

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Acetonitrile HPLC / LC-MS Grade

**SYNONYMS:** Methyl Cyanide

**PRODUCT CODES:** 1910, 1930

**MANUFACTURER:** Birch Biotech, LLC

**ADDRESS:** 701 Hemlock Rd, Morgantown, PA 19543

**CHEMTREC PHONE:** 800-424-9300

**SUPPORT:** 610-524-5810

**FAX:** 610-901-3046

**PRODUCT USE:** Analytical Uses; HPLC, LC-MS

**PREPARED BY:** CB

### SECTION 1 NOTES:

## SECTION 2: HAZARDS IDENTIFICATION

**GHS CLASSIFICATION:** Flammable liquid Category 2, Acute Toxicity, Dermal Category 4; Acute Toxicity, Inhalation Category 4; Acute Toxicity, Oral Category 4; Eye Irritation Category 2A



**Signal Word:** Danger!

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

Precautionary Phrases	
P210	Keep away from heat, sparks, open flames and hot surfaces. No smoking.
P260	Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P264	Wash hands thoroughly after handling.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P403+P235	Store in a well- ventilated place. Keep cool.

### SECTION 2 NOTES:

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

**INGREDIENT:**

Acetonitrile

**CAS NO.**

75-05-8

**% VOL**

99~100

**SECTION 3 NOTES:****SECTION 4: FIRST AID MEASURES**

**EYES:** Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if irritation persists.

**SKIN:** In case of contact, flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If skin irritation occurs: Get medical attention/advice.

**INGESTION:** Call medical doctor or poison control center immediately. Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if you feel unwell.

**SECTION 4 NOTES:**

Note to Physician: Treat symptomatically

**SECTION 5: FIRE-FIGHTING MEASURES**

**FLAMMABILITY OF THE PRODUCT:** OSHA/NFPA Class IB Flammable Liquid

**FLASH POINT:** 12.8°C (55°F) - closed cup

**AUTOIGNITION TEMPERATURE:** 524°C (975°F)

**NFPA HAZARD CLASSIFICATION**

**HEALTH:2    FLAMMABILITY: 3    REACTIVITY: 0**

**OTHER:**

**HMIS HAZARD CLASSIFICATION**

**HEALTH:2    FLAMMABILITY: 3    REACTIVITY: 0**

**PROTECTION:**

**EXTINGUISHING MEDIA:** Small fire - use DRY chemical powder, CO<sub>2</sub>, water spray or alcohol resistant foam. Large fire - use alcohol resistant foam, water spray or fog. Cool all affected containers with flooding quantities of water.

**NOT SUITABLE:** Do not use water jet.

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear self-contained breathing apparatus and protective clothing to protect contact with skin and eyes. Keep unopened containers cool by spraying with water. Alcohols burn with a pale blue flame which may be difficult to see under normal lighting conditions. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon monoxide, carbon dioxide

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** May produce a floating fire hazard. Vapors may travel to source of ignition and flash back. Vapors may settle on low or confined spaces.

**SECTION 5 NOTES:** Static ignition hazard can result from handling and use. Keep away from sparking tools.

**SECTION 6: ACCIDENTAL RELEASE MEASURES****ACCIDENTAL RELEASE MEASURES:**

Small spill and leak: Ensure adequate ventilation. Remove all sources of ignition. Dilute with water and mop, or absorb with an inert dry material and place in appropriate waste disposal container.

Large spill and leak: Keep away from heat and ignition sources. Stop leak if without risk. Absorb with DRY earth, sand, or other non-combustible material. Avoid skin and eye contact. Prevent entry into sewers, basements or confined areas; dike if needed. Additional protective equipment such as full-face respirator, full body suit and boots may be required.

## SECTION 6 NOTES:

## SECTION 7: HANDLING AND STORAGE

**HANDLING:** Do not get in eyes or on skin. Do not breathe vapor or mist. If potential for splashing exists, protect skin by using sleeve protectors, aprons and face-shield. Immediately remove contaminated clothing. Wash thoroughly after handling.  
**STORAGE:** Keep away from sources of ignition. Keep containers closed and out of reach of children. Ground all equipment containing material. Containers which are opened must be resealed and kept upright to prevent leakage. Store at room temperature.

## SECTION 7 NOTES:

## SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

**ENGINEERING CONTROLS:** General mechanical ventilation or laboratory fume hood. Ensure that eyewash stations and quick drench showers are close to the workstation.

**PERSONAL PROTECTIVE MEASURES:** Wear gloves, lab coat, eye protection and impervious footwear. Approved/certified respirator if airborne concentrations exceed exposure limits

**ENVIRONMENTAL EXPOSURE CONTROLS:** Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**WORK HYGIENIC PRACTICES:** Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

## EXPOSURE GUIDELINES:

Reagent	CAS#	OSHA PEL TWA	Note
Acetonitrile	75-05-8	40 ppm (70 mg/m <sup>3</sup> )	Absorbed through skin.

## ACGIH Threshold Limit values (TLVs):

Reagent	CAS#	ACGIH PEL TWA	ACGIH STEL	Note
Acetonitrile	75-05-8	20 ppm		Skin - potential for cutaneous absorption.

## SECTION 8 NOTES:

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE:** Clear

**ODOR:** sweetish odor, ethereal odor

**PHYSICAL STATE:** liquid

**pH AS SUPPLIED:** Not available

**BOILING POINT:** 82°C

**MELTING POINT/FREEZING POINT:** -50°C

**VAPOR PRESSURE (mmHg):** 73 mmHg @ 20°C

**VAPOR DENSITY (AIR = 1):** 1.42

**EVAPORATION RATE:** 5.79 (Butyl acetate=1)

**SOLUBILITY IN WATER:** Soluble in water

**MOLECULAR WEIGHT:** 41.05

**VISCOSITY:** 0.36 cP @20°C

## SECTION 9 NOTES:

## SECTION 10: STABILITY AND REACTIVITY

**STABILITY:** Product is stable under normal conditions of use.

**CONDITIONS TO AVOID (STABILITY):** Avoid heat, sparks, flames, and all other sources of ignition.

**INCOMPATIBILITY (MATERIAL TO AVOID):** Oxidizing agents, Reducing agents, Acids, bases, alkali metals; fluorine, nitric acid, perchlorates, sulfuric acid, chlorosulfonic acid, oleum, dinitrogen tetroxide, sulfates, indium, moisture.

**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:** Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: oxides of carbon, Hydrogen cyanide, Nitrogen oxides, irritating and toxic fumes and gases.

**HAZARDOUS POLYMERIZATION:** No hazardous polymerization

## SECTION 10 NOTES:

## SECTION 11: TOXICOLOGICAL INFORMATION

### ACUTE TOXICITY:

Oral: Acetonitrile: LD50 (oral, mouse) = 269 mg/kg, LD50 (oral, rat) = 2460 mg/kg LD50 (oral, rabbit) = 50 mg/kg

Inhalation: Acetonitrile LC50 (Inhalation, rat) = 7551ppm 8 hrs; LC50 (Inhalation, rabbit) = 2828ppm 4 hrs

Dermal LD50: Acetonitrile: Rabbit LD50 >2 g/kg

Skin corrosion/irritation: No data available

Eyes: Rabbit: 100 µl/24hr Moderate

Respiratory or skin sensitization: Maximization Test - Guinea Pig - Sensitization not displayed in laboratory animals when following OECD Test Guideline 406.

Germ cell mutagenicity: No data available

Carcinogenicity:

Acetonitrile: NIOSH: Not classifiable as a human carcinogen ACGIH: Not classifiable as a human carcinogen

NTP: Not classifiable as a human carcinogen IARC: Not classifiable as a human carcinogen

Aspiration hazard: no data available

### POTENTIAL HEALTH EFFECTS:

EYES: Direct contact with the eyes produces a mild, reversible irritation, assuming treatment is initiated promptly.

SKIN: Causes moderate skin irritation. Can cause dermatitis by de-fatting the skin from prolonged or repeated contact.

INGESTION: Risk of aspiration pneumonia

INHALATION: Toxic by inhalation. Vapor harmful. Can cause irritation to the respiratory tract. Headache, dizziness, mental confusion, nausea, vomiting.

CHRONIC HEALTH HAZARDS: Effects may be delayed. Prolonged exposure can cause liver, kidney, and heart damage.

Long term exposure can cause loss of appetite, weight loss, weakness, headache, dizziness, GI complaints

### MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Dermatitis, emphysema, bronchitis and conjunctivitis.

**SIGNS AND SYMPTOMS OF EXPOSURE:** Central nervous system depression, blindness

**ROUTES OF ENTRY:** Ingestion, Skin/eye contact, inhalation

**TARGET ORGANS:** Respiratory system

## SECTION 11 NOTES:

## SECTION 12: ECOLOGICAL INFORMATION

### ECOLOGICAL TOXICITY:

**Acute Fish Toxicity:**

LC50 / 96 hours static *Poecillia reticulata*: 1650 mg/L; LC50 / 96 hours static Fathead minnow: 1000 mg/L

Toxic to *Daphnia* and Other Aquatic Invertebrates:

EC50 / 18h / Water Flea - 5838 mg/L

**PERSISTENCE AND DEGRADABILITY:** Biodegradation is expected

**BIOACCUMULATIVE POTENTIAL:** Bioaccumulation is unlikely.

**MOBILITY IN SOIL:** No data available

**PBT and vPvB ASSESSMENT:** Not required.

**SECTION 12 NOTES:****SECTION 13: DISPOSAL CONSIDERATIONS**

**WASTE DISPOSAL METHOD:** Unused product: dispose as a regulated hazardous waste. Burn in a chemical incinerator equipped with an afterburner and scrubber. Take extra care in lighting as this material is highly flammable. Spent product or spill clean up- follow all provincial, local, state, and federal regulations.

**SECTION 13 NOTES:****SECTION 14: TRANSPORT INFORMATION****U.S. DEPARTMENT OF TRANSPORTATION:**

UN No. UN1648

Proper Shipping Name: Acetonitrile

Hazard Class:3

Packing Group: II

Label Statement: Flammable liquid

**IMDG**

UN No. UN1648

Proper Shipping Name: Acetonitrile

Hazard Class:3

Packing Group: II

EMS-No: F-E, S-D

Marine pollutant: No

**IATA**

UN No. UN1648

Proper Shipping Name: Acetonitrile

Hazard Class:3

Packing Group: II

**SECTION 15: REGULATORY INFORMATION****United States**

**HCS Classification:** Flammable liquid

**U.S. Federal regulations:**

**TSCA 8(a) IUR:** Listed on inventory.

**United States inventory (TSCA 8b):** Listed on inventory.

**SARA 302/304/311/312 extremely hazardous substances:** No products were found.

**SARA 302/304 emergency planning and notification:** No products were found.

**SARA 302/304/311/312 hazardous chemicals:** No products were found.

**SARA 311/312 MSDS distribution - chemical inventory - hazard identification:**

Acetonitrile CAS-No. 75-05-8 Acute Health Hazard; Chronic Health Hazard, Fire Hazard

**SARA 313 Form R - Reporting:** The following components are subject to reporting levels established by SARA Title III, Section 313: Acetonitrile CAS-No. 75-05-8

**DEA List I & II Chemicals**

**(Precursor Chemicals):**

Not Listed

**CERCLA:** Acetonitrile CAS-No. 75-05-8 RQ: 5,000 lbs

**RTK STATES:** Acetonitrile CAS-No. 75-05-8 CA, MA, NJ, PA, MN, IL, RI

**California Prop. 65**

This product does not contain a chemical known to the State of California to cause birth defects or other reproductive harm.

**CANADA**

**WHMIS (Canada):**

Class B-2: Flammable liquid

Class D-1B: Material causing immediate and serious toxic effects. (Toxic)

Class D-2B: Material causing other toxic effects. (Toxic)

**Canadian lists:**

**CEPA Toxic substances:** Listed

**Canadian ARET:** None of the components are listed.

**Canadian NPRI:** The following components are listed: Volatile organic compounds

**CEPA DSL / CEPA NDSL:**

All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

**International regulations**

**International lists:**

**Australia inventory (AICS):** All components are listed or exempted.

**China inventory (IECSC):** All components are listed or exempted.

**Japan inventory:** All components are listed or exempted.

**Korea inventory:** All components are listed or exempted.

**New Zealand Inventory of Chemicals (NZIoC):** All components are listed or exempted.

**Philippines inventory (PICCS):** All components are listed or exempted.

## SECTION 16: OTHER INFORMATION

National Fire Protection Association (NFPA)



**DISCLAIMER:** This Safety Data Sheet has been prepared in accordance with the Globally Harmonized System for the Classification and Labelling of Chemicals (GHS). To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries makes any warranty of merchantability or any other warranty, expressed or implied, which respect to such information, and we assume no liability resulting from its use. In no event shall Birch Biotech, LLC be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages resulting from use of or reliance upon this information.

**PREPARATION INFORMATION:** Prepared 06/01/2017

Reviewed 05/31/2019