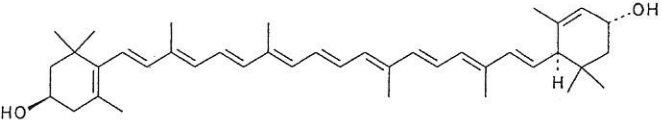


**INDOFINE Chemical Company, Inc.**

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**Certificate Of Analysis****020306S****LUTEIN****Lot No.: 15060354****IDENTIFICATION**

CAS number	[127-40-2]	
Synonym	Xanthophyll	
Molecular formula	C <sub>40</sub> H <sub>56</sub> O <sub>2</sub>	
Molecular weight	568.89	

**ANALYSIS**

<b>TEST</b>	<b>SPECIFICATION</b> <i>(December 2010, version 03)</i>	<b>RESULT</b>
Appearance	Powder	Conform
Melting point	174-181°C	180-181°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 2330
Assay (UV)*	≥95%	Conform
Date of last QC-recheck	June 2015	
Date of retest	June 2016	

\*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