

## Certificate of analysis

### General

Product	Vana-Sana ARA 11 IF VC 30S 086
Lot number	AJ0838
Date of production	10.01.2012
Expiry date:	10.01.2014

### Analysis

Physical		Results	Limits
Scorched particles	disc	A	A
Appearance	-	conform standard	conform standard
Taste and flavour	-	conform standard	conform standard
Bulk density (loose)	g/l	475	400 - 500
Color EP	-	11	-
Particle size (d50)	µm	165	-
Chemical (average) in powder			
Fat	%	29.5	28.5 - 31.5
Moisture	%	3.1	1.5 - 5.0
Proteins	%	7.1	5.0 - 8.0
Ash	%	3.5	-
ARA	mg/g	115.2	105.0 - 130.0
Free fat	%	0.3	max 0.6
Vitamin C	mg/g	50.0	44.0 - 58.0
Chemical (average) in oil			
Peroxide Value	meq/kg	0.1	max 5.0
Microbiological			
Total plate count 30°C	cfu/g	<10 - 40	max 1000
Thermophilic count	cfu/1 g	<10 - 10	max 1000
Enterobacteriaceae	/25 g	absent in 5x5g	absent in 5x5g
E-coli	/10 g	absent	absent
Bacillus Cereus	cfu/1 g	<10	max 50
Clostridia perfringens	/1 g	absent	absent
Sulphite reducing clostridia	cfu/1 g	<10	max 10

Date:  30 January 2012

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K. A. van Dijken  
 Manager QC

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CD-12004/3144 op



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### Analysis

E. Sakazakii, Cronobacter spp	/30x10 g	absent	absent
Listeria(by screening)	cfu/25 g	absent	absent
Salmonellae	/60x25 g	absent	absent
Staph.Aureus coagulase pos.	/1 g	absent	absent
Faecal Streptococci	cfu/g	<10	max 50
Yeasts and Moulds	cfu/g	<10	max 30

Date:

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Manager QC

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# Certificate of Analysis

## Martek DHA™-S

Lot No.	1500006968
Country of Origin	United States
Manufacturing Location	Kingstree, SC
Date of Manufacture	August 11, 2011
Expiration Date (frozen, -20°C)	August 11, 2013

*CB-12001 / 209-3135 CP*

### General Characteristics

**Description:** Nutritional oil derived from the marine alga, *Schizochytrium* sp., a rich source of Omega-3 docosahexaenoic acid (DHA) with sunflower lecithin and rosemary extract (flavoring). Tocopherols and ascorbyl palmitate, as antioxidants, are added to provide stability.

**Appearance:** Light yellow to orange colored oil

**Aroma:** Characteristic

### Fatty Acid Profile

Fatty Acid Profile	Method
14:0	5.0 % AOCs Ce 1b-89
16:0	14.9 % AOCs Ce 1b-89
18:0	0.9 % AOCs Ce 1b-89
18:1n-9	16.6 % AOCs Ce 1b-89
18:2n-6	1.5 % AOCs Ce 1b-89
20:4n-6 ARA	0.5 % AOCs Ce 1b-89
20:5n-3 EPA	1.0 % AOCs Ce 1b-89
22:5n-6 DPA	16.0 % AOCs Ce 1b-89
22:6n-3 DHA	38.5 % AOCs Ce 1b-89
Others	1.2 % AOCs Ce 1b-89

Chemical Characteristics	Units	Specification	Result	Method
Docosahexaenoic Acid	mg/g	min. 350	363	AOCs Ce 1b-89
Free Fatty Acids	%	max. 0.25	0.11	AOCs Ca 5a-40
Peroxide Value	meq/kg	max. 5.0	<0.1	AOCs Cd 8-53
Anisidine Value	-	max. 20	2	AOCs Cd 18-90
Moisture and Volatiles	%	max. 0.05	<0.01	AOCs Ca 2c-25
Unsaponifiable Matter	%	max. 4.5	1.4	AOCs Ca 6b-53
Trans Fatty Acids	%	max. 1	<1	AOCs Cd 14-95

### Elemental Composition

Arsenic	ppm	max. 0.1	<0.1	AOCs Ca 17-01
Cadmium	ppm	max. 0.1	<0.1	AOCs Ca 17-01
Copper	ppm	max. 0.05	<0.02	AOCs Ca 17-01
Iron	ppm	max. 0.2	0.1	AOCs Ca 17-01
Lead	ppm	max. 0.1	<0.1	AOCs Ca 17-01
Mercury	ppm	max. 0.04	<0.01	AOAC 977.15

Martek Biosciences Corporation certifies this product is vegetable oil from algae, containing docosahexaenoic acid (DHA), and meets the product specifications as outlined above. Martek DHA™-S is Kosher and Halal Certified and is BSE/TSE free.

Released By: **LaToya M. Pressley**  
 Release Specialist II

\* Martek guarantees that this product will meet the specifications listed within this Certificate of Analysis through the expiration date if the material is stored frozen (-20 °C) in the original, unopened containers. Beyond the expiration date, we recommend the quality of the material be confirmed prior to use by retesting the Certificate of Analysis parameters.

COA.00004.01

Martek Biosciences Corporation  
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Manufacturing

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Manufacturing

For questions regarding this Certificate of Analysis, please contact Martek Customer Service.

Fr: 台灣公利洋行



# Certificate of Analysis

## Martek DHA™ Powder

### KSF35

Lot No.	1500006961
Batch Code	AG2109
Country of Origin	United States
Date of Manufacture	September 20, 2011
Expiration Date	September 20, 2013

LB-12001/209/313507

#### General Characteristics

Description: A white to light orange free flowing powder containing Docosahexaenoic Acid (DHA) from algae for use in the food industry.

Aroma: Characteristic

Chemical Characteristics	Units	Specification	Result
Docosahexaenoic Acid Content, mg/g powder	mg/g	100 - 130	118
Docosahexaenoic Acid Content, by weight	%	10.0 - 13.0	11.8
Bulk Density	g/100 ml	40 - 70	45
Moisture	%	Max 5	2

Elemental Composition	Units	Specification	Result
Arsenic	ppm	Max 0.1	Pass
Lead	ppm	Max 0.1	Pass
Mercury	ppm	Max 0.01	Pass

Microbiological Information	Units	Specification	Result
E. coli	/1g	Not detected	Not Detected
Total Plate Count (aerobic)	cfu/g	< 3000	<10
Yeast and Molds	cfu/g	< 100	<10
Salmonella	/50g	Not detected	Not Detected
Staphylococcus Aureus	/1g	Not detected	Not Detected

Martek Biosciences Corporation certifies this product is powder containing docosahexaenoic acid (DHA) from algae, contains no meat ingredients except less than 5% dairy ingredients, and meets the product specifications as outlined above.

Released By:

Dennie Duke  
Quality Release Specialist II

\* Martek endorses that this product will meet the specifications listed within this Certificate of Analysis through the expiration date if the material is stored refrigerated (~ 4oC) in the original, unopened containers. Beyond the expiration date, we recommend the quality of the material be confirmed prior to use by retesting the Certificate of Analysis parameters.

COA.00046.03

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For questions regarding this Certificate of Analysis, please contact Martek Customer Service.  
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