NATURE SCIENCE TECHNOLOGIES

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CERTIFICATE OF ANALYSIS

Lutein

LOT EX0406

Catalog No.: NST-10-133

CAS No.: 127-40-2

Molecular formula: $C_{40}H_{56}O_2$

MW: 568.90

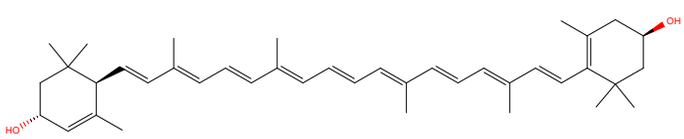
Botanical name: *Tagetes erecta L.*

Part used: flower

Manufactured date: 23.09.2026

Analysis date: 28.09.2026

Shelf life: 24 months



No.	Parameter	Specification	Results	Method
1.	Appearance	Powder	Conforms	Visual
2.	Color	Orange yellow to orange red	Conforms	Visual
3.	Particle size	≥95 % pass 80 mesh	Conforms	Screen
4.	Loss on Drying	≤1.0%	0.17 %	USP <731>
5.	Ashes	≤1.0%	0.66 %	USP <281>
6.	Total carotenoids	≥80.0%	85.22 %	UV
7.	Lutein	≥75.0%	75.25 %	HPLC
8.	Zeaxanthin	≤9.0%	5.31 %	HPLC
9.	N-hexane residual	≤50 mg/kg	30.52 mg/kg	GC
10.	Heavy Metals	≤10 ppm	Conforms	ICP-MS
11.	Lead	≤2 ppm	Conforms	ICP-MS
12.	Arsenic	≤1 ppm	Conforms	ICP-MS

13.	Mercury	≤0.1 ppm	Conforms	ICP-MS
14.	Cadmium	≤1 ppm	Conforms	ICP-MS
15.	TPC	$<10^3$ CFU/g	Conforms	USP <2021>
16.	TYMC	$<10^2$ CFU/g	Conforms	USP <2021>
17.	*Escherichia Coli*	Absent	Conforms	USP <2022>
18.	*Salmonella*	Absent	Conforms	USP <2022>
19.	*Staphylococcus aureus*	Absent	Conforms	USP <2022>

Storage: store in a cool and dry place, keep away from strong light and heat

Stability: 24 months when properly stored

Issued by
Nature Science Technologies Ltd.

Signature:



Date: 28.09.2026

This Certificate of Analysis is based on the manufacturer's quality control documentation for the referenced batch.