

DRY VITAMIN D3 100 SD/S

CERTIFICATE OF ANALYSIS

Productcode : 5010950 Lot No. : UT16010013 Analysis No. : 03B30258

| Test | Result | Limits / Specifications | Dimension / Units |
|-----------------------------------|------------------------|----------------------------|----------------------|
| Appearance | free flowing particles | free flowing particles | |
| visual | | | |
| Colour | yellowish | off-white | |
| visual | | yellowish | |
| Fineness (US Standard sieve): | | | |
| - through sieve No. 80 / USP | 100 | min. 95 | % |
| jet sieving | | | |
| Dispersibility in water | passes test | passes test | |
| Dispersibility in water at 20°C | | | |
| Loss on drying | 4 | max. 6 | % |
| Halogen moisture Analysis | | | |
| Identity for Vitamin D3 | corresponds | corresponds | |
| TLC | | | |
| Identity for Tocopherol | corresponds | corresponds | |
| TLC | | | |
| Identity for Sodium Ascorbate | corresponds | corresponds | |
| HPLC | 3333p333 | остобротив | |
| Assay Vitamin D3 | 107273 | 100000 to 110000 | I.U./g |
| HPLC | | 100000 10 110000 | |
| Microbiological purity | | | |
| Total aerobic microbial count | <10³ | <10³ | CFU/g |
| Ph.Eur. | | 10³ | ŭ |
| Total combined yeast/moulds count | <102 | <10 ² | CFU/g |
| Ph.Eur. | | 10² | · · |
| Enterobacteria | <10 | <10 | CFU/g |
| Ph.Eur. | | | |
| Escherichia coli | negative in 10g | negative in 10g | |
| Ph.Eur. | | | |
| Salmonella spp. | negative in 25g | negative in 25g | |
| Ph.Eur. | | | |
| Staphylococcus aureus | negative in 10g | negative in 10g | |
| Ph.Eur. | | | |
| Pseudomonas aeruginosa | negative in 10g | negative in 10g | |
| Ph.Eur. | | | |

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B-Carotene® 10% CWS/S

CERTIFICATE OF ANALYSIS

Product code : 50 1576 7

Lot-no.: EW17021004 Manufacturing date: 03 February 2017

Analysis-no.: 76000815 Best use before: 03 February 2020

Date of issue: 28 February 2017

| Test | | Result | Limits | Dimensions |
|------------------|---|----------------------|------------------------|------------|
| | | | Specifications | Units |
| Appeara | nce | fine granular powder | fine granular powder | |
| • | Visual estimation | | | |
| Colour | | reddish | reddish | |
| • | Visual estimation | | | |
| Identity | | 454 | maximum at 453- 456 nm | |
| • | Spectrophotometry in cyclohexane | | | |
| Powder f | fineness | | | |
| • | through sieve no. 20 | 100 | 100 | % |
| • | through sieve no. 40 | 98 | min. 85 | % |
| • Ridd | through sieve no. 100 le sieve screening | 14 | max. 15 | % |
| Loss on c | drying | 3.5 | max. 8 | % |
| • | IR drying | | | |
| Dispersib | oility in water | dispersible | dispersible | |
| • | Dispersibility in water at 20°C | | | |
| Colour in | ntensity of aqueous solution | 121 | min. 110 | |
| • | Photometer: A(1%, 1cm) at maximum | | | |
| B -Carote | ne content | 11.3 | min. 10 | % |
| • | (HPLC) USP | | | |
| Microbio | logical purity | | | |
| • | Total aerobic microbial count | <10 | max. 10 ³ | CFU/g |
| • | Ph.Eur. Total combined yeasts/moulds count | <10 | max. 10 ² | CFU/q |
| | Ph.Eur. | | | 3 |
| • | Enterobacteria Ph.Eur. | <10 | < 10 | CFU/g |
| • | Escherichia Coli Ph.Eur. | negative in 10g | negative in 10g | |
| • | Salmonella spp. Ph.Eur. | negative in 25g | negative in 25g | |
| • | Staphylococcus aureus Ph.Eur. | negative in 10g | negative in 10g | |
| • | Pseudomonas aeruginosa Ph.Eur. | negative in 10g | negative in 10g | |

This lot was analyzed and release by our authorized Quality Assurance Department and was found to meet the specifications as given above.

This document is valid without signature

DSM Nutritional Products Quality Assurance



DRY VITAMIN D3 100 SD/S

CERTIFICATE OF ANALYSIS

Productcode : 5010950 Lot No. : UT16010013 Analysis No. : 03B30258

This lot was analysed and released by our authorized Quality Control Department and was found to meet the specifications as given above.

The product meets all requirements of the following valid compendia when tested accordingly: USP, FCC and Ph.Eur.

DSM Nutritional Products Ltd The Quality Assurance Manager

BARTH GABRIELE

Date of issue: 07-Mar-2016

Product Information



Dry Vitamin D3 100 SD/S

GMO Statement

We hereby confirm that the active substance used for Dry Vitamin D3 100 SD/S is manufactured by conventional processes** and does not contain GMO-DNA.

With regard to the ingredients used in the application form of the active substance we hereby confirm that they are manufactured by conventional processes** and are not produced from GMOs. They do not contain GMO-DNA.

This document is generated electronically and valid without signature.

Disclaimer: The information contained herein is to the best of our knowledge accurate. However, we refuse any liability for the application and use of further processed material containing our product. Solely the producer of the final product has to assume full responsibility according to the relevant local regulations. The content of this document is subject to change without further notice unless otherwise agreed in writing. Please consult your local representative or one of DSM's websites at http://webshop.dsm.com for latest version of this document or the latest information.

^{**} The term "conventional process" refers to chemical synthesis, fermentation using non GMM, extraction from conventional plants.



HFCE

المجلس الأوروبي للأغذية الحلال Halal Food Council of Europe

4 Rue de la Presse, 1000 Brussels, Belgium | Tel: +32-2227-1114, +32-2227-2728 | Fax: +32-2218-3141 | www.HFCE.eu

Registration No: 827964482

شهادة حلال HALAL CERTIFICATE

المجلس الأوروبي للأغذية الحلال يشهد بأن المنتجات المذكورة أدناه قد إستوفت شروط الحلال وفقاً للشريعة الإسلامية

The Halal Food Council of Europe hereby certifies that the products listed below have met the Halal requirements in accordance with Islamic laws.

Date: November 16, 2016

Document #: 5256.5257.IH160711

Company Name & Address: DSM Nutritional Products, Ltd. PO Box 2676 Postfach, Basel City CH 40020 Switzerland

Plant Name & Address: DSM Nutritional Products Hauptstrasse 4 Sisseln, Aargau CH 4334 Switzerland

Product Name Product Code Halal-ID Product Certificate #

Dry Vitamin D3 100 SD/S 50 1095 0 B79113 HC-16DSYJ16







This certificate is valid until **November 30, 2018** and subject to renewal at that time.



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D160129302HCP1E

Product Information



B-Carotene 10 % CWS/S

GMO Statement

We hereby confirm that the active substance is manufactured by conventional processes¹ and does not contain GM organisms. It does not fall under the scope of Regulation (EC) 1829/2003² or under the scope of Regulation (EC) 1830/2003².

The active substance in the above-named product does not require labelling as a GMO as defined in the regulations mentioned above, either as a food or feed ingredient in its own right or when incorporated into intermediate or final products.

With regard to the formulation ingredients used in the application form of this product, we hereby confirm that they are manufactured using conventional processes¹ and that they are not produced from GMOs. The ingredients do not contain GMOs. They do not fall under the scope of Regulations (EC) 1829/2003² and 1830/2003².

Traceability is established for all ingredients for which genetically modified counterparts exist.

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Disclaimer: The information contained herein is to the best of our knowledge accurate. However, we refuse any liability for the application and use of further processed material containing our product. Solely the producer of the final product has to assume full responsibility according to the relevant local regulations. The content of this document is subject to change without further notice unless otherwise agreed in writing. Please consult your local representative or one of DSM's websites at https://webshop.dsm.com for the latest version of this document or the latest information.

¹ The term "conventional process" refers to chemical synthesis, fermentation using non GMM, extraction from conventional plants.

 $^{^2}$ The following legislation, including its subsequent amendments, is important in the control of the use of Genetically Modified Organisms in food and feed:

Regulation (EC) 1829/2003 on Genetically Modified Food and Feed.

Regulation (EC) 1830/2003 concerning the traceability and labelling of GMOs and the traceability of food and feed products produced from GMOs.

Directive 2001/18/EC on the deliberate release into the environment of genetically modified organisms and repealing Council Directive 90/220/EEC.

Directive 2009/41/EC on the contained use of genetically modified micro-organisms.



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شهادة حلال HALAL CERTIFICATE

المجلس الأوروبي للأغذية الحلال يشهد بأن المنتجات المذكورة أدناه قد إستوفت شروط الحلال وفقاً للشريعة الإسلامية

The Halal Food Council of Europe hereby certifies that the products listed below have met the Halal requirements in accordance with Islamic laws.

Date: March 09, 2017

Registration No: 827964482

Document #: 5256.8996.IH170061

Company Name & Address: DSM Nutritional Products, Ltd. PO Box 2676, Postfach, Basel-City CH - 40020 Switzerland

Plant Name & Address: Vitatene S.A.U Avda. Ingeniero Sáez de Miera, Leon, Castille and Leon 24009 Spain

Product NameProduct CodeHalal-IDProduct Certificate #b-Carotene 10% CWS/S5015767A47484HC-17DSRS41







This certificate is valid until November 30, 2018 and subject to renewal at that time.

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