APPENDIX VIII

PROPOSED AMENDMENT/REVISION TO THE *STANDARD FOR NAMED VEGETABLE OILS* (CXS 210-1999): INCLUSION OF HIGH OLEIC ACID SOYA BEAN OIL

(For Adoption at Step 5/8)

2. DESCRIPTION

2.1 Product definitions

Soya bean oil – high-oleic acid (soybean oil – high-oleic acid; high-oleic acid soya bean oil; high-oleic acid soybean oil) is produced from high-oleic acid oil-bearing seeds of varieties derived from soya beans (seeds of *Glycine max* (L.) Merr.).

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

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

High-oleic acid soya bean oil must contain not less than 65 percent oleic acid (as a percentage of total fatty acids).

Table 1: Fatty acid composition of high oleic acid soya bean oils as determined by gas liquid chromatography from authentic samples (expressed as percentage of total fatty acids)

Fatty acid	Soya bean oil (high-oleic acid)
C6:0	ND
C8:0	ND-0.1
C10:0	ND-0.1
C12:0	ND-0.1
C14:0	ND-0.5
C16:0	2.5-8.0
C16:1	ND-0.1
C17:0	ND-0.8
C17:1	ND-1.5
C18:0	3.2-5.0
C18:1	65.0-87.0
C18:2	1.0-16.0
C18:3	1.0-6.0
C20:0	ND-1.0
C20:1	ND-1.0
C20:2	ND-0.1
C22:0	ND-0.7
C22:1	ND-0.4
C22:2	ND
C24:0	ND-0.5
C24:1	ND

ND – not detectable, defined as ≤ 0.05%

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

3. CHEMICAL AND PHYSICAL CHARACTERISTICS

Table 2: Chemical and physical characteristics of crude high oleic acid soya bean oils

	Soya bean oil (high-oleic acid)
Relative density (x°C/water at 20°C)	0.909-0.923 x=20°C
Refractive index (ND 40°C)	1.462-1.468
Saponification value (mg KOH/g oil)	188-192
Iodine value	75-95
Unsaponifiable matter (g/kg)	≤15

4. IDENTITY CHARACTERISTICS

Table 3: Levels of desmethylsterols in crude high oleic acid soya bean oils from authentic samples as a percentage of total sterols

	Soya bean oil (high-oleic acid)
Cholesterol	0.2-0.5
Brassicasterol	0.2-0.3
Campesterol	19.9-25.2
Stigmasterol	17.3-23.0
Beta-sitosterol	42.3-51.9
Delta-5-avenasterol	1.9-3.0
Delta-7-stigmastenol	0.6-2.5
Delta-7-avenasterol	0.5-1.5
Others	4.5-7.1
Total sterols (mg/kg)	2300-3850

ND – Non-detectable, defined as ≤ 0.05%

Table 4: Levels of tocopherols and tocotrienols in crude high oleic acid soya bean oils from authentic samples (mg/kg)

	Soya bean oil (high-oleic acid)
Alpha-tocopherol	17-138
Beta-tocopherol	9-106
Gamma-tocopherol	89-1756
Delta-tocopherol	44-570
Alpha-tocotrienol	ND-39
Gamma-tocotrienol	ND
Delta-tocotrienol	ND
Total (mg/kg)	900-2000

ND – Non-detectable.