

Certificate of Analysis

Product Description: Earthrise® Natural Spirulina Export
100% pure having no preservatives, dyes, pesticides or radiation used in its production;
fine dark green powder. Made in U.S.A.

Species Name: *Spirulina (Arthrospira platensis)* **Plant Part:** Whole

Lot Number: 20049 **MFD:** 29 Sept. 2021 **EXPD:** 29 Sept. 2025

Analytical

TEST	RESULTS	DIC – EUROPE SPECIFICATION	METHOD
Particle Size (40 mesh through: %)	Pass	98	USP29 <786>
Bulk Density (kg/L)	0.5	0.3 - 0.6	USP24 NF 19 <616> (Modified)
Moisture (%)	5.6	> 5.0	AOAC 935.29A/925.09B
Ash (%)	6	≤ 12	AOAC 923.03/942.05 (Modified)
Crude Protein (%)	64.9	≥ 58.0	AOAC 2001.11
Chlorophyll (%)	1.4	≥ 0.9	Vonshak, A. (1997). <i>Spirulina platensis (Arthrospira)</i> Physiology, Cell-biology and Biotechnology. p214. (modified)
Total Carotenoids (mg/100g)	526	≥ 400	AOAC 941.15 (Modified)
β-Carotene (mg/100g)	241	> 200	AOAC 941.15 (Modified)
c-Phycocyanin (%)	8.5	≥ 5.5	J. AOAC. Int., 91 (3): 2008
Lead (ppm)	0.0792	< 0.3	AOAC 993.14 / 2011.19 (Modified)
Arsenic (ppm)	Conforms*	≤ 1.0	AOAC 993.14 / 2011.19 (Modified)
Cadmium (ppm)	Conforms*	≤ 0.2	AOAC 993.14 / 2011.19 (Modified)
Mercury (ppm)	Conforms*	≤ 0.05	AOAC 993.14 / 2011.19 (Modified)
Iron (ppm)	896**	≥ 1,000	AOAC 984.27/985.01/2011.14
Vitamin B12 (µg/100g)	187	≥ 90	AOAC 952.20/960.46

*Conforms based in results of 3 lots per month.

**Customer accepts as is

Microbiological

TEST	RESULTS	SPECIFICATION	METHOD
Standard Plate Count (cfu/g)	7,200	≤ 50,000	AOAC 990.12
Coliform (cfu/g)	Negative	Negative	AOAC 991.14
<i>E. coli</i> (cfu/g)	Negative	Negative	AOAC 991.14
Yeast (cfu/g)	< 10	≤ 40	AOAC 997.02
Mold (cfu/g)	50	≤ 100	AOAC 997.02
Sulfate reducing anaerobic (cfu/g)	7,200	< 10,000	AOAC 976.30
<i>Clostridium perfringens</i> (cfu/g)	≤ 100	≤ 100	AOAC 976.30
<i>Listeria</i> (per 25g)	Negative	Negative	AOAC 2004.02
<i>Salmonella spp.</i> (per 25g)	Conforms to Spec*	Negative	AOAC989.13
<i>Staphylococcus aureus</i> (per g)	Conforms to Spec*	Negative	AOAC 987.09 / 975.55

*Conforms to Spec based in weekly blend results



7 Feb. 2022