

Australian Standard for Olive Oil and Olive-Pomace Oil AS 5264-2011®

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Australian Olive Association

Wangaratta, Victoria
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Australian Standard

Code of Practice – A Critical Part



Australian Standard

The Ultimate Goal

**Scientifically based and consumer
oriented Standard for all olive oils
and olive-pomace oils traded in
Australia**

Australian Standard

The Process

Phase	Start	Finish
Preliminary Phase	June 2002	May 2010
Initiation	June 2010	August 2010
Design	August 2010	December 2010
Public Comment	December 2010	February 2011
Public Consultation Resolution	March 2011	May 2011
Ballot Period	May 2011	June 2011
Finalisation	June 2011	July 2011
Publication	20 th July 2011	

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- To protect (untrained) consumers from confusing and/or misleading labelling practices.
- To guarantee the quality of the product throughout the chain.
- To allow honest growers and traders to have a level playing - pears with pears and apples with apples.
- To provide government and non government agencies with a reference and tool to control and enforce fair trade.

Australian Standard

- **Standard Committee FT-034**
- Standards Australia.
- Department of Agriculture, Fisheries and Forestry.
- Rural Industries Research and Development Corporation.
- Industry and Investment NSW (AORL).
- Private Laboratories.
- Australian Olive Association.
- New Zealand Olive Association.
- Australian Olive Oil Association.
- Australian Customs.
- Australian National Retailers Association.
- Food and Grocery Council New Zealand.
- Consumers Federation of Australia.
- Choice (observer).
- Australian Competition and Consumer Commission (observer).
- Food Standards Australia and New Zealand (observer).

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- The most widely accepted international standards for olive oils and olive-pomace oils are:
 - **Codex Standard** for Olive Oils and Olive Pomace Oils - Codex Stan 33-1981 (Rev. 2-2003).
 - **International Olive Council Trade Standard** Applying to Olive Oils and Olive-Pomace Oils - COI/T.15/NC N° 3/Rev. 3 November 2008.
- Other relevant standards due to the olive oil and olive pomace oil volumes traded in those countries are:
 - **European Commission Regulation** (EEC) N° 2568/91 of 11 July 1991 on the characteristics of olive oil and olive-residue oil and on the relevant methods of analysis and subsequent amendments.
 - **United States Standards** for Grades of Olive Oil and Olive-Pomace Oil - Effective date October 25, 2010.
- There was **no Australian standard for olive oil**.

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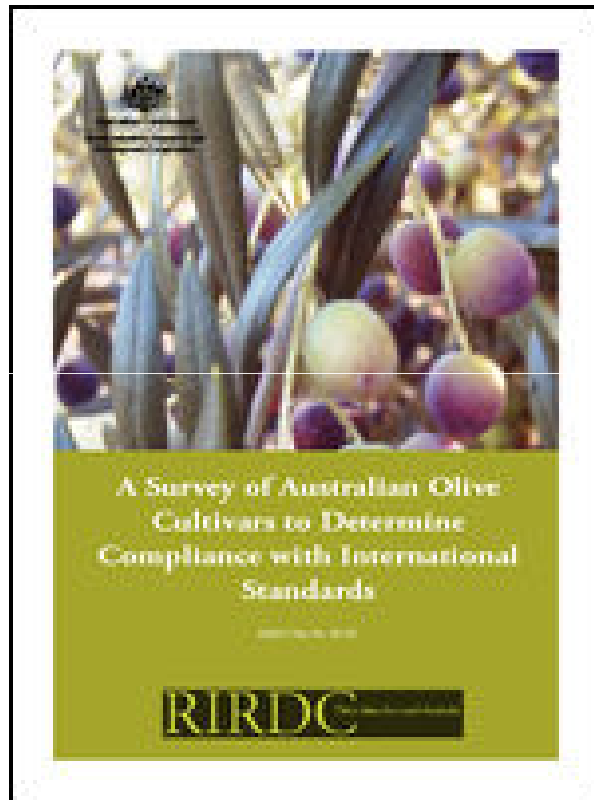
Why Australia needed a new Standard?

Other Standards (IOC, Codex, EC, etc.):

- Are based on average European oils' characteristics , traditional varieties and do not contemplate new world's olive oils.
- Do not make reference to the shelf life of the oils or the need for a best before date.
- Do not detect refined olive oils utilising new technologies (e.g. Soft Column®).
- Use confusing denominations of the grades.
- And are different from each other.

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Why Australia needed a new Standard?



Australian Standard

Recognition of natural variations without compromising detection of adulterations

Summary of AORL and MOLS records for Fatty Acid Composition of Australian oils

	C 14:0	C 16:0	C16:1	C 17:0	C 17:1	C 18:0	C 18:1	C 18:2	C18:3	C 20:0	C 20:1	C22:0	C 24:0
IOC LIMITS	0.0-0.05	7.5-20.0	0.3-3.5	0.0-0.3	0.0-0.3	0.5-5.0	55.0-83.0	3.5-21.0	0.0-1.0	0.0-0.6	0.0-0.4	0.0-0.2	0.0-0.2
AUSTRALIAN STANDARD LIMITS	0.0-0.05	7.0-20.0	0.3-3.5	0.0-0.3	0.0-0.4	0.5-5.0	53.0-85.0	2.5-22.0	0.0-1.5	0.0-0.6	0.0-0.5	0.0-0.2	0.0-0.2
AVERAGE	0.01	11.87	0.98	0.09	0.11	2.31	73.81	9.25	0.73	0.39	0.31	0.10	0.09
MEDIAN	0.01	11.70	0.90	0.10	0.10	2.30	74.30	9.40	0.70	0.40	0.30	0.10	0.10
STANDARD DEVIATION	0.00	1.57	0.33	0.03	0.05	0.44	3.86	2.75	0.10	0.05	0.05	0.02	0.03
MAXIMUM	0.04	20.26	3.56	0.50	0.50	5.40	84.15	23.79	1.71	0.70	0.60	0.20	0.20
MINIMUM	0.00	6.70	0.29	0.00	0.00	0.20	53.87	2.21	0.30	0.16	0.03	0.04	0.00
NUMBER OF SAMPLES	1859	1859	1859	1859	1859	1859	1859	1859	1859	1859	1859	1859	1859
PERCENTAGE OF SAMPLES BELOW PROPOSED AUS STANDARD	0.0%	0.2%	0.1%	0.0%	0.0%	0.1%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
PERCENTAGE OF SAMPLES ABOVE PROPOSED AUS STANDARD	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%
PERCENTAGE OF SAMPLES BELOW IOC STANDARD	0.0%	0.3%	0.1%	0.0%	0.0%	0.1%	0.1%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%
PERCENTAGE OF SAMPLES ABOVE IOC STANDARD	0.0%	0.1%	0.1%	0.1%	0.3%	0.1%	0.4%	0.1%	0.5%	0.1%	2.6%	0.0%	0.0%

Summary of AORL and MOLS records for Sterol Composition of Australian oils

	Cholesterol	Brassicasterol	Campesterol	Stigmasterol	D-7-Stigmasterol	β -Sitosterol	Total sterols	E+U	2-glyceryl monopalmitate
IOC LIMITS	0.0-0.5	0.0-0.1	0.0-4.0	< Camp.	0.0-0.5	93.0-100.0	> 1000	0.0-4.5	C16:0<=14.0 <=0.9%, <=1.1%
AUSTRALIAN STANDARD LIMITS	0.0-0.5	0.0-0.1	0.0-4.8	< Camp.	0.0-0.5	92.5-100.0	> 1000	0.0-4.5	<=1.5%
AVERAGE	0.18	0.02	3.81	0.71	0.26	94.08	1741.11	1.02	0.48
MEDIAN	0.15	0.03	3.80	0.63	0.20	94.07	1764.00	0.90	0.40
STANDARD DEVIATION	0.13	0.01	0.68	0.29	0.11	0.73	327.95	0.55	0.23
MAXIMUM	0.80	0.10	5.00	2.30	1.19	96.70	2862.00	5.53	1.50
MINIMUM	0.00	0.00	1.88	0.00	0.00	92.00	789.23	0.20	0.04
NUMBER OF SAMPLES	651	651	651	651	651	651	651	582	305
PERCENTAGE OF SAMPLES BELOW PROPOSED AUS STANDARD	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	1.2%	0.0%	0.0%
PERCENTAGE OF SAMPLES ABOVE PROPOSED AUS STANDARD	0.8%	0.0%	1.1%	0.0%	0.5%	0.0%	0.0%	0.3%	0.0%
PERCENTAGE OF SAMPLES BELOW IOC STANDARD	0.0%	0.0%	0.0%	0.0%	0.0%	3.5%	1.2%	0.0%	0.0%
PERCENTAGE OF SAMPLES ABOVE IOC STANDARD	0.8%	0.0%	39.0%	0.0%	0.5%	0.0%	0.0%	0.3%	3.9%

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Shelf life limited to no more than 2 years from bottling and guided by evidence

Estimated shelf life of olive oils (in days) for every 1 Rancimat® hour @ 110°C

		Storage Temperature (in °C)								
		24	23	22	21	20	19	18	17	16
General reference	Air	16.1	17.3	18.5	19.9	21.3	22.8	24.5	26.2	28.1
	Nitrogen	24.2	26.0	27.8	29.8	32.0	34.2	36.7	39.3	42.1
Modern Olives Trials	Air	20.2	21.6	23.2	24.8	26.6	28.5	30.6	32.7	35.1
	Nitrogen	30.2	32.4	34.7	37.2	39.9	42.8	45.8	49.1	52.6

General Reference: <http://www.metrohm.com.cn/administrator/resource/upfile/Stab%20Introduction.pdf>

Nitrogen Factor: <http://grasasyaceites.revistas.csic.es/index.php/grasasyaceites/article/view/461/463>

Modern Olives Trials: Trials conducted by MOLS in 2008 with BBE Arbequina and Picual oils at varying temperatures

Red: Standard reference for fats and oils stored under air

Green: Estimation proposed by the Australian Code of Practice

Australian Standard

Shelf life limited to no more than 2 years
from bottling and guided by evidence



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INTERNATIONAL
OLIVE
COUNCIL

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DECISION No DEC-18/96-V/2008

DETECTION OF DEODORISED OLIVE OILS IN EXTRA VIRGIN OLIVE OILS

THE COUNCIL OF MEMBERS OF THE INTERNATIONAL OLIVE COUNCIL,

Having regard to the recommendation made by the Technical Committee at its fifth meeting on the occasion of the 96th session of the Council of Members,

Whereas means are urgently needed to facilitate the detection of the fraudulent admixture of deodorised olive oil to extra virgin olive oil until the chemists define a position on the most reliable method and acceptable repeatability values;

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Analysis

- Pyropheophytins (PPPs). ISO 29841:2009.
- 1,2-Diacylglycerol Content (DAGs). ISO 29822:2009.
- Fatty Acid Alkyl Esters. COI/T.20/Doc. N° 28.

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HEAT TREATMENT TRIAL

Variety BARNEA BR T20004 Jan-10

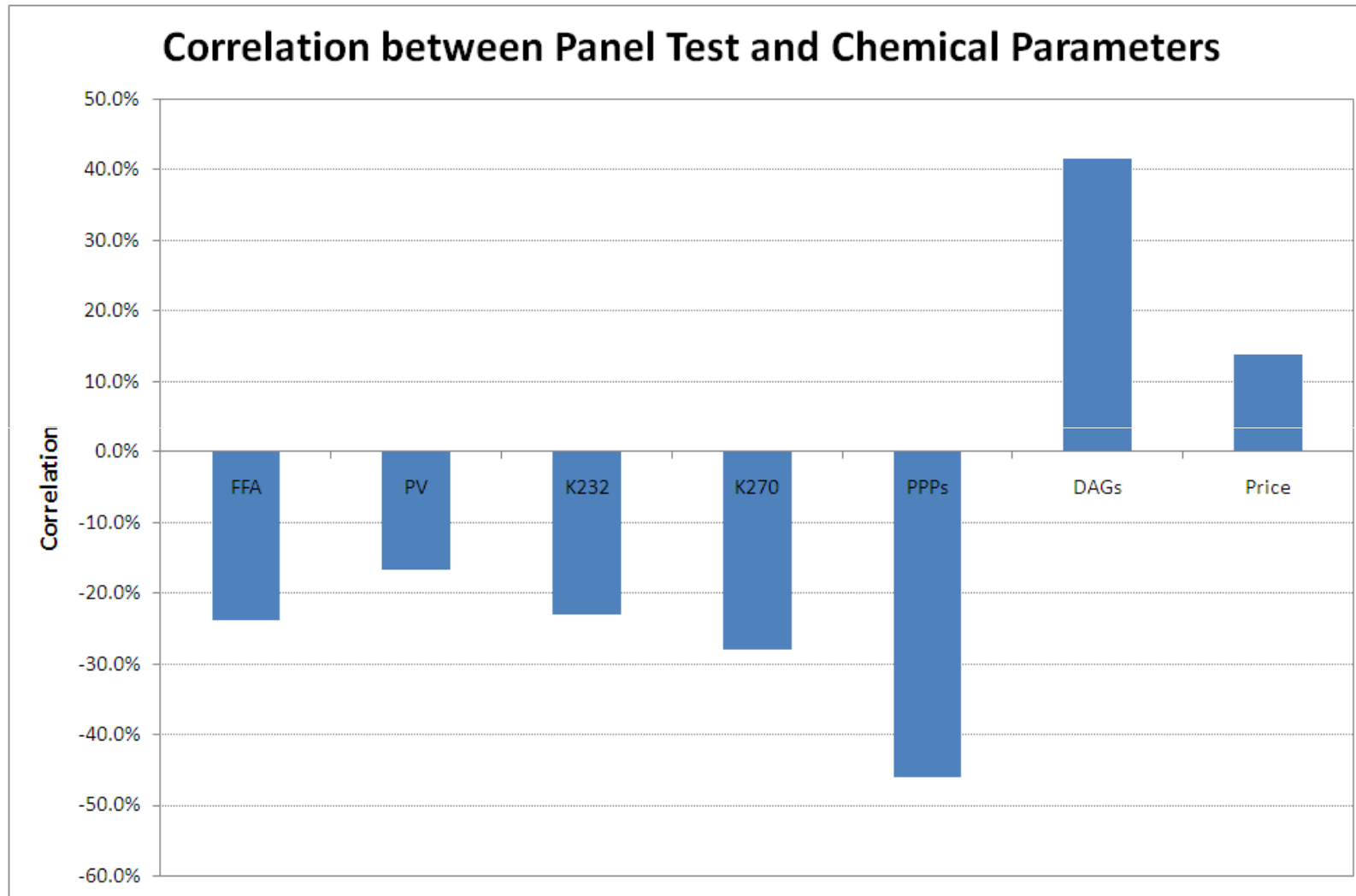
Work Order	Temp	K232	K270	DK	PPP	PPP pred	DAG	FAAE	Ratio	STIG
10/018-01	20 °C (Control)	1.779	0.136	0.000	6.54	2.86	82.6	12.300	0.380	0.051
10/018-02	40 °C	1.835	0.150	0.000	6.40	3.04	85.6	8.670	0.593	0.062
10/018-03	60 °C	1.886	0.168	0.000	6.40	2.99	85.0	8.050	0.588	0.114
10/018-04	80 °C	1.861	0.162	0.000	7.88	2.98	84.8	8.860	0.464	0.120
10/018-05	100 °C	1.930	0.160	0.000	10.94	2.99	85.0	11.200	0.356	0.112
10/018-06	120 °C	1.968	0.163	0.000	18.46	2.92	83.8	17.200	0.497	0.107
10/018-07	150 °C	2.508	0.335	0.007	73.28	3.65	69.5	11.400	0.310	0.097
10/018-08	200 °C	2.456	0.635	0.021	96.36	8.04	53.4	11.239	0.391	0.082

$PPP_{\text{predicted}} = 49,7 - 1,17 * \%DG + 0,0073 * \%DG * \%DG + 5,0 \%$

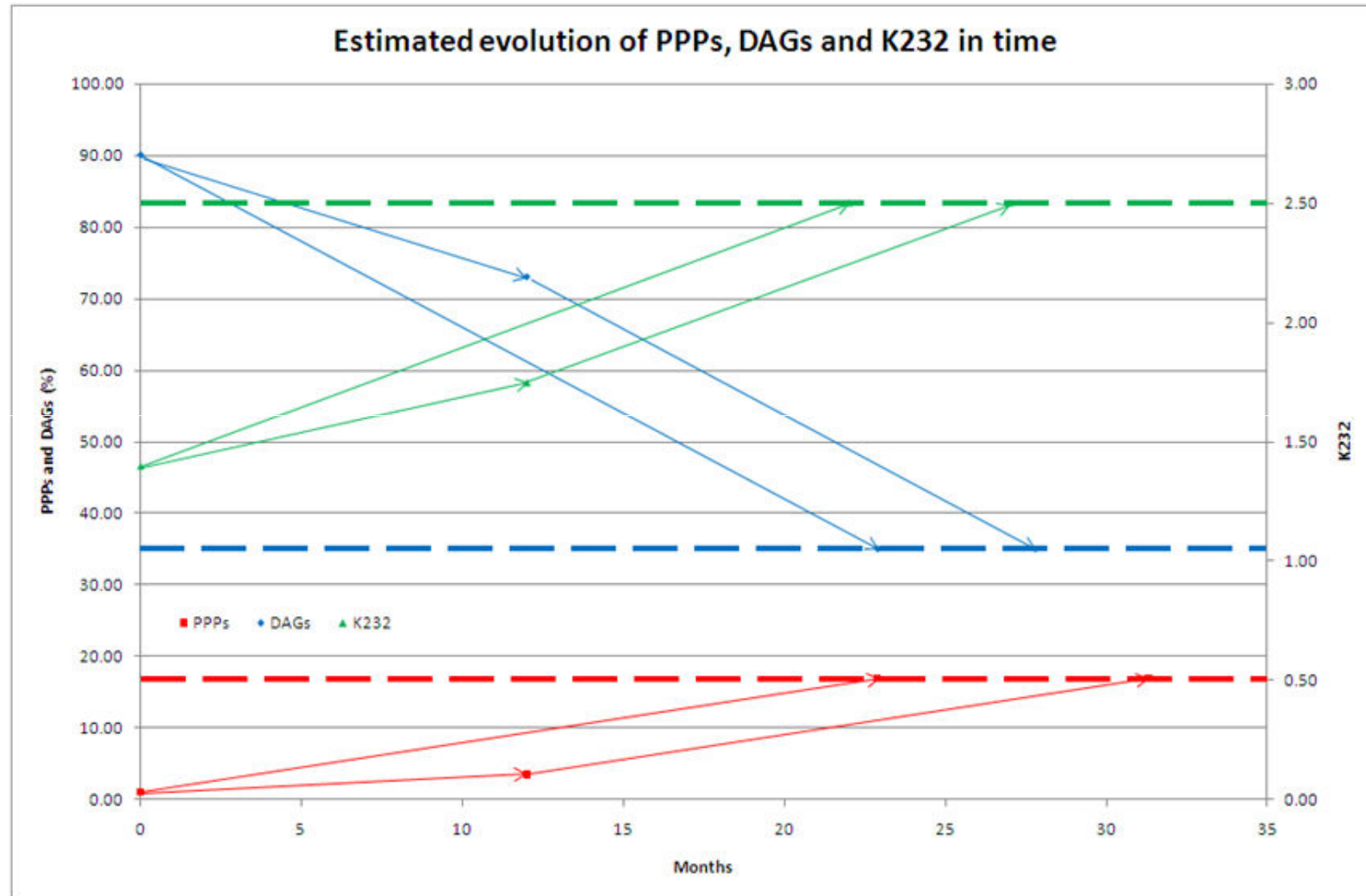
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Treatment	Storage time (months)	Initial PPP Ratio (%)	PPP Ratio (%) after temperature
20°C	6	1.5	1.5
100°C – 5 min	6	1.5	10.9
150°C – 5 min	6	1.5	73.3
200°C – 5 min	6	1.5	96.4

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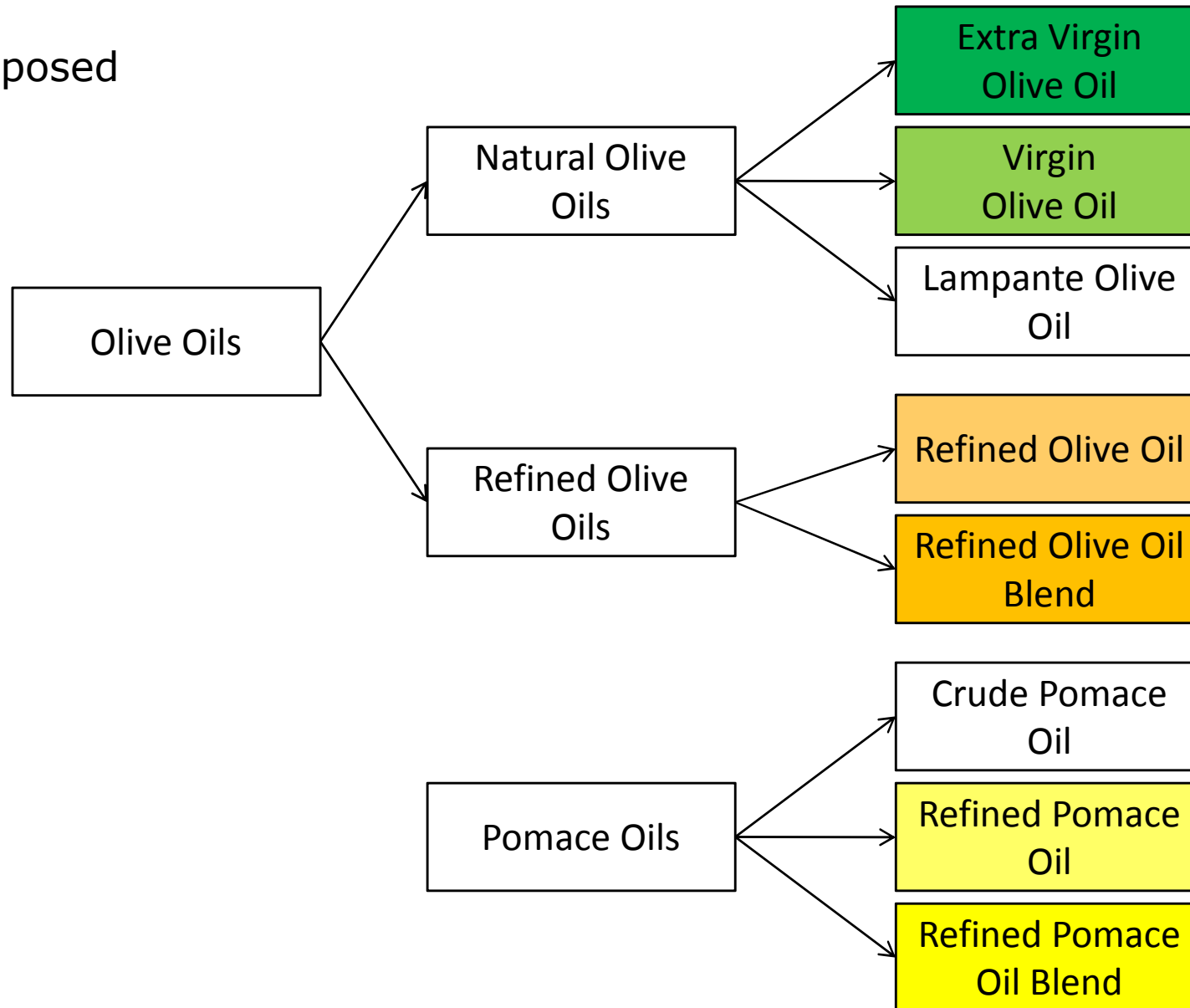


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Proposed



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CODEX STANDARD FOR OLIVE OILS AND OLIVE POMACE OILS

CODEX STAN 33-1981 (Rev. 2-2003)¹

3.5 *Olive oil*: oil consisting of a blend of refined olive oil and virgin olive oils suitable for human consumption. It has a free acidity, expressed as oleic acid, of not more than 1 gram per 100 grams and its other characteristics correspond to those laid down for this category³.

3.6 *Refined olive-pomace oil*: oil obtained from crude olive-pomace oil by refining methods which do not lead to alterations in the initial glyceridic structure. It has a free acidity, expressed as oleic acid, of not more than 0.3 grams per 100 grams and its other characteristics correspond to those laid down for this category².

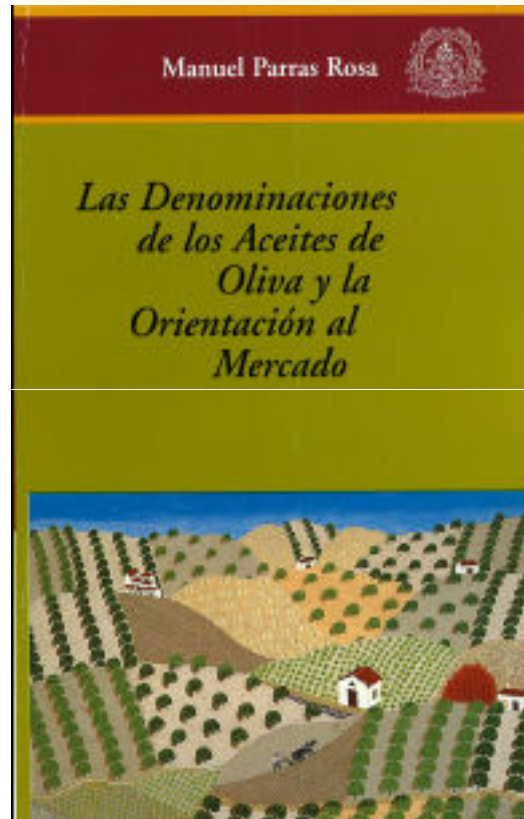
3.7 *Olive-pomace oil*: oil consisting of a blend of refined olive-pomace oil and virgin olive oils. It has a

¹ Formerly CAC/RS 33-1970; Revised in 1989

² This product may only be sold direct to the consumer if permitted in the country of retail sale.

³ The country of retail sale may require a more specific designation.

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“The current confusing denominations do not assist in a better knowledge and differentiation of the different olive oil grades. It is our opinion that current denominations create confusion or, at least, do not assist in differentiating the various olive oil grades having a negative incidence in the knowledge that the consumer has about them” (Page 11).

“We must change the current denominations for other names that help consumers to differentiate between the different grades of olive oil” (Page 13).

“It seems clear that the naming policy followed until now tried to avoid a product differentiation up to the point that, it could be argued that, the denominations do not follow labelling regulations related to food products according to which the retail denomination should not have an intention to mislead the consumer. The use of adjectives such as “Extra light”, “fine”, “pure”, etc. are clear examples of that” (Page 33).

“Denomination policies for olive oil have been mostly technical in nature and they have never been oriented towards facilitating the consumers’ purchasing process. That is, they have been policies decided from the offer perspective and not oriented towards the consumer” (Page 34).

“It is extremely hard to understand how the term “pure” can be used to refer to a blend of different grades of olive oil. According to the dictionary, “pure” means “free of any mix or blend”” (Page 39).

“Using the term “Olive Oil” for a grade is also a mistake because, if we mention olive oil, it is not clear if we are talking about all olive oils or just one of its grades. Equally misleading is to be able to continue utilising the terms “pure” or “100% pure” after the grade pure olive oil has been removed” (Page 40).

“In terms of denominations, olive oil Standards managed to confuse consumers rather than facilitating information about the characteristics of the different oils. AS a consequence, consumers cannot, on one hand, differentiate the different grades of olive oil, and on the other hand, they cannot recognise virgin and extra virgin olive oils as the only grades that have not undergone chemical or thermal treatments” (Page 41).

Australian Standard

52001AE0709

Opinion of the Economic and Social Committee on: the Commission Report to the Council and the European Parliament on the quality strategy for olive oil, and the Proposal for a Council Regulation amending Regulations No 136/66/EEC and (EC) No 1638/98 as regards the extension of the period of validity of the aid scheme and the quality strategy for olive oil

Official Journal C 221 , 07/08/2001 P. 0068 - 0073

3.1.2.3.7. Oils sold for consumption (1.3.3)

3.1.2.3.7.1. Aware of the low level of consumer knowledge concerning the quality and types of olive oil, the Commission proposes to clarify and reduce the number of current designations at both the wholesale and retail levels. The ESC welcomes the Commission's stance, and it is to be hoped that its proposals will be sufficiently understood by consumers, for whom the suggested changes are basically intended.

3.1.2.3.7.2. There is a clear lack of analytical procedures for identifying specific lawful blends of olive oil and determining the proportions involved. The most sensitive point of the Commission proposal under this heading is the present use of the term "olive oil", which is at the same time a generic designation and a specific category.

3.1.2.3.7.3. This overlap introduces an element of confusion which should be removed. This could be achieved by selecting a new term for the present "olive oil" category (blend of refined and virgin oils), adding some qualification - with neither a negative or a positive connotation - which clearly distinguishes it from the generic term olive oil. Given the possible economic repercussions for some of the subsectors involved, the ESC proposes a prior survey of consumers and users to sound out their reaction to a possible change in the current designation of olive oil. In any case, efforts must continue to raise the profile of higher-quality oils and allow base prices for the different categories of olive oil to be more clearly differentiated. In so doing, it must be borne in mind that because of their unique production process, higher-quality oils generate more employment, require shorter processing times and are more environment-friendly.

Australian Standard

52000PC0855

Proposal for a Council Regulation amending Regulations No 136/66/EEC and (EC) No 1638/98 as regards the extension of the period of validity of the aid scheme and the quality strategy for olive oil /* COM/2000/0855 final - CNS 2000/0358 */

Official Journal 213 E , 31/07/2001 P. 0001 – 0004

The second principal aspect is the current use of generic designations for specific types of olive oil. The biggest problem in this respect is the mandatory use of the designation "olive oil" for blends of refined olive oil and certain virgin olive oils. Consumers are to some extent misled by a mixture which guides them to one sort of olive oil, to the detriment of virgin olive oils. The type of oil concerned should be described accurately, without detracting from its merits, in particular those of a nutritional nature.

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COUNCIL REGULATION (EC) No 1513/2001

of 23 July 2001

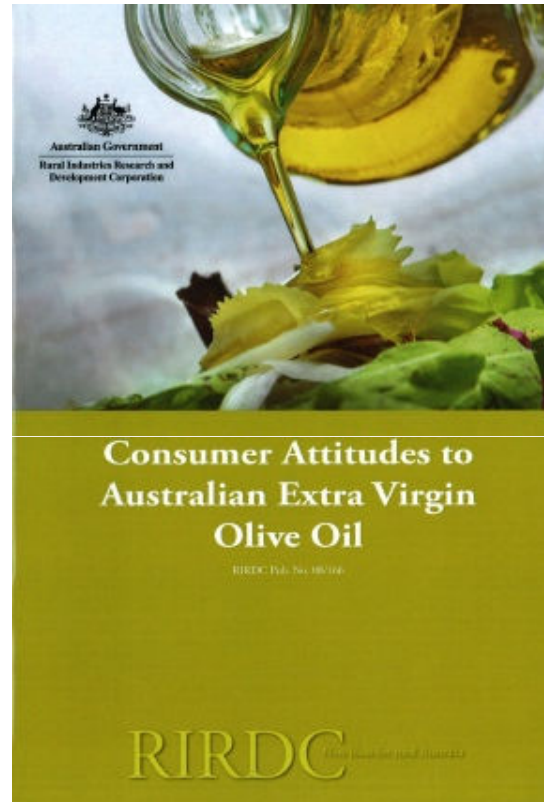
amending Regulations No 136/66/EEC and (EC) No 1638/98 as regards the extension of the period of validity of the aid scheme and the quality strategy for olive oil

- (6) The descriptions and definitions of olive oils and olive-pomace oils are in certain cases unsatisfactory and could lead to confusion among both consumers and operators. Such problems cause disruption on the market and, in order to avoid them, new descriptions and definitions should replace those laid down in the Annex to Regulation No 136/66/EEC.

3. OLIVE OIL — COMPOSED OF REFINED OLIVE OILS AND VIRGIN OLIVE OILS

Olive oil obtained by blending refined olive oil and virgin olive oil other than lampante oil, having a free acidity content expressed as oleic acid, of not more than 1 g per 100 g, and the other characteristics of which comply with those laid down for this category.

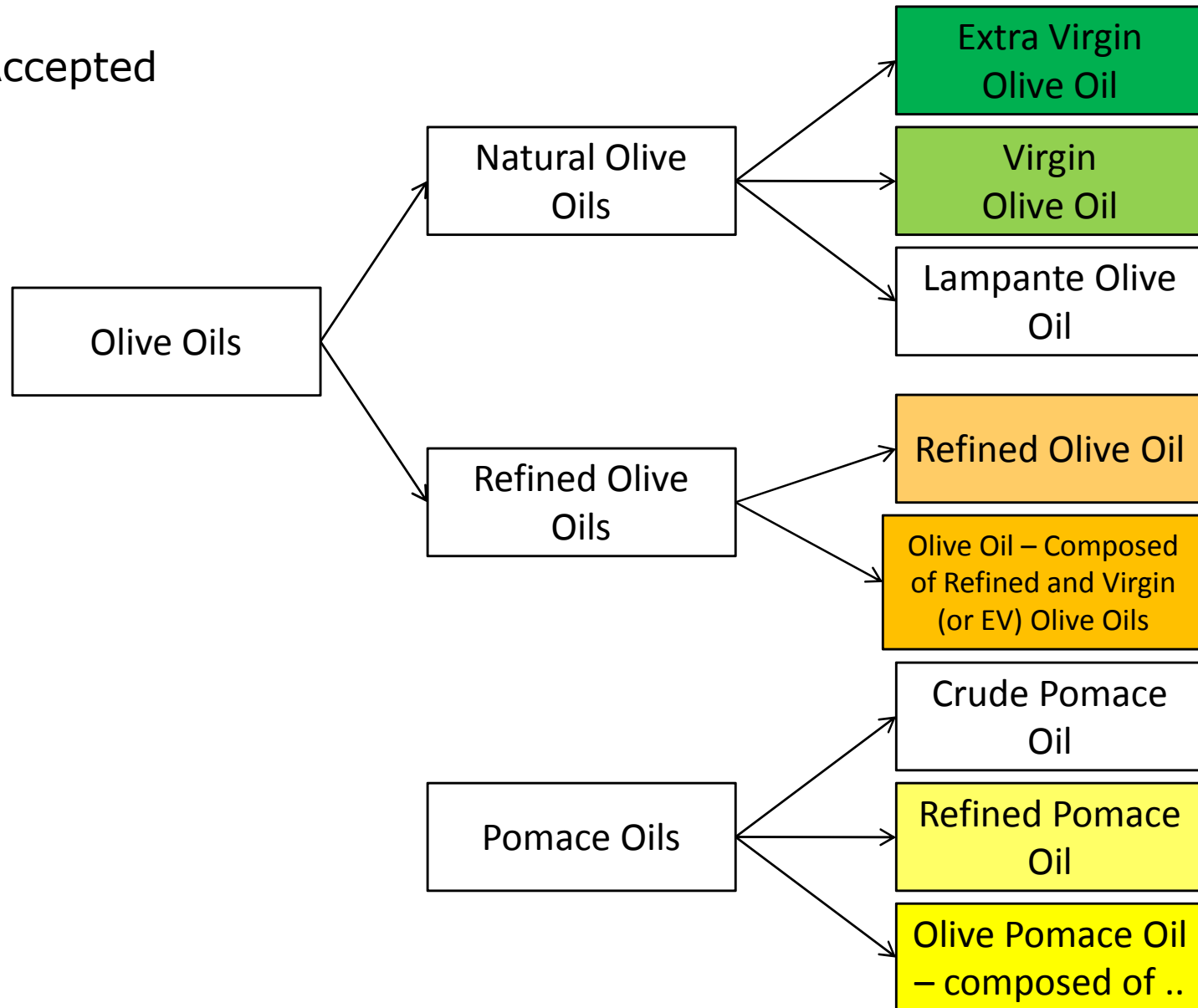
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RIRDC funded research study on “Consumer Attitudes to Australian Extra Virgin Olive Oil” states: “Extra light appears most strongly associated with low/good fat credentials when compared with Extra Virgin”.

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Accepted



Australian Standard

Next Steps

- Education and training of consumers and retailers.
- Adoption of Standard by stakeholders.
- Meeting with key stakeholders.
- On going survey (30 samples/3 months).
- Survey of bulk imports.
- ACCC, Customs and Consumer Groups

this symbol



when you purchase
**Australian
Extra Virgin
Olive Oil**
Ask us why!

Very Important Work

Gippsland





Thank You