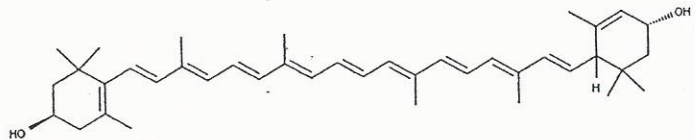


**INDOFINE Chemical Company, Inc.**

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**Certificate Of Analysis****020306S****LUTEIN****Lot No.: 17060861****IDENTIFICATION**

CAS number [127-40-2]  
Synonym Xanthophyll  
Molecular formula  $C_{40}H_{56}O_2$   
Molecular weight 568.89

**ANALYSIS**

TEST	SPECIFICATION <i>(January 2017, version 10.1)</i>	RESULT
Appearance	Powder	Conform
Melting point	174-181°C	178-180°C
TLC	Silicagel Heptane / acetone (60/40, V/V) Visible	Main spot
UV/Visible spectrum $\lambda$ max ( $\pm 2$ nm)	421, 444, 472 nm in methanol + 0.5% methylene chloride	Conform
E1%	2520 $\pm$ 100 at 444 nm 2320 $\pm$ 100 at 472 nm	2610 2400
Assay (UV)*	$\geq 95\%$	Conform

\*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  $< -15^\circ\text{C}$   
Store away from light  
HYGHLY UNSTABLE