

SAFETY DATA SHEET

SDS DATE: February 19, 2021

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Human Carcinoembryonic Antigen

PRODUCT CODES: Cat. # P1712-100

RESTRICTIONS ON USE: For laboratory research purposes. Not for drug or household use.

MANUFACTURER: BioVision, Inc.

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SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Product name	Description	Volume	Safety Information
Human Carcinoembryonic Antigen	Lyophilized (contains Ammonium bicarbonate)	P1712-100: 100 µg	See below

Ammonium bicarbonate:

Emergency Overview

GHS Classification: Acute toxicity, Oral (Category 4), H302

Short-term (acute) aquatic hazard (Category 3), H402

GHS Label elements, including precautionary statements



Pictogram:

Signal word:

Warning

Hazard statement(s):

H302 Harmful if swallowed.

H402: Harmful to aquatic life.

Precautionary statement(s):

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

P501 Dispose of contents/ container to an approved waste disposal plant.

HMIS Classification

Health hazard: 1

Chronic Health Hazard: 0

Flammability: 1

Physical hazards: 0

NFPA Rating

Health hazard: 1

Fire: 0

Reactivity Hazard: 0

Potential Health Effects

Inhalation: Low hazard for usual industrial handling. Inhalation of a mist of this material may cause respiratory tract irritation.

Skin: May cause skin irritation. Low hazard for usual industrial handling

Eyes: May cause eye irritation.

Ingestion: Ingestion of large amounts may cause gastrointestinal irritation. Low hazard for usual industrial handling. May cause headache.

SECTION 3: HAZARDS IDENTIFICATION

Component	CAS Number	EC-No.	Molecular Weight	Chemical Formula
Ammonium bicarbonate	1066-33-7	213-911-5	79.06	CH ₅ NO ₃

SECTION 4: FIRST AID MEASURES

Ammonium bicarbonate:

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

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In case of skin contact: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

In case of eye contact: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation develops, get medical aid.

If swallowed: Never give anything by mouth to an unconscious person. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cup full of milk or water. Get medical aid if irritation or symptoms occur.

SECTION 5: FIRE-FIGHTING MEASURES

Ammonium bicarbonate:

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture: Carbon oxides, Nitrogen oxides (NO_x). Not combustible

Advice for firefighters: Wear protective self-contained breathing apparatus for firefighting if necessary.

Further information: No data available

SECTION 6: ACCIDENTAL RELEASE MEASURES

Ammonium bicarbonate:

Personal precautions, protective equipment and emergency procedures: Ensure adequate ventilation. Ensure that air-handling systems are operational. Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

Methods and materials for containment and cleaning up: Wear protective eyewear, gloves, and clothing. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Keep in suitable closed containers for disposal.

SECTION 7: HANDLING AND STORAGE

Ammonium bicarbonate:

Precautions for safe handling: Wash thoroughly after handling. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Wash clothing before reuse.

Conditions for safe storage, including any incompatibilities: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. No special precautions indicated

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Ammonium bicarbonate:

Personal protective equipment:

Eye protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection

Wear appropriate protective gloves to prevent skin exposure. Wear appropriate protective clothing to minimize contact with skin.

Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	Ammonium bicarbonate
Appearance:	White crystalline
pH:	7.0 - 8.5 at 79.1 g/l at 25 °C (77 °F)
Water Solubility:	79.1 g/l at 20 °C (68 °F) - completely soluble
Other Solubility:	No data available
Boiling Point (°C):	No data available
Melting Point (°C):	60 °C (140 °F)
Flash Point (°C):	No data available
Ignition Temperature (°C):	No data available
Density:	1.580 g/cm ³

SECTION 10: STABILITY AND REACTIVITY

Property	Ammonium bicarbonate
Chemical stability:	Stable under recommended storage conditions.
Conditions to avoid:	Heat.
Materials to avoid:	Oxidizing agents, Strong acids, Nitrites, Nitrates Strong oxidizing agents
Hazardous decomposition products:	Under fire conditions. - Carbon oxides, Nitrogen oxides (NO _x)

SECTION 11: TOXICOLOGICAL INFORMATION

Ammonium bicarbonate:

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Acute toxicity: LD50 Oral - Rat - male and female - 1,576 mg/kg. (OECD Test Guideline 401). Remarks: (ECHA)
LC50 Inhalation - Rat - male and female - 4.5 h - > 4.74 mg/l (US-EPA) Remarks: (ECHA) (in analogy to similar products) LD50 Dermal - Rat - male and female - > 2,000 mg/kg (OECD Test Guideline 434)

Remarks: (ECHA) (in analogy to similar products) No data available

Skin corrosion/irritation: Skin - reconstructed human epidermis (RhE) Result: No skin irritation. (OECD Test Guideline 431). Remarks: (ECHA)

Serious eye damage/eye irritation: Eyes – Rabbit. Result: No eye irritation. (US-EPA)

Remarks: (ECHA) (in analogy to similar products)

Respiratory/skin sensitization: Maximisation Test - Guinea pig , Result: negative (US-EPA)

Remarks: (ECHA) (in analogy to similar products)

Germ cell mutagenicity: Ames test. Salmonella typhimurium Result: negative (ECHA)

OECD Test Guideline 474. Mouse – male Result: negative (ECHA) (in analogy to similar products)

Carcinogenicity:

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: No data available

Mutagenicity: No data available

Additional information: RTECS: B08600000

SECTION 12: ECOLOGICAL INFORMATION

Ammonium bicarbonate:

Persistence and degradability: The methods for determining the biological degradability are not applicable to inorganic substances.

Toxicity: Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 98.3 mg/l - 96 h Remarks: (ECOTOX Database)

Bioaccumulative potential: Not data available

Mobility in soil: Aqueous solution has high mobility in soil.

PBT and vPvB assessment: no data available

Other adverse effects: no data available

SECTION 13: DISPOSAL CONSIDERATIONS

Ammonium bicarbonate:

Product: Dispose of in a manner consistent with federal, state, and local regulations.

Contaminated packaging: Dispose of as unused product

SECTION 14: TRANSPORT INFORMATION

Ammonium bicarbonate:

DOT (US): UN number: 3077 Class: 9 Packing group: III Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Ammonium hydrogencarbonate). Reportable Quantity (RQ): 5000 lbs. Poison Inhalation Hazard: No

IMDG: Not dangerous goods.

IATA: Not dangerous goods.

SECTION 15: REGULATORY INFORMATION

Ammonium bicarbonate:

SARA 302 Components: SARA 302: No chemical in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title II, Section 313.

SARA 311/312 Hazards: Ammonium bicarbonate: Acute Health Hazard

Massachusetts Right to Know Components: No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right to Know Components: No components are subject to the Pennsylvania Right to Know Act.

New Jersey Right to Know Components: No components are subject to the New Jersey Right to Know Act.

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

EU regulations

Component	Risk Phrases	Safety Phrases
Ammonium bicarbonate	--	--

SECTION 16: OTHER INFORMATION

DISCLAIMER:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does

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not represent any guarantee of the properties of the product. BioVision, Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.