APPENDIX V

DRAFT AMENDMENT/REVISION TO THE *STANDARD FOR NAMED VEGETABLE OILS* (CXS 210-1999): INCLUSION OF AVOCADO OIL

(Adoption at Step 8)

2. DESCRIPTION

2.1 Product definitions

Avocado oil may be derived from either the mesocarp of avocado fruit (*Persea americana*) or obtained by processing the whole avocado fruit.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 GLC ranges of fatty acid composition (expressed as percentages)

Samples falling within the appropriate ranges specified in Table 1 are in compliance with this Standard. Supplementary criteria, for example national geographical and/or climatic variations, may be considered, as necessary, to confirm that a sample is in compliance with the Standard.

Table 1: Fatty acid composition of avocado oil as determined by gas liquid chromatography from authentic samples *(expressed as percentage of total fatty acids)*

Fatty acid	Avocado Oil
C6:0	ND
C8:0	ND
C10:0	ND
C12:0	ND
C14:0	ND - 0.3
C16:0	11.0 - 26.0
C16:1	4.0 – 17.1
C17:0	ND – 0.3
C17:1	ND - 0.1
C18:0	0.1 - 1.3
C18:1	42.0 - 75.0
C18:2	7.8 - 19.0
C18:3	0.5 - 2.1
C20:0	ND - 0.7
C20:1	ND - 0.3
C20:2	ND
C22:0	ND - 0.5
C22:1	ND
C22:2	ND
C24:0	ND - 0.2
C24:1	ND – 0.2

APPENDIX TO CXS 210-1999: OTHER QUALITY AND COMPOSITION FACTORS

3. CHEMICAL AND PHYSICAL CHARACTERISTICS

Chemical and Physical Characteristics are given in Table 2.

Table 2: Chemical and physical characteristics of crude avocado oil

Parameter	Avocado Oil
Relative density (x°C/water at 20°C)	0.910 – 0.920
Refractive Index (nD 40°C)	1.458 – 1.470
Saponification Value (mg KOH/g oil)	170 – 202
Iodine Value	78 – 95
Unsaponifiable matter (g/Kg)	≤ 19.0

4. IDENTITY CHARACTERISTICS

Levels of desmethylsterols in vegetable oils as a percentage of total sterols are given in Table 3.

Table 3. Levels of desmethylsterols in crude avocado oil from authentic samples as a percentage of total sterols.

	Avocado Oil[d]
Cholesterol	ND - 0.5
Brassicasterol	ND - 0.5
Campesterol	4.0 - 8.3
Stigmasterol	0.3 - 2.0
Beta-sitosterol	79.0 - 93.4
Delta-5-avenasterol	2.0 - 8.0
Delta-7-stigmastenol	ND – 1.5
Delta-7-avenasterol	ND – 1.5
Others	ND - 2.0
Total sterols (mg/kg)	3000 - 7500

[d] Avocado oil also contains 1.0 - 2.5% clerosterol

Table 4: Levels of tocopherols and tocotrienols in crude vegetable oils from authentic samples (mg/kg) (see Appendix of the Standard)

	Avocado oil
Alpha-tocopherol	45 – 270
Beta-tocopherol	ND – 36
Gamma-tocopherol	ND – 62
Delta-tocopherol	ND – 70
Alpha-tocotrienol	ND – 20
Gamma-tocotrienol	ND – 20
Delta-tocotrienol	ND – 20
Total (mg/kg)	45 – 478