1. Purpose

The purpose of this industry standard is to warrant transparency for the consumer regarding the quality of CBD oil on the Dutch market. Members of CAN (the Cannabinoid Association of the Netherlands) whose products comply with the standard may request the CAN quality mark for these products.

2. Definitions

CBD is the abbreviation of cannabidiol. CBD-paste is an extract of the aerial parts of the hemp plant (flower and/or leaf), derived from (industrial) hemp varieties containing less than 0.3% THC[1] including but not limited to: EU permitted hemp species [2], Canadian permitted hemp species [3], or USA permitted hemp species [4]. The production method should be suitable for use in food[5]. The resulting paste may undergo further processing steps, such as a heating step to convert CBD-A into CBD and a winterization step to remove chlorophyll and bad-tasting fatty acids and waxes.

The resulting paste is a full-spectrum extract: the full spectrum of cannabinoids which is found in the plant, is found in the extract in the original ratio. The final product may be labelled as **full-spectrum**.

A full-spectrum paste can also be further processed, for instance by removing THC. The resulting product is a broad-spectrum extract: the full spectrum of cannabinoids which is found in the plant, except THC, is found in the extract in the original ratio. The final product may be labelled as **broad-spectrum**.

Cannabidiol can also be added to increase the natural CBD content for example, which is limited in a full-spectrum product due to the maximum permitted THC content (see 3.a). Cannabidiol should then be included in the ingredient declaration of the final product. A separate industry standard has been drawn up for the raw material cannabidiol[6].

CBD oil is a mixture of CBD paste and/or cannabidiol and an edible oil, such as hemp seed oil, coconut oil, MCT oil, etc.

[1] https://www.europarl.europa.eu/doceo/document/TA-9-2020-0289_EN.html
[2] http://ec.europa.eu/food/plant/plant_propagation_material/plant_variety_catalogues_databases/search/ (choose: Agricultural plant species, and subsequently at species: A-85)
[3] https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/producing-selling-hemp/commercial-licence/list-approved-cultivars-cannabis-sativa.html
[4] https://www.federalregister.gov/documents/2019/10/31/2019-23749/establishment-of-a-domestic-hemp-production-program
[5] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32009L0032
[6] https://www.cannabinoidenadviesbureau.nl/en/diensten/keurmerk/

3. Regulatory status

a. Dutch "Opium Act"

CBD oil, manufactured from CBD-paste, is subject to the provisions of the Opium Act and is illegal according to the Act:

- The definition of hemp oil applies to CBD oil (Opiumwet schedule 1);
- CBD oil may contain traces of THC, defined as <0.05% (Opiumwet schedule 1);
- The definition of cannabis applies to industrial hemp. It is not permitted to extract, process, etc. cannabis (Opiumwet art 3);
- Only fibre and seed may be produced from industrial hemp (Opiumwetbesluit art 12).

Nevertheless, CBD oil (manufactured from CBD-paste) is condoned in the Netherlands as an herbal product/food supplement under the Opium Act, if it complies to the following prerequisites:

- CBD oil is manufactured from permitted (industrial) hemp strains containing <0.3% THC.
- CBD oil does not contain more than 0.05% (w/w) THC[7].

See also the industry standard for cannabidiol[6].

b. Novel Food Regulation[8]

As long as CBD oil, manufactured from CBD-paste, is covered by the Opium Act, the Novel Food Regulation does not apply.

The Novel Food Regulation applies when CBD oil is manufactured from an edible oil and cannabidiol only (without CBD-paste). See also the industry standard for cannabidiol[6].

c. Cosmetics Regulation

Hemp extracts and CBD oil are subject to the provisions of Annex II/306[9] if extracted from the flowering parts of the hemp plant. If extracted from the leaves and free of THC, they are permitted for use in cosmetics[10].

See also the industry standard for cannabidiol[6].

4. Maximum daily dose

The maximum allowed daily dose of CBD is 160 mg[11]. It is also possible to recommend a lower maximum dose.
Each label should contain the maximum recommended daily dose stated as the number of drops. The number of drops is dependent on the quality of the CBD oil (extraction method, strength, choice of edible oil) and the dropper (drop size).

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[7] besluit-wob-verzoek-over-over-de-stof-cannabidiol-cbd, 2018 (https://rijksoverheid.archiefweb.eu/#archive search: cannabidiol)
[8] https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1449760581954&uri=OJ%3AJOL_2015_327_R_0001
[9] https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32009R1223
[10] https://ec.europa.eu/growth/tools-databases/cosing/index.cfm?fuseaction=search.details_v2&id=97599
[11] besluit-wob-verzoek-over-over-de-stof-cannabidiol-cbd, 2018 (https://rijksoverheid.archiefweb.eu/#archive search: cannabidiol)

5. Claims

Medical claims are not permitted. Not on the primary or secondary packaging, nor on any marketing material, including flyers, folders, advertisements, websites, blogs, etc.
Health claims are only permitted for ingredients that have been submitted to and approved by EFSA[12]. Until now, no claims have been submitted for CBD or hemp extracts.

In case an approved health claim is used, proof of the concentration/quantity of the relevant ingredient in the final product must be provided with the application for the quality mark.

6. Labelling requirements[13]

a. Name of the product
b. List of ingredients in descending quantity, per annex VII (EU/1169/2011)
c. Allergen declaration, per annex II (EU/1169/2011)
d. Net quantity, per annex IX (EU/1169/2011)
e. Quantification of the amount of CBD, per annex VIII (EU/1169/2011)
f. Quantification of additional functional ingredients (i.e. vitamins, minerals, herbal extracts, etc), per annex VIII and annex XIII (EU/1169/2011)
g. Date of minimum durability, per annex X (EU/1169/2011)
h. Batch code
i. Storage conditions
j. Instructions for use
k. Dosage recommendation for daily consumption
l. A warning not to exceed the stated recommended daily dose
m. Name and address of the food business operator
n. Statement “Food supplement”
o. A statement to the effect that the product should not be used during pregnancy or breastfeeding
p. A statement to the effect that food supplements should not be used as a substitute for a varied diet
q. A statement to the effect that the product should be stored out of the reach of young children
r. No statements regarding the content of THC

When products are made available on-line (via internet) the required information must also be made available, except for the batch code and date of minimum durability. This can be provided directly with the product or accessible via a hyperlink. Consumers must be able to see this product information online before purchase.

[12] http://ec.europa.eu/food/safety/labelling_nutrition/claims/register/public/?event=register.home
[13] According to EU/1169/2011 and 2002/46/EC

7. Test procedures[14]

#	Parameter	Specification	Preferred method
1	Appearance	Yellow to orange to dark green clear to turbid viscous liquid	Visual
2	Odour	Typical of hemp and the edible oil of choice	Sensory
3	Density/Relative density	To be determined in-house for each specific quality	Pycnometer/Densitometer
4	Peroxide value	Max. 20 meq/kg	ISO 3960
5[15]	Heavy metals [16]		
	Lead Cadmium Mercury	Max. 3,0 mg/kg Max. 1,0 mg/kg Max. 0,1 mg/kg	Regulation (EC) 333/2007
6[15]	Pesticides	Acc to Regulation (EC) 396/2005	SANTE/11945/2015
7[15]	Mycotoxins [17]		
	Aflatoxin B1 Aflatoxins B1+B2+G1+G2	Max. 2 µg/kg Max. 4 µg/kg	Regulation (EC) 401/2006 Annex II
8[15]	Polycyclic Aromatic Hydrocarbons [18]		
	Benzo(a)pyrene: Benzo(a)pyrene, benz(a)anthracene, benzo(b)fluoranthene and chrysene:	Max. 2 µg/kg Max. 10 µg/kg	Regulation (EC) 333/2007
9[15]	Dioxins and PCB's [19]		
	Sum of dioxins: Sum of dioxins and dioxin-like PCBS: Sum of PCB28, PCB52, PCB101, PCB138, PCB153 and PCB180:	Max. 0,75 pg/g Max. 1,25 pg/g Max. 40 ng/g	Regulation (EU) 2017/644
10	Microbiology [20]		
	TAMC TYMC Enterobacteria Salmonella E. coli S. aureus	Max. 10^4 CFU/ml Max. 10^2 CFU/ml Max. 10^2 CFU/ml Absent in 10 ml Absent in 1 ml Absent in 1 ml	ISO 4833-1
11	Residual solvents	Acc to Ph Eur 5.4	Ph Eur 2.4.24
12	Content CBD	Label declaration +/- 10% (w/w)	in-house method
13	Content CBD-A[21]	Label declaration +/- 10% (w/w)	in-house method
14	Content THC	Max. 0,05% (w/w)	in-house method
15	Content THC-A	Max. 0,05% (w/w)	in-house method
16	Fingerprint cannabinoid profile (chromatogram)	Acc to company standard	in-house method
17	Functional ingredients	Label declaration +/- 20% (w/w)	in-house method

[14] See Annex 1 1 for list of approved laboratories
[15] These tests do not have to be performed in the final product if they have been performed in the paste and the results comply to the specifications
[16] Specifications are based on EU 1881/2006 dd. 01-01-2016 as laid down in the Annex (3.2.21, 3.1.22, 3.3.3)
[17] Specifications are based on Ph Eur 6.0 requirements for Herbal Drugs.
[18] Specifications are based on EU 1881/2006 dd. 01-01-2016 as laid down in the Annex (6.1.1).
[19] Specifications are based on EU 1881/2006 dd. 01-01-2016 as laid down in the Annex (5.12).
[20] Specifications are based on Ph Eur 5.1.4
[21] Specification is only applicable if the CBD-A content is declared on the label

Annex 1 – list of laboratories

1. The appointed laboratories for the tests on cannabinoids (12 till 16) are:

   - BrightLabs[22]
     St. Jansweg 20
     5928 RC Venlo
     Netherlands

   BrightLabs can perform all tests.
   CAN members receive a 25% discount on the tests at BrightLabs. The reporting lead-time is 7 working days after receipt of the samples. The discount is not applicable in case of a lead-time of 5 working days. An additional discount is applicable if all tests are performed by Brightlabs.

   - Eurofins PROXY Laboratories[22]
     Archimedesweg 25
     2333 CM Leiden
     Netherlands

   Proxylab can perform all tests, except 8 and 9.
   The reporting lead-time is 10 working days after receipt of the samples.

   - ÖHMI Analytik GmbH
     Berliner Chaussee 66
     39114 Magdeburg
     Germany

   Öhmi can also perform all tests.
   The reporting lead-time is 7 working days after receipt of the samples. For a lead-time of 24 hours a surcharge of 100% is calculated and for 48 hours there is a surcharge of 50%.

   - Dept of Food Analysis and Nutrition (UAPV), UCT Prague
     Technická 3
     16628 Praha 6
     Czech Republic

   CAN does not (yet) have any agreements with UAPV about analyses, prices and lead times.

[22] No “Opiumontheffing” is required of the client if the sample contains less than 0,05% (w/w) THC. Samples that contain more than 0,05% (w/w) THC are reported with IGJ.

2. Tests 1 till 10 may also be performed by any of the following laboratories. These laboratories do not perform the assays on cannabinoids and only test if the assays have already been performed and the sample does not contain more than 0,05% THC!

   - NutriControl
     N.C.B. laan 52
     5462 GE Veghel
     Netherlands

   - NofaLab
     Jan van Galenstraat 41/51
     3115 JG Schiedam
     Netherland

3. The following laboratory only performs microbiological testing.

   - Sure Laboratories
     Steenovenweg 5
     5708 HN Helmond
     Netherlands