado por el IOOC en las principales regiones productoras del mundo mejorarán los conocimientos que se tienen sobre la composición de los aceites de oliva. No obstante, estos resultados no serán más que el primer paso para seguir estudiando e investigando. Los procedimientos científicos son esenciales para poder justificar cualquier modificación de los parámetros.

La Secretaría ejecutiva del IOOC ha recibido datos parciales de sus países miembros.

Según los datos aportados por Australia durante el periodo que va de 2002 a 2004, una media del 4,2 % de los aceites de oliva estaban «fuera de la norma» con respecto al ácido linolénico. Puesto que la producción de aceite de oliva en Australia varía entre las 2 500 toneladas en 2003 y las 5 000 toneladas en 2004 (fuente: IOOC), la cantidad de aceite de oliva australiano «fuera de la norma» asciende, como máximo, a 200 toneladas, lo que constituye un porcentaje insignificante de la producción mundial, que en 2004/05 fue de 2 700 000 toneladas.

La UE ya hizo una concesión —aumentar el parámetro del 0,9 % al 1 %— para llegar a un acuerdo con el resto de miembros del IOOC; si se volviera a aumentar el nivel máximo, las prácticas leales en el comercio de estos productos se verían seriamente amenazadas.

Mexico

México propone que se fije un máximo de 1.5% de ácido linolénico en el aceite de oliva en la Norma correspondiente del Codex, por considerar que será perfectamente cumplido por todos los países productores de aceite de oliva.

New Zealand

New Zealand is pleased to submit the following comments in response to the above mentioned circular letter.

New Zealand thanks the International Olive Oil Council for carrying out this survey but wishes to register its concern regarding the analysis presented within the document, Report of the Executive Secretariat of the International Olive Oil Council IOOC for the following reasons:

The survey mentions a 1.0% ‘standard’; however New Zealand wishes to draw to the attention of the Committee that contrary to the statement contained within the survey document, there is no current Codex Standard that has an entry for linolenic acid. The objective of this survey has been to gather relevant data to incorporate fatty acid composition ranges representative of world olive oil production in the international standards.

The analysis is based on a very limited response and therefore does not properly provide a sound basis to support the establishment of a new linolenic acid level – only 7 of 35 countries responded. However, the analysis is sufficient to indicate that a level of 1% is not appropriate. Four countries are reported as having samples with linolenic acid content above 1.0%.

The analysis appears to show that majority of oils may meet the proposed standard and by implication appears to suggest that trade concerns may be limited. The issue here is not the relative share of affected product in international trade but whether the international standard is based on robust analysis and reflective of the range and variations in composition of authentic olive oils produced in different parts of the world. The analysis seeks to dismiss one country’s results by saying it did not define a representative, uniform producing area.

New Zealand believes that if the linolenic acid level were set too low it would raise some broader issues of principle for Codex. Codex is the recognized international body for establishing international standards for food safety and fair trade practices. It is important that its standards are based on data from across its membership and that its standards do not in themselves create unjustified technical barriers to trade. New Zealand believes that a 1% linolenic acid level is likely to have such an effect.

To clarify in New Zealand's case, firstly, data that has been provided by New Zealand is based on survey results limited to one year, therefore variation in climatic conditions and other factors are not represented. Second, while New Zealand's results are spread over a range of 0.39, that is from 0.61% to 1.0%, qualitative statistical modeling suggests that a larger number of samples would find a wider range. These results suggest that, on average over the whole population of New Zealand olive oils, 4% of results would exceed a level of 1.0%. This estimation is based on the assumption that the distribution of results is normal, i.e. a bell-shaped curve. The two other countries whose results in this survey were not over 1.0% are also likely to find that a proportion of their oils exceed 1.0%.

Further, it is probable that this analysis underestimates the range of linolenic acid within New Zealand, as the results of all other countries that responded to the IOOC survey have wider ranges than New Zealand.

New Zealand therefore could not accept a standard set at 1.0% on the basis of limited survey results provided in the IOOC survey document.

New Zealand believes that the information presented in document CX/FO 05/19/04 does not provide adequate justification for setting the linolenic acid level at 1.0% for the reasons set out above.

New Zealand acknowledges the importance of ensuring authenticity of product entering international trade and recognises the use of linolenic acid as one possible parameter for authenticity. However, New Zealand is concerned about proposals to set the standard at 1.0% as it would exclude some authentic oils.

New Zealand therefore believes that the only appropriate course of action for the Committee is to reinstate the current maximum level for linolenic acid level at 1.5% as per the original standard, and if necessary strengthen protection against fraud and deceptive practices through other, more appropriate means.

New Zealand suggests that the Committee re-examine the issue of linolenic acid levels once it has access to more representative data both in terms of number of respondents and number of years of available data. This would provide adequate data upon which a more robust analysis and decision-making process can be based.

Turkey

THE VARIATIONS OF THE LINOLENIC ACID'S CONTENTS OF TURKISH OLIVE OIL ACCORDING TO THE YEARS

Physical and chemical characteristics of Olive Oil varies upon its own region, species, climate and the crop year. In this study, It is presented at table-1 that linolenic acid content which is utilized as an important criterion of quality and purity also with its deviations from the standard value per olive season for the olive oils obtained from the different regions.

To get these values, Ayvalık, Memecik, Kilis-Nizip species of olives for oil obtained from which following regions of Balıkesir, İzmir, Aydın, Muğla, Mediterranean and South-east Anatolia which all have an important part in olive production of our country were applied to. Linolenic acid contents obtained from total 349 samples were determined and then evaluated.

Table 1. The Variation of Linolenic Acid's Portion According to the Years

	1995/96	1998/99	1999/00	2000/01	20001/02	2002/03	GENERAL
Std. Value (Turkish Food Codex)	$\leq 0,9$						
Number of Samples	62	94	9	90	62	32	349
Minimum	0,33	0,48	0,60	0,47	0,59	0,30	0,30
Maximum	0,76	0,76	0,89	0,89	1,03	1,07	1,07
Average	0,63	0,64	0,70	0,69	0,76	0,61	0,68
Out of Std. Sample No	0	0	0	0	1	1	2
Out of Std. Sample %	0	0	0	0	1,61	3,12	0,57

NOTE:

1: The data which are applied for the evaluation at issue are the results of the laboratory studies of the different olive oil factories from the region of Aegean and the region of Marmara (The years between 1995-2003, Analysis results pertaining to 6 different olive seasons and to total 349 samples)

2: As an analysis method ; COI/T.20/Doc. No. 24 was applied for preparing the olive oil acids' methyl ester and COI/T.20/Doc. No. 17 was applied for determining the methyl ester as a "gas chromatographic"

THE RESULT

When the standard value for Linolenic acid portion is accepted as ≤ 0.9 , It's likely that the samples pertaining to 5 years have shown no deviation from the standard value about the linolenic acid's contents. The linolenic acid value of " ≤ 1.0 " which was suggested before on the Commission of Codex is convenient for our domestic olive oil.

Venezuela

Aún cuando Venezuela no es un país productor de estos aceites, es importador y consumidor de los mismos, por tales razones dichos productos se someten a controles analíticos en el laboratorio oficial, Instituto Nacional de Higiene "Rafael Rangel" (INHRR). En los análisis practicados en Venezuela durante el período 1999-2004 no se han detectado valores de Ácido Linolénico superiores al 1%.

Por tal motivo Venezuela no avala el aumentar este valor al 1,5% como límite máximo, por lo cual manifiesta estar de acuerdo en mantener un límite máximo del 1% para el Ácido Linolénico en los Aceites de Oliva y Aceite de Orujo de Oliva.