SAFETY DATA SHEET

[Required under safety and health regulations for shipping and handling]

Version: 2019
Date Updated: September 13, 2019

SECTION 1. - - - - - - - - - PRODUCT AND COMPANY IDENTIFICATION- - - - - - - - - -

Product Name	CTAB
Product Code(s)	CB0108
Recommended Use	For Laboratory Research Use Only Not for Human or Animal Drug Use
Supplier	Bio Basic Inc.
Address	20 Konrad Crescent, Markham, Ontario, Canada, L3R 8T4
Telephone	(905) 474 4493
Fax	(905) 474 5794
For Chemical Emergency Phone#	(416) 995 9730

SECTION 2. - - - - - - - - - - HAZARDS IDENTIFICATION - - - - - - - - -

Classification of the substance or mixture

GHS Classification in accordance with Hazardous Products Regulations (HPR) (SOR/2015-17)

Acute toxicity, Oral (Category 4), H302
Skin irritation (Category 2), H315
Serious eye damage (Category 1), H318
Specific target organ toxicity - single exposure (Category 3),
Respiratory system, H335
Specific target organ toxicity - repeated exposure,
Oral (Category 2), Gastrointestinal tract, H373
Acute aquatic toxicity (Category 1), H400

For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS Label elements, including precautionary statements

Pictogram

Signal word: Danger

Hazard statement(s)

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H373	May cause damage to organs (Gastrointestinal tract) through prolonged or repeated exposure if swallowed.
H400	Very toxic to aquatic life.

Precautionary statement(s)

P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/ eye protection/ face protection.
P301 + P312 + P330	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

	Rinse mouth.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P314	Get medical advice/ attention if you feel unwell.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC) or not covered by GHS - none

SECTION 3. - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - - -

Chemical Name	EC No.	CAS-No	Weight %
Cetrimonium bromide	200-311-3	57-09-0	<100

SECTION 4. - - - - - - - - - - FIRST-AID MEASURES- - - - - - - - - - -

Description of first aid measures

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

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5. - - - - - - - - - FIRE FIGHTING MEASURES - - - - - - - - - -

Extinguishing media

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

Special hazards arising from the substance or mixture
No data available

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

Further information

No data available

SECTION 6. - - - - - - - - ACCIDENTAL RELEASE MEASURES- - - - - - - - -

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Reference to other sections

For disposal see section 13.

SECTION 7. - - - - - - - - - - HANDLING AND STORAGE- - - - - - - - - -

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Storage class (TRGS 510): 13: Non Combustible Solids

Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8. - - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION- - - - -

Control parameters

Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Nitrile rubber

Minimum layer thickness: 0.11 mm
Break through time: 480 min

Splash contact Material: Nitrile rubber

Minimum layer thickness: 0.11 mm
Break through time: 480 min

If used in solution, or mixed with other substances, and under conditions which differ from EN 374,

contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9. - - - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - - - -

Information on basic physical and chemical properties

a)	Appearance	Form: solid
b)	Odour	No data available
c)	Odour Threshold	No data available
d)	pH	5.0 - 7 at 36.4 g/l at 25 °C (77 °F)
e)	Melting point/freezing point	Melting point/range: 248 - 251 °C (478 - 484 °F)
f)	Initial boiling point and boiling range	No data available
g)	Flash point	244 °C (471 °F) - closed cup
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower flammability or explosive limits	No data available
k)	Vapour pressure	No data available
l)	Vapour density	No data available
m)	Relative density	No data available
n)	Water solubility	36.4 g/l at 20 °C (68 °F) - completely soluble
o)	Partition coefficient: n-octanol/water	log Pow: 3.18
p)	Auto-ignition temperature	No data available
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

Other safety information
No data available

SECTION 10. - - - - - - - - -STABILITY AND REACTIVITY - - - - - - - - -

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
No data available

Conditions to avoid
No data available

Incompatible materials
Strong oxidizing agents

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx), Hydrogen bromide gas
Other decomposition products - No data available In the event of fire: see section 5

SECTION 11. - - - - - - - - - TOXICOLOGICAL INFORMATION - - - - - - - -

Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - 410 mg/kg
Remarks: (RTECS)

Inhalation: Irritating to respiratory system.

Dermal: (in analogy to similar products)

Skin corrosion/irritation
Expert judgement (in analogy to similar products)

Serious eye damage/eye irritation
Expert judgement (in analogy to similar products)

Respiratory or skin sensitisation
Germ cell mutagenicity
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.

Reproductive toxicity

Specific target organ toxicity - single exposure
May cause respiratory irritation. - Respiratory system

Specific target organ toxicity - repeated exposure
Ingestion - May cause damage to organs through prolonged or repeated exposure. - Gastrointestinal tract

Aspiration hazard

Additional Information
RTECS: BQ7875000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12. - - - - - - - - - ECOLOGICAL INFORMATION - - - - - - - - - -

Toxicity

Toxicity to fish	semi-static test LC50 - Danio rerio (zebra fish) - 0.2 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	Immobilization EC50 - Daphnia magna (Water flea) - 0.037 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	Growth rate NOEC - Desmodesmus subspicatus (green algae) - 0.001 mg/l - 72 h Remarks: (ECHA)
	static test EC50 - Pseudokirchneriella subcapitata (green algae) - 0.00411 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	EC50 - Photobacterium phosphoreum - 9.8 mg/l - 5 min Remarks: (Lit.)

Persistence and degradability

Biodegradability	aerobic Chemical oxygen demand - Exposure time 11 d Result: 100 % - Readily biodegradable. (OECD Test Guideline 301E) Result: > 95 % - Readily eliminated from water (OECD Test Guideline 302B)

Bioaccumulative potential

Mobility in soil

Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects

Very toxic to aquatic life.
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13. - - - - - - - - - DISPOSAL CONSIDERATIONS - - - - - - - - -

Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

SECTION 14. - - - - - - - - - - TRANSPORT INFORMATION - - - - - - - - -

TDG (Canada)

UN number: 3077 Class: 9 Packing group: III
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

IMDG

UN number: 3077 Class: 9 Packing group: III EMS-No: F-A, S-F

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Cetrimonium bromide)
Marine pollutant:yes

IATA
UN number: 3077 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Cetrimonium bromide)

Further information
EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

SECTION 15. - - - - - - - - - REGULATORY INFORMATION - - - - - - - - - -

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

SECTION 16. - - - - - - - - - - OTHER INFORMATION- - - - - - - - - - - -

Full text of H-Statements referred to under sections 2 and 3.

Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
Eye Dam.	Serious eye damage
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure if swallowed.
H400	Very toxic to aquatic life.
Skin Irrit.	Skin irritation
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure

Further information: no limited for paper copy, just for internal uses.
For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

Issuing Date: 13-Sept-2019

End of SDS