

General Characterization

一般特性

Conjugated Linoleic Acid

共轭亚油酸

Tonalin® TG 80 is a clear, fully transparent colorless to slightly yellow liquid oil at room temperature with characteristic taste and odor. It is comprised of glycerides containing typically 80% conjugated linoleic acid. Tonalin® TG 80 is derived from safflower oil and contains a 50:50 ratio of the active conjugated linoleic acid isomers (C18:2 c9, t11 and C18:2 t10, c12). It is intended for use in the dietary supplement and food industry*.

Tonalin® TG 80 在室温下通常为无色透明至淡黄色油状液体，并伴有特殊刺激性气味。由 80%以上共轭亚油酸的甘油酯组成。Tonalin® TG 80 来自红花籽油，包含一个 50 : 50 的比例的活性共轭亚油酸同分异构体(C18:2 c9, t11 and C18:2 t10, c12)。主要应用于膳食补充及食品行业*。

*We recommend that formulators verify that the intended use is in accordance with prevailing national law.

*推荐根据现行的国家法律验证预期处方。

分子结构 Molecular structure	名称 Name	分子式 Empirical formula	摩尔质量 Mol weight	CAS 号 CAS
	cis-9, trans-11 conjugated linoleic acid	C ₁₈ H ₃₂ O ₂	280.44	2540-56-9
	trans-10, cis-12 conjugated linoleic acid	C ₁₈ H ₃₂ O ₂	280.44	2540-56-9

Standards

标准

Produced under ISO 9001, ISO 22000 and DSHEA Certification.

Composition / Ingredients 成分/组成

Conjugated linoleic acid glycerides from safflower oil*

共轭亚油酸甘油酯来自红花油*

Tocopherol rich extracts (antioxidant E 306)

富含的生育酚（抗氧化剂 E306）

*includes approx. 80% triglycerides, 20% diglycerides and less than 1% monoglycerides

*由大约 80%的三甘油酯，20%的双甘油酯和少于 1%的单甘油酯组成

Characteristic Values 特征值

The specifications stated below finally and conclusively describe the properties of the product.
产品的特性按如下规格描述。

Quality control data 质量控制数据

Data which is used for quality release and is specified for each batch.
适用于每个批次的质量放行数据。

CLA content		
共轭亚油酸含量(mg/g)	750 – 800	by GC
Typical CLA content		
典型的共轭亚油酸含量(mg/g)	770	by GC
Fatty Acid Composition		
脂肪酸组分		
Conjugated linoleic acid (CLA) C18:2		
共轭亚油酸 C18:2	78 – 84	by GC, rel. area %
CLA isomer c9. t11		
共轭亚油酸同分异构体 顺-9, 反-11	37.5 – 42	
CLA isomer t10. c12		
共轭亚油酸同分异构体 反-10, 顺-12	37.5 – 42	
CLA isomers trans trans		
共轭亚油酸的反反式异构体	max. 1	
Acid value		
酸值(mg KOH/g)	max. 2	ISO 660
Peroxide value		
过氧化值(mEq/kg)*	max. 1	DGF C VI 6a
Saponification value		
皂化值(mg KOH/g)	185 – 195	DGF V 3
Iodine value		
碘值(g I ₂ /100g)	min.115	DGF C 5 11 A
Color		
颜色	max. 4	DGF C IV 4c
Heavy metals (as Pb)		
重金属（以铅计） mg/kg	<10	USP

Microbiology

微生物学

Total aerobic microbial count		
好氧微生物总数	max. 3000/g	ISO 4833
Yeasts and moulds		
酵母菌和霉菌	max. 300/g	ISO 7954
Coliforms		
大肠菌群	max. 10/g	ISO 4832
E. coli		
大肠杆菌	negative/g 每克不得检出	ISO 16649
Staphylococci, coagulase-positive		
葡萄球菌	negative/g 每克不得检出	ISO 6888
Salmonella		
沙门氏菌	negative/25g 25 克不得检出	ISO 6579

Typical values based on monitored audit samples
典型值基于监测审计样本

Nutritional Information

营养信息

For 100g of product

100g 产品

Energy		
能量	3700 KJ/900 kcal	USA/EU*
Calories from fat (kcal)		
脂肪的热量 (卡路里)	900	USA
Calories from saturated fat (kcal)		
饱和脂肪热量	36	USA
Total fat (%, g)		
总脂肪	100	USA/EU
Saturated fatty acids** (%, g)		
饱和脂肪酸	4	USA/EU
Monounsaturated fatty acids **(% , g)		
单不饱和脂肪酸	14	EU
Polyunsaturated fatty acids** (% , g)		
多不饱和脂肪酸	2	EU
Conjugated linoleic acid (CLA)**		
共轭亚油酸	80	
Trans fat (% , g)		
反式脂肪	<0.1	USA
Total Carbohydrates (% , g)		
总碳水化合物	0	USA/EU
Dietary fiber (% , g)		
膳食纤维	0	USA/EU
Sugar (% , g)		
糖	0	USA/EU
Polyols (% , g)		
多元醇	0	EU
Starch (% , g)		
淀粉	0	EU
Protein by Kjeldahl (% , g)		
蛋白质 (凯氏定氮法)	<0.1	USA/EU
Moisture (% , g)		
湿度	0	USA
Ash (% , g)		
灰份	0	USA
Vitamin C (mg)		
维生素 C	0	USA
Cholesterol by GC (mg)		
胆固醇 (气相色谱法)	<0.1	USA/EU
Sodium (mg)		
钠	120	USA/EU
Potassium (mg)		
钾	<1.0	USA

*Requirements according to different regions, EU: European Union

*参照不同区域: 欧盟

**Calculated as triglyceride

**以甘油三酯计算

Application & Properties

应用及性能

Tonalin® TG 80 is intended for use in functional food and dietary supplement. Tonalin® TG 80 is neutral in taste and odor and is an ideal form of conjugated linoleic acid for food applications.*
Tonalin® TG 80 应用于功能性食品和膳食补充剂。Tonalin® TG 80 几乎无味道和气味，在食品应用中是一种理想的共轭亚油酸。*

*We recommended that formulators verify that the intended use is in accordance with prevailing national law.

*推荐根据现行的国家法律验证预期处方。

Patents

专利

The use of Tonalin® TG 80 Conjugated Linoleic Acid as a dietary supplement and food ingredient is licensed under one or more of the following patents: US 5,554,646; US5,428,072; US 5,430,066; US 6,015,833; and their foreign equivalents. Unauthorized use without license is prohibited by law.
使用 Tonalin® TG 80 共轭亚油酸作为膳食补充剂或食品成分参照专利：US 5,554,646; US 5,428,072; US 5,430,066; US 6,015,833; 和他们的等价物。未经授权使用是法律禁止的。

Solubility

溶解度

Insoluble in water; sparingly soluble in ethanol, miscible with organic solvents, vegetable oils and fats.
不溶于水；微溶于乙醇；易溶于有机溶剂、植物油及脂肪。

Storage, Packaging and Shelflife

储存、包装及货架期

Storage Conditions

储存条件

Store in tightly closed containers. Keep cool between 4 – 8°C for maintaining product freshness. Protect from heat, light and oxygen.

储存于密闭容器中。温度保持在 4 – 8°C 保鲜。避免接触热、光和氧气。

Shelf life

货架期

The product can be stored in sealed original containers under the mentioned storage conditions for 36 months after date of manufacture.

放置于原装容器中，置于妥善的环境中自生产日期可保存 36 个月。

Packaging

包装

The product is available in 25kg and 185kg inner coated steel drums blanketed with nitrogen.

贮存于 25kg 及 185kg 的充氮的钢桶中。

Names

名称

Conjugated Linoleic Acid (CLA):

共轭亚油酸

C18:2 c9, t11

cis-9, trans-11 conjugated linoleic acid

顺-9, 反-11 共轭亚油酸

cis-9, trans-11 conjugated octadecadienoic

顺-9, 反-11 共轭十八碳二烯酸

C18:2 t10, c12

trans-10, cis-12 conjugated linoleic acid

反-10, 顺-12 共轭亚油酸

trans-10, cis-12 conjugated octadecadienoic

反-10, 顺-12 共轭十八碳二烯酸