NATURE SCIENCE TECHNOLOGIES

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QUALITY SPECIFICATION

Marigold Extract

Catalog No.: NST-8-45

CAS No.: 90131-43-4

Source: *Tagetes erecta L.*

Part used: flower

Solvent used: water and ethanol

Shelf life: 24 months

No.	Parameter	Specification	Method
1.	Appearance	Fine powder	Visual
2.	Color	Orange-red	Visual
3.	Identification	Conforms	TLC
4.	Assay (Lutein)	≥20.0 %	HPLC
5.	Odor	Characteristic	Organoleptic
6.	Taste	Characteristic	Organoleptic
7.	Sulfated ash	≤5.0 %	Ph. Eur. 2.4.14
8.	Loss on drying	≤5.0 %	Ph. Eur. 2.8.17
9.	Mesh size/sieve	≥95 % pass 80 mesh	80 mesh
10.	Bulk density	≤0.8 g/ml	Density meter
11.	Solvent residues	Ph. Eur. 2.4.24	Ph. Eur. 2.4.24
12.	Pesticide residues	EC 396/2005	Third lab
13.	Ethylene oxide	EC 396/2005	HACCP
14.	Benzo[a]pyrene	(EU) 2023/915	HPLC
15.	PAHs	(EU) 2023/915	HPLC

16.	Heavy Metals	≤10 ppm	ICP-MS
17.	Lead	≤2 ppm	ICP-MS
18.	Arsenic	≤1 ppm	ICP-MS
19.	Mercury	≤0.1 ppm	ICP-MS
20.	Cadmium	≤1 ppm	ICP-MS
21.	TPC	$<10^3$ CFU/g	AOAC,BAM
22.	TYMC	$<10^2$ CFU/g	AOAC,BAM
23.	*Escherichia Coli*	Absent	AOAC,BAM
24.	*Salmonella*	Absent	AOAC,BAM
25.	*Staphylococcus aureus*	Absent	AOAC,BAM

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

Stability: 24 months when properly stored