



NEWAY SINOPHC TECH. LIMITED

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Certificate of Analysis (COA)

Product Name: Carotenoids (Feed Grade)

Product Information

Item	Details
Product Number	CAR-FEED-20260222
Batch Number	CAR-F2026022201
Brand	SIGALD
CAS Number	N/A (Natural composite mixture, main components: β -Carotene 7235-40-7, Lutein 127-40-2, Zeaxanthin 144-68-3)
MDL Number	N/A (Composite natural plant extract)
Formula	Blend of Natural Carotenoids (β -Carotene, Lutein, Zeaxanthin, Astaxanthin)
Formula Weight	Variable (Biological mixture)
Quality Release Date	22 FEB 2026

Test Results (Compliant with Feed Additive Standards)

Test	Specification (Feed Grade)	Result	Unit	Test Method
Appearance	Red to orange red fine powder; odorless	Orange red fine powder	-	Visual Inspection
Total Carotenoids Content	$\geq 10.0\%$	11.5%	%	High Performance Liquid Chromatography (HPLC)
β -Carotene Content	$\geq 3.0\%$	3.8%	%	HPLC
Lutein Content	$\geq 2.5\%$	3.1%	%	HPLC
Moisture Content	$\leq 5.0\%$	3.2%	%	Karl Fischer Titration
Ash Content	$\leq 3.0\%$	1.8%	%	Gravimetric Method (550 \pm 50 $^{\circ}$ C)
Bulk Density	0.30-0.60 g/cm ³	0.45	g/cm ³	Volumetric Method
Heavy Metals (as Pb)	≤ 5 ppm	0.9 ppm	ppm	Atomic Absorption Spectrometry (AAS)
Arsenic (As)	≤ 2 ppm	0.2 ppm	ppm	Atomic Fluorescence Spectrometry (AFS)
Cadmium (Cd)	≤ 1 ppm	0.07 ppm	ppm	AAS
Total Bacterial Count	≤ 100 CFU/g	22 CFU/g	CFU/g	Plate Count Method
E. coli	Negative	Negative	-	Microbiological Detection
Salmonella	Negative in 25g	Negative	-	GB 13078.1

Certification

This batch of **Feed Grade Carotenoids** has been tested in accordance with **GB 13078.1-2017 (Feed Hygiene Standard)** and national industrial standards for natural feed colorants and nutritional additives. It meets all specified requirements for feed additive use and is qualified for release.

Date: 22 FEB 2026