

Quality and Safety Standards for Spirulina for the USA Natural Foods Industry

The Natural Products Quality Assurance Alliance (NPQAA)
and The Natural Nutritional Foods Association (NNFA)

Extraneous Materials.

For USA human consumption only, testing of each production lot is required. *US FDA Guideline acceptance criteria.

- | | | |
|---------------------|--------------------|----------------------|
| 1. Insect fragments | *less than 150/50g | AOAC (1990) 15th ed. |
| 2. Rodent hairs | *1.0/100g | AOAC 990.09 |

Heavy Metals. Shown by a typical analysis of spirulina:

- | | | |
|------------|--------------------|------|
| 1. Lead | less than 2.5 ppm | AOAC |
| 2. Arsenic | less than 1.0 ppm | AOAC |
| 3. Cadmium | less than 0.5 ppm | AOAC |
| 4. Mercury | less than 0.05 ppm | AOAC |

Supplementary Guidelines. Shown by a typical analysis of spirulina:

- | | | |
|------------------|----|------------------|
| 1. No pesticides | 4. | No preservatives |
| 2. No herbicides | 5. | No stabilizers |
| 3. No dyes | 6. | No irradiation |

Spirulina finished products

Finished products for human consumption shall meet all relevant USA food quality and safety standards, and shall follow the appropriate Good Manufacturing Practice Guidelines.

Minimum Nutritional Content. To be determined.

Moisture. Acceptance criteria for each production lot:

- | | | |
|-------------|--------------|------|
| 6. Moisture | less than 7% | AOAC |
|-------------|--------------|------|

Bacteriological Assays. Acceptance Criteria:

- | | | |
|-------------------------|---------------------|----------------------------|
| 1. Standard Plate Count | less than 200,000/g | FDA Bacteriological Manual |
| 2. Molds | less than 100/g | FDA Bacteriological Manual |
| 3. Yeast | less than 40/g | FDA Bacteriological Manual |
| 4. Coliforms | less than 3/g | FDA Bacteriological Manual |
| 5. Salmonella | negative | FDA Bacteriological Manual |
| 6. Staphylococcus | negative | FDA Bacteriological Manual |

Product shelf life:

Producers of finished products shall determine nutrient statements on labels based on both bulk spirulina powder analysis and nutrient changes due to tableting and bottling and package shelf life.