Printing date 08/11/2020

Agilent

Version Number 1

Reviewed on 08/11/2020

1 Identification

· Product identifier

· Trade name: Cannabigerol (CBG) Standard -1mL

- · Part number: 5191-3923
- · Application of the substance / the mixture Reagents and Standards for Analytical Chemical Laboratory Use
- · Details of the supplier of the safety data sheet

• Manufacturer/Supplier: Agilent Technologies, Inc. 5301 Stevens Creek Blvd. Santa Clara, CA 95051 USA

· Information department:

Telephone: 800-227-9770 e-mail: pdl-msds_author@agilent.com • Emergency telephone number: CHEMTREC®: 1-800-424-9300

2 Hazard(s) identification

· Classification of the substance or mixture



Flam. Liq. 2 H225 Highly flammable liquid and vapor.



Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2A H319 Causes serious eye irritation.

· Label elements

• GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS). • Hazard pictograms

_ _ _ _ _ _ _ _ _ _ _ _ _



· Signal word Danger

Hazard-determining components of labeling: acetonitrile
Hazard statements Highly flammable liquid and vapor. Harmful if swallowed.

Causes serious eye irritation.

· Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

(Contd. on page 2)

US

Version Number 1

Reviewed on 08/11/2020

Trade name: Cannabigerol (CBG) Standard -1mL

(Contd. of page 1)

Use only non-sparking tools. Take precautionary measures against static discharge. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. In case of fire: Use for extinction: CO2, powder or water spray. Store in a well-ventilated place. Keep cool. Dispose of contents/container in accordance with local/regional/national/international regulations. · Classification system: · NFPA ratings (scale 0 - 4) Health = 2Fire = 3Reactivity = 0· HMIS-ratings (scale 0 - 4) HEALTH 2 Health = 2Fire = 3FIRE 3 **REACTIVITY** 0 Reactivity = 0 · Other hazards · Results of PBT and vPvB assessment • **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.
- · Dangerous components:

75-05-8 acetonitrile

4 First-aid measures

· Description of first aid measures

- · General information:
- Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact: Immediately rinse with water.
- · After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

(Contd. on page 3)

US

99.8728%

Printing date 08/11/2020



Agilent

Reviewed on 08/11/2020

Trade name: Cannabigerol (CBG) Standard -1mL

(Contd. of page 2)

• After swallowing: Immediately call a doctor.

- · Information for doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- \cdot Indication of any immediate medical attention and special treatment needed
- No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents:
- CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

 Personal precautions, protective equipment and emergency procedures 	
Wear protective equipment. Keep unprotected persons away.	
· Environmental precautions:	
Dilute with plenty of water.	
Do not allow to enter sewers/ surface or ground water.	
· Methods and material for containment and cleaning up:	
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).	
Dispose contaminated material as waste according to item 13.	
Ensure adequate ventilation.	
· Reference to other sections	
See Section 7 for information on safe handling.	
See Section 8 for information on personal protection equipment.	
See Section 13 for disposal information.	
· Protective Action Criteria for Chemicals	
· PAC-1:	
75-05-8 acetonitrile	13 ppm
· PAC-2:	
75-05-8 acetonitrile	50 ppm
• PAC-3:	
75-05-8 acetonitrile	150 ppm

7 Handling and storage

· Handling:

· Precautions for safe handling No special precautions are necessary if used correctly.

- · Information about protection against explosions and fires:
- Keep ignition sources away Do not smoke.

Protect against electrostatic charges.

(Contd. on page 4)



Printing date 08/11/2020

US –

Reviewed on 08/11/2020

Trade name: Cannabigerol (CBG) Standard -1mL

(Contd. of page 3)

· Conditions for safe storage, including any incompatibilities

- · Storage:
- Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: Not required.
- Further information about storage conditions:
- Keep receptacle tightly sealed.
- Store in cool, dry conditions in well sealed receptacles.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

· Additional information about design of technical systems: No further data; see item 7.

· Control parameters

· Components with limit values that require monitoring at the workplace:

75-05-8 acetonitrile

PEL Long-term value: 70 mg/m³, 40 ppm

- REL Long-term value: 34 mg/m³, 20 ppm
- TLV Long-term value: 34 mg/m³, 20 ppm Skin

• Additional information: The lists that were valid during the creation were used as basis.

· Exposure controls

· Personal protective equipment:

· General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· Breathing equipment:

When used as intended with Agilent instruments, the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device/equipment with appropriate organic or acid gas cartridge.

Protection of hands:

Although not recommended for constant contact with the chemicals or for clean-up, nitrile gloves 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

· Material of gloves

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· Penetration time of glove material

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: >4 hours

(Contd. on page 5)



Printing date 08/11/2020

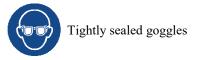
re 5)

Reviewed on 08/11/2020

Trade name: Cannabigerol (CBG) Standard -1mL

(Contd. of page 4)

· Eye protection:



Information on basic physical and c	hemical properties
General Information Appearance:	
Form:	Fluid
Color:	Colorless
Odor:	Aromatic
Odor threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/Melting range:	-46 °C (-50.8 °F)
Boiling point/Boiling range:	81 °C (177.8 °F)
Flash point:	2 °C (35.6 °F)
Flammability (solid, gaseous):	Not applicable.
Ignition temperature:	525 °C (977 °F)
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
Explosion limits:	
Lower:	4.4 Vol %
Upper:	16 Vol %
Vapor pressure at 20 °C (68 °F):	0 hPa
Density at 20 °C (68 °F):	0.786 g/cm ³ (6.55917 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Fully miscible.
Partition coefficient (n-octanol/wate	er): Not determined.
Viscosity:	
Dynamic at 20 °C (68 °F):	0.39 mPas
Kinematic:	Not determined.



Printing date 08/11/2020

Reviewed on 08/11/2020

Trade name: Cannabigerol (CBG) Standard -1mL

		(Contd. of page 5)
• Solvent content: VOC content:	0.00 % 0.0 g/l / 0.00 lb/gal	
Solids content: • Other information	0.1 % No further relevant information available.	

10 Stability and reactivity

· Reactivity No further relevant information available.

· Chemical stability

Printing date 08/11/2020

- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

· Information on toxicological effects

· Acute toxicity:

· LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimate)

Oral	LD50	1,322 mg/kg (rat)
Dermal		>2,003 mg/kg (rabbit)
Inhalative	LC50/4 h	3,592 mg/L (mouse)

75-05-8 acetonitrile

Oral	LD50	1,320 mg/kg (rat)
Dermal		>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	3,587 mg/L (mouse)

· Primary irritant effect:

• on the skin: No irritant effect.

- on the eye: Irritating effect.
- · Sensitization: No sensitizing effects known.

· Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: Harmful

Irritant

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

(Contd. on page 7)



US

Version Number 1

Reviewed on 08/11/2020

(Contd. of page 6)

Trade name: Cannabigerol (CBG) Standard -1mL

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

Printing date 08/11/2020

· Toxicity

- Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:

· General notes:

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

- \cdot Results of PBT and vPvB assessment
- · PBT: Not applicable.
- **vPvB:** Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods

· Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· Uncleaned packagings:

- · Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

UN-Number		
DOT, IMDG, IATA	UN1648	
UN proper shipping name		
DOT	Acetonitrile	
IMDG, IATA	ACETONITRILE	
Transport hazard class(es) DOT		
Class	3 Flammable liquids	



Reviewed on 08/11/2020

Printing date 08/11/2020

Version Number 1

Trade name: Cannabigerol (CBG) Standard -1mL

	(Contd. of page 7
Label	3
IMDG, IATA	
Class	3 Flammable liquids
Label	3
Packing group DOT, IMDG, IATA	II
Environmental hazards:	Not applicable.
Special precautions for user Hazard identification number (Kemler code):	
EMS Number:	3-02
Stowage Category Stowage Code	B SW2 Clear of living quarters.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
рот	
Quantity limitations	On passenger aircraft/rail: 5 L
	On cargo aircraft only: 60 L
Hazardous substance:	5000 lbs, 2270 kg
IMDG	
Limited quantities (LQ)	
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per unter packaging: 50 ml
UN "Model Regulation":	UN 1648 ACETONITRILE, 3, II

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture · Sara

· Section 355 (extremely hazardous substances): None of the ingredients is listed. · Section 313 (Specific toxic chemical listings): 75-05-8 acetonitrile · TSCA (Toxic Substances Control Act): 75-05-8 acetonitrile ACTIVE · Hazardous Air Pollutants 75-05-8 acetonitrile (Contd. on page 9) US



Printing date 08/11/2020

· Proposition 65

Version Number 1

Reviewed on 08/11/2020

Trade name: Cannabigerol (CBG) Standard -1mL

(Contd. of page 8)

· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

 \cdot Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency)

75-05-8 acetonitrile

· TLV (Threshold Limit Value established by ACGIH)

75-05-8 acetonitrile

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

• Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· Date of preparation / last revision 08/11/2020 / -

· Abbreviations and acronyms: ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit Flam. Liq. 2: Flammable liquids - Category 2 Acute Tox. 4: Acute toxicity - Category 4 Eye Irrit. 2A: Serious eye damage/eye irritation - Category 2A



CBD, D

A4