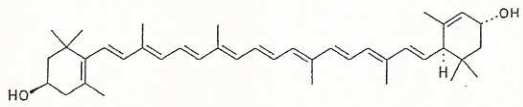


**INDOFINE Chemical Company, Inc.**

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Certificate Of Analysis**020306S****LUTEIN****Lot No.: 13112250****IDENTIFICATION**

CAS number	[127-40-2]	
Chemical family	Carotenoids	
Synonym	Xanthophyll	
Molecular formula	C ₄₀ H ₅₆ O ₂	
Molecular weight	568.89	

ANALYSIS

TEST	SPECIFICATION <i>(December 2010, version 03)</i>	RESULT
Appearance	Powder	Conform
Melting point	174-181°C	179-181°C
TLC	Silicagel Heptane / acetone (60/40, V/V) Visible	Main spot
UV/Visible spectrum λ max (± 2 nm)	421, 444, 472 nm in methanol + 0.5% methylene chloride	Conform
E1%	2470 ± 100 at 444 nm 2290 ± 100 at 472 nm	2550 2340
Assay (UV)*	≥95%	Conform
Date of last QC-recheck	November 2013	
Date of retest	November 2014	

*Despite the specific and intensive care taken with these products, they are very fragile. We recommend that you confirm product purity by measuring the E1%

The values given on the 'Certificate of Analysis' are the results determined at the time of analysis.

STORAGE

Store at <-15°C
Store away from light
HYGHLY UNSTABLE