1. Purpose

The purpose of this industry standard is to establish a quality standard for cannabigerol as a raw material for the food/supplements and cosmetics industry.

2. Definition

CBG stands for cannabigerol. Cannabigerol may be isolated or synthesized.

- CBG isolate is (pure) CBG of natural origin. CBG isolate is extracted from the aerial parts of the hemp plant (flower and/or leaf), originating from (industrial) hemp species that contain less than 0.3% THC[1], including: EU permitted hemp species[2], Canadian permitted hemp species[3], or USA permitted hemp species[4].
- Synthetic CBG is cannabigerol obtained by chemical synthesis.

The production methods should be suitable for use in food[5].

3. Regulatory status

a. Dutch "Opium Act"

Although cannabigerol is not included in the schedules of the Opium Act, the production of CBG isolate in the Netherlands is subject to the provisions of the Opium Act and is illegal according to the Act:

- CBG isolate 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).

The production of CBG isolate must therefore take place outside the Netherlands. Production of synthetic CBG, on the other hand, can take place in the Netherlands.

b. Novel Food Regulation[6]

Cannabigerol is considered Novel[7]. In the Netherlands, the use of cannabigerol in herbal preparations/food supplements or food is permitted, provided that a Novel Food authorisation has been issued for the intended quality.

c. Cosmetics Regulation

Cannabigerol is permitted for use in cosmetics[8].

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[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://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1449760581954&uri=OJ%3AJOL_2015_327_R_0001
[7] http://ec.europa.eu/food/safety/novel_food/catalogue/search/public/index.cfm# search: Cannabinoids
[8] https://ec.europa.eu/growth/tools-databases/cosing/index.cfm?fuseaction=search.details_v2&id=98212

4. Maximum daily dose

As human pharmacokinetic data for CBG are currently still lacking, no maximum allowed daily dose has been determined yet. Based on animal toxicological data and a general chemical similarity with CBD we advise for now to adhere to the maximum daily dose for CBD, which is currently set at 160 mg/day[9]. It is also possible to recommend a lower maximum dose.
Each label should contain the maximum recommended daily dosage, stated as the number of drops, capsules, etc.

5. Claims

No medical claims and no health claims are permitted. Not on the primary or secondary packaging, nor on any marketing material, including flyers, leaflets, ads, websites, blogs, etc.
Health claims are only permitted for ingredients that have been submitted to and approved by EFSA[10]. Until now, no claims have been submitted for CBG 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 for food supplements[11]

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 CBG, 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 (e.g. shake well and drop under the tongue)
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

[9] besluit-wob-verzoek-over-over-de-stof-cannabidiol-cbd, 2018 (https://rijksoverheid.archiefweb.eu/#archive search: cannabidiol)
[10] http://ec.europa.eu/food/safety/labelling_nutrition/claims/register/public/?event=register.home
[11] According to EU/1169/2011 and 2002/46/EC

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.

7. Test procedures[12]

#	Parameter	Specification	Preferred method
1	Appearance	White to beige crystalline powder	Visual
2	Odour	Odourless	Sensory
3	Melting point	49 – 52 °C	Melting point apparatus
4	Sulphate Ash	Max. 0,1%	Ph Eur 2.4.14
5	Loss on drying	Max. 0,5%	Ph Eur 2.2.32
6	Water content	Max. 1%	Karl Fisher
7	Heavy metals [13]		
	Lead Cadmium Mercury	Max. 3,0 mg/kg Max. 1,0 mg/kg Max. 0,1 mg/kg	Regulation (EC) 333/2007
8	Pesticides	Acc to Regulation (EC) 396/2005	SANTE/11945/2015
9	Microbiology[14]		
	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
10	Residual solvents	Acc to Ph Eur 5.4	Ph Eur 2.4.24
11	Content CBG	97,5 – 102,5%	in-house method
12	Content THC	Max. 0,05% (w/w)	in-house method
13	Fingerprint cannabinoid profile (chromatogram)	Acc to company standard	in-house method

[12] See Annex 1 1 for list of approved laboratories
[13] 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)
[14] Specifications are based on Ph Eur 5.1.4

Annex 1 – list of laboratories

1. The appointed laboratories for the tests on cannabinoids (11 till 13) are:

   - BrightLabs[15]
     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[15]
     Archimedesweg 25
     2333 CM Leiden
     Netherlands

   Proxylab can perform all tests.
   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.

[15] 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