



Safety Data Sheet

acc. to OSHA HCS

Printing date 10/17/2016

Reviewed on 10/17/2016

1 Identification

· **Product identifier**

· **Product name: Aflatoxin B1 (U-13C17) 0.5 µg/mL in Acetonitrile CERTAN®**

· **Part number:** B-MYC0210-1.2

· **Application of the substance / the mixture** Reference material for laboratory use only

· **Manufacturer/Supplier:**

VHG Labs, Inc

LGC Standards

276 Abby Road

Manchester, NH 03103

UNITED STATES OF AMERICA

Tel : +1 (603) 622-7660

Fax : +1 (603) 622-5180

eMail : custsvc@vhglabs.com

Web : www.vhglabs.com

· **Information department:**

Product safety department

eMail : sds-request@lgcgroup.com

· **Emergency telephone number:**

INFOTRAC 24-hour Emergency telephone number:

800-535-5053 (US & Canada);

352-323-3500 (International)

2 Hazard(s) identification

· **Classification of the substance or mixture**



GHS02 Flame

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



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H312 Harmful in contact with skin.

Acute Tox. 4 H332 Harmful if inhaled.

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**



GHS02



GHS07

· **Signal word** Danger

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Product name: Aflatoxin B1 (U-13C17) 0.5 µg/mL in Acetonitrile CERTAN®

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· **Hazard-determining components of labeling:**

Acetonitrile

· **Hazard statements**

H225 *Highly flammable liquid and vapor.*
 H302+H312+H332 *Harmful if swallowed, in contact with skin or if inhaled.*
 H319 *Causes serious eye irritation.*

· **Precautionary statements**

P210 *Keep away from heat/sparks/open flames/hot surfaces. No smoking.*
 P241 *Use explosion-proof electrical/ventilating/lighting/equipment.*
 P303+P361+P353 *If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*
 P305+P351+P338 *If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
 P321 *Specific treatment (see on this label).*
 P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**

HEALTH	1	Health = 1
FIRE	3	Fire = 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: consisting of the following components.

· **Dangerous components:**

CAS: 75-05-8	Acetonitrile	> 99%
RTECS: AL 7700000	⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	

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RTECS: -

Aflatoxin B1 (U-13C17)

< 0.1%

☠ Acute Tox. 1, H300; Acute Tox. 1, H310; Acute Tox. 2, H330; ☠ Muta.
IB, H340; Carc. 1B, H350

4 First-aid measures

· **Description of first aid measures**

· **General information:**

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. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:**

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

· **After swallowing:**

Rinse mouth. Do not induce vomiting.

Immediately call a doctor.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **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, sand, extinguishing powder. Do not use water.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· **Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.

· **Advice for firefighters**

· **Protective equipment:**

Mouth respiratory protective device.

Wear self-contained respiratory protective device.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

· **Environmental precautions:** 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.

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- Ensure adequate ventilation.
- Do not flush with water or aqueous cleansing agents
- **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.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
 - Ensure good ventilation/exhaustion at the workplace.
 - Store in cool, dry place in tightly closed receptacles.
 - Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
 - Keep ignition sources away - Do not smoke.
 - Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
 - Store in a cool location.
 - Please refer to the manufacturers certificate for specific storage and transport temperature conditions.
 - Store only in the original receptacle.
 - Keep container in a well-ventilated place. Keep away from sources of ignition and heat.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **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/m ³ , 40 ppm
REL	Long-term value: 34 mg/m ³ , 20 ppm
TLV	Long-term value: 34 mg/m ³ , 20 ppm
	Skin

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

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- **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:**
 In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**
 The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
 Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
 The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374



Protective gloves

- **Material of gloves** Butyl rubber, BR
- **Penetration time of glove material**
 The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Liquid
Color:	Colorless
Odor:	Aromatic
Odor threshold:	Not determined.
- **pH-value:** Not determined.
- **Change in condition**

Melting point/Melting range:	-46 °C (-51 °F)
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Boiling point/Boiling range:	81 °C (178 °F)
· Flash point:	5 °C (41 °F)
· Flammability (solid, gaseous):	Not determined.
· 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):	97 hPa (73 mm Hg)
· Density at 20 °C (68 °F):	0.78212 g/cm ³ (6.527 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water at 25 °C (77 °F):	74 g/l
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** Stable under normal conditions.
- **Chemical stability** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:**
Formation of toxic gases is possible during heating or in case of fire.
- **Possibility of hazardous reactions** Forms explosive gas mixture with air.
- **Conditions to avoid**
Sources of ignition
Heat.
- **Incompatible materials:**
Strong oxidizing agents.
Strong acids.

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· **Hazardous decomposition products:** Formation of toxic gases is possible during heating or in case of fire.

11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

75-05-8 Acetonitrile

Oral	LD50	2730 mg/kg (rat)
Dermal	LD50	1250 mg/kg (rabbit)

· **Primary irritant effect:**

· **on the skin:** Based on available data, the classification criteria are not met.

· **on the eye:** Causes eye irritation.

· **Sensitization:** Based on available data, the classification criteria are not met.

· **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.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

· **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 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

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· **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:** Dispose in accordance with national regulations.

14 Transport information

- **UN-Number**
- **DOT, ADR, IMDG, IATA** UN1648
- **DOT** Acetonitrile, mixture
- **ADR** 1648 Acetonitrile, mixture
- **IMDG, IATA** ACETONITRILE, mixture

- **Transport hazard class(es)**

- **DOT**



- **Class** 3 Flammable liquids
- **Label** 3

- **ADR, IMDG, IATA**



- **Class** 3 Flammable liquids
- **Label** 3

- **Packing group**

- **DOT, ADR, IMDG, IATA** II

- **Environmental hazards:**

- **Marine pollutant:** No

- **Special precautions for user** Warning: Flammable liquids

- **Danger code (Kemler):** 33

- **EMS Number:** F-E,S-D

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· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **UN "Model Regulation":** UN1648, Acetonitrile, mixture, 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

· **Proposition 65**

· **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.

· **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

CBD, D

· **TLV (Threshold Limit Value established by ACGIH)**

75-05-8 | Acetonitrile

A4

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

None of the ingredients is listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02 GHS07

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· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

Acetonitrile

· **Hazard statements**

H225 *Highly flammable liquid and vapor.*

H302+H312+H332 *Harmful if swallowed, in contact with skin or if inhaled.*

H319 *Causes serious eye irritation.*

· **Precautionary statements**

P210 *Keep away from heat/sparks/open flames/hot surfaces. No smoking.*

P241 *Use explosion-proof electrical/ventilating/lighting/equipment.*

P303+P361+P353 *If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*

P305+P351+P338 *If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*

P321 *Specific treatment (see on this label).*

P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

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

16 Other information

The information in this Safety Data Sheet meets the requirements of the United States OCCUPATIONAL SAFETY AND HEALTH ACT and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) This document is intended only as a guide to the appropriate precautionary handling of the material by a person trained in, or supervised by a person trained in, chemical handling. The user is responsible for determining the application. Depending on usage, protective clothing including eye and face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes. Exposure to this product may have serious adverse health effects. This chemical may interact with other substances. Since the potential uses are so varied, we cannot warn of all of the potential dangers of use or interaction with other chemicals or materials. We warrant that the chemical meets the specifications set forth on the label. We (LGC/VHG/ARMI) disclaim any other warranties, expressed or implied with regard to the product supplied hereunder, its merchantability or its fitness for a particular purpose. The user should recognize that this product can cause severe injury and even death, especially if improperly handled or the known dangers of use are not heeded. Read all precautionary information.

· **Date of preparation / last revision** 10/17/2016 / -

· **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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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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
BEI: Biological Exposure Limit
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 1: Acute toxicity – Category 1
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 2: Acute toxicity – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Muta. 1B: Germ cell mutagenicity – Category 1B
Carc. 1B: Carcinogenicity – Category 1B

· Sources

Tables 3.1 and 3.2 from Annex 6 of EC 1272/2008, EC 1907/2006, EH40/2005 as amended 2011, Registry of Toxic Effects of Chemical Substances (RTECS), The Dictionary of Substances and their Effects, 1st Edition, IUCLID.