

**SECTION 1. Identification of the substance/mixture and of the company/undertaking****Product name:** Slides (2) (CC1003)**Manufacturer/Supplier:**

Novus Biologicals

10771 East Easter Avenue

Centennial, CO 80112, USA

Phone: 1-888-506-6887

**Information department:** Technical Support**Emergency telephone number:** (800) 424-9300 or 911**SECTION 2. Hazards identification****Classification of the substance or mixture:***This product is not classified according to the Globally Harmonized System (GHS)***Classification according to EC No. 1272/2008***This product does not meet the criteria for classification in any hazard class according to Regulation (EC) no. 1272/2008 on classification, labelling and packaging for substances and mixtures and are below the regulatory threshold limits described by Occupational Safety Health Administration Hazard Communication standard 29 CFR 1910.1200. However a safety data sheet is being supplied for it upon request as it contains a substance for which there is a Union workplace exposure limit.***Classification system:***The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.***Label elements***Labeling according to EU guidelines:**Observe the general safety regulations when handling chemicals**The product is not subject to identification regulations pertaining to regulations on hazardous materials.***Classification system****NFPA ratings (scale 0-4)***Health = 0**Flammability = 0**Reactivity = 0***Other hazards:***This product contains material(s) of animal and human origin which have been rendered inactivated thru chemical fixation methods. Observe general safety guidelines for protection when handling this product.*

**SECTION 3. Composition/information on ingredients****Chemical characterization: Mixtures**

**Description:** Mixture of the substances listed below with nonhazardous additions

CAS No.	Description	EC No.	%
N/A	Slides	N/A	N/A

**SECTION 4. First aid measures****General information**

*No special measures required*

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

**After eye contact:** Rinse opened eye for several minutes under running water.

**After swallowing:** If symptoms persist consult doctor.

**After inhalation:** Seek medical treatment in case of complaints.

**SECTION 5. Firefighting measures****Suitable extinguishing agents**

CO<sub>2</sub>, ABC multipurpose dry chemical 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.

**Protective equipment:** No special measures required.

**SECTION 6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** Not required.

**Environmental precautions:** Wipe up with damp sponge or mop.

**Methods and materials for containment or cleaning up:** No special measures required.

**Reference to other sections:**

See Section 7 for information on safe handling.

See Section 8 for information on personal protective equipment.

See Section 13 for disposal information.

**SECTION 7. Handling and storage****Handling**

**Precautions for safe handling:** No special measures required.

**Information about protection against explosions and fires:** No special measures required.

**Requirements to be met by storerooms and receptacles:** Store at -20C.

**Information about storage in one common storage facility:** Store away from oxidizing agents.

**Further information about storage conditions:** Store at -20C in a well-sealed container.

**Specific end use (s):** No further relevant information available.

**SECTION 8. Exposure controls/personal protection**

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

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

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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

**Personal Protective Equipment**

**General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

**Breathing equipment:** Not required.

**Protection of hands:**



Chemical resistant gloves (i.e. nitrile or equivalent)

**Eye protection:**



Safety glasses, tightly sealed goggles.

**Body protection:** Protective work clothes (lab coat).

**SECTION 9. Physical and chemical properties**

**General Information**

**Appearance:**

Form	Glass
Color	Clear
Odor	Odorless
pH-value	Not applicable
Flash point	Not applicable
Flammability (solid, gaseous)	Not applicable
Ignition temperature	Not determined
Auto ignition	Product is not self-igniting
Danger of explosion	Product is not explosive.
Vapor pressure at 20C (68F)	Not determined
Density	Not determined
Vapor Density	Not determined
Evaporation rate	Not determined
Solubility in / Miscibility with water	Not miscible or difficult to mix
Solvent contents:	
Organic solvents	0.0%
Other information	No further relevant information available

**SECTION 10. Stability and reactivity**

**Thermal decomposition/conditions to be avoided:** No decomposition if used according to specifications.

**Incompatible materials:** Incompatible material: strong oxidizers.

**Hazardous decomposition products:** No dangerous decomposition products known

**SECTION 11. Toxicological information****Acute toxicity****Primary irritant effect:****Skin:** No irritating effect**Eye:** No irritating effect**Sensitization:** No sensitization effects known.**Additional toxicological information:** This product is not subject to OSHA classification according to internally approved calculation methods for preparations.

When used and handled according to specifications, the product does not have any harmful effects according to our experience and information provided to us.

**SECTION 12. Ecological information**

The ecological effects have not been thoroughly investigated, but currently none have been identified.

General notes: Generally not hazardous for water.

**SECTION 13. Disposal considerations****Waste treatment methods:****Recommendation:** Should be disposed of with solid waste. Disposal of material in accordance with federal (40 CFR 261) state and local requirements. This product is not considered a RCRA hazardous waste.**Uncleaned packages: Recommendation:** Disposal must be made according to state and federal regulations.**Recommended cleansing agent:** Water, if necessary with cleansing agents.**SECTION 14. Transport information****UN-Number****DOT, ADR, ADN, IMDG, IATA** Void**UN proper shipping name****DOT, ADR, ADN, IMDG, IATA** Void**Transport hazard class (es)****DOT, IMDG, IATA, ADR, ADN** Void**Packing group****DOT, ADR, IMDG, IATA** Void**Environmental hazards:****Marine pollutant:** None**Special precautions for user**

Not applicable

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

**SECTION 15. Regulatory information**

**SARA Section 355 (extremely hazardous substances):** None of the ingredients listed.

**SARA Section 313 (specific toxic chemical listings)** None of the ingredients listed

**TCSA (Toxic Substance Control Act):** None  
listed

**California 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 listed.

**Chemicals known to cause reproductive toxicity for males:** None of the ingredients listed.

**Chemicals known to cause developmental toxicity:** None of the ingredients listed

**Carcinogenic categories:**

**ARC (International Agency for Research on Cancer):** None of the ingredients listed

**NTP (National Toxicology Program):** None of the ingredients listed

**TLV (Threshold Limit Value established by ACGIH):** None of the ingredients listed

**Product related hazard information:**

Observe the general safety regulations when handling chemicals. The product is not subject to identification regulations pertaining to regulations on hazardous materials

**National regulations – Water hazard class:** Generally not hazardous for water

**SECTION 16. Other information**

To the best of our knowledge, the information contained herein is accurate. However, Novus Biologicals does not assume any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

**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)

RID: Règlement international concernant le transport des marchandises dangereuses par de fer (regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

**SECTION 1. Identification of the substance/mixture and of the company/undertaking****Product name:** H<sub>2</sub>O<sub>2</sub> /Urea Tablets (AHTAB20)**Manufacturer/Supplier:**

Novus Biologicals

10771 East Easter Avenue

Centennial, CO 80112, USA

Phone: 1-888-506-6887

**Information department:** Technical Support**Emergency telephone number:** (800) 424-9300 or 911**SECTION 2. Hazards identification****Classification of the substance or mixture:***This product is not classified according to the Globally Harmonized System (GHS)***Classification according to EC No. 1272/2008**

Xn ; Harmful

*R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.***Classification system:***The classification was made according to the latest editions of international substances lists expanded upon from company and literature data.***Label elements***Labeling according to EU guidelines:**The product has been classified and marked in accordance with regulations on hazardous materials.***Code letter and hazard designation of product:**

Xn Harmful



Oxidizing

**Hazard-determining components of labeling:**

Hydrogen Peroxide




**Risk phrases:***20/21/22: Harmful by inhalation, in contact with skin and if swallowed.***Safety phrases:***9 Keep container in a well-ventilated place.**23 Do not breathe gas/fumes/vapor/spray.**36/37 Wear suitable protective clothing and gloves.**60 This material and its container should be disposed of as hazardous waste.***Classification system****NFPA ratings (scale 0-4)**

Health = 3

Flammability = 0

Reactivity = 2

**SECTION 3. Composition/information on ingredients****Chemical characterization: Mixtures****Description:** Mixture of the substances listed below with nonhazardous additions

CAS No.	Description	EC No.	%
7722-84-1	Hydrogen Peroxide  Xn R40  F H302  H314; H333	231-765-0	0.05%

**SECTION 4. First aid measures****General information**

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

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

**After eye contact:** Rinse opened eye for several minutes under running water.

**After swallowing:** Seek immediate medical advice.

**After inhalation:** Supply fresh air. If required provide artificial respiration. Keep patient warm. Seek medical advice. In case of unconsciousness place patient on side position for transport.

**SECTION 5. Firefighting measures****Suitable extinguishing agents**

CO<sub>2</sub>, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Special hazards arising from the substance or mixture:** Formation of toxic gases is possible during heating or in case of fire.

**Protective equipment:** No special measures required.

**SECTION 6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** Not required.

**Environmental precautions:** Wipe up with damp sponge or mop.

**Methods and materials for containment or cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).

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 protective equipment.

See Section 13 for disposal information.

**SECTION 7. Handling and storage****Handling****Precautions for safe handling:**

Ensure good ventilation/exhaustion at the workplace and prevent formation of aerosols.

**Information about protection against explosions and fires:**

No special measures required.

**Requirements to be met by storerooms and receptacles:** Store at -20C.

**Information about storage in one common storage facility:** Store away from oxidizing agents.

**Further information about storage conditions:** Store at -20C in a well-sealed container.

**Specific end use (s):** No further relevant information available.

**SECTION 8. Exposure controls/personal protection**

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

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

7722-84-1 Hydrogen Peroxide	
PEL 0	Short term value: 1.39mg/m <sup>3</sup> Long term value: 1.39mg/m <sup>3</sup> TWA 1 ppm(1.4mg/M <sup>3</sup> )

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

**Personal Protective Equipment****General protective and hygienic measures**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

**Breathing equipment:** Not required.

**Protection of hands:**

Chemical resistant gloves (i.e. nitrile or equivalent)

**Eye protection:**

Safety glasses, tightly sealed goggles.

**Body protection:** Protective work clothes (lab coat).



**SECTION 9. Physical and chemical properties****General Information****Appearance:**

Form	Solid
Color	White
Odor	Odorless
pH-value	6.2
Flash point	Not applicable
Flammability (solid, gaseous)	Not applicable
Decomposition temperature	Not determined
Auto ignition	Product is not self-igniting
Danger of explosion	Non combustible, but an oxidizer
Solubility in / Miscibility with water	Soluble
Solvent contents: N/A	N/A

**SECTION 10. Stability and reactivity**

**Thermal decomposition/conditions to be avoided:** No decomposition if used according to specifications.

**Incompatible materials:** Incompatible material: strong oxidizers, acid materials and metals

**Hazardous decomposition products:** No dangerous decomposition products know

**SECTION 11. Toxicological information**

**Acute toxicity: LD/LD50 values that are relevant for classification: 7722-84-1 Hydrogen Peroxide Oral/LD50/ 2000 mg/kg (mouse)**

**Primary irritant effect:**

**Skin:** No irritating effect

**Eye:** Irritating

**Subacute to chronic toxicity:** Target organs: eyes, skin, respiratory system.

**Additional toxicological information:** The product shows the following dangers according to internally approved calculation methods for preparation: Harmful

**SECTION 12. Ecological information**

*The ecological effects have not been thoroughly investigated, but currently none have been identified.*

*General notes: Water hazard class 2 (self-assessment); hazardous for water.*

**SECTION 13. Disposal considerations****Waste treatment methods:**

**Recommendation:** *Should be disposed of with solid waste. Disposal of material in accordance with federal (40 CFR 261) state and local requirements. This product is not considered a RCRA hazardous waste. RCRA hazardous waste – RCRA# D004 (Arsenic)*

**Uncleaned packages: Recommendation:** *Disposal must be made according to state and federal regulations.*

**Recommended cleansing agent:** *Water, if necessary with cleansing agents.*

**SECTION 14. Transport information****UN-Number**

**DOT, ADR, ADN, IMDG, IATA**      **Void**

**UN proper shipping name**

**DOT, ADR, ADN, IMDG, IATA**      **Void**

**Transport hazard class (es)**

**DOT, IMDG, IATA, ADR, ADN**      **Void**

**Packing group**

**DOT, ADR, IMDG, IATA**      **Void**

**Environmental hazards:**

**Marine pollutant:**      **None**

**Special precautions for user**      **Not applicable**

**Transport in bulk according to Annex II of**

**MARPOL73/78 and the IBC Code**      **Not applicable**

**SECTION 15. Regulatory information**

<b>SARA Section 355 (extremely hazardous substances):</b>	None of the ingredients listed
<b>SARA Section 313 (specific toxic chemical listings)</b>	7722-84-1 Hydrogen Peroxide
<b>TCSA (Toxic Substance Control Act):</b>	None of the ingredients listed
<b>California Proposition 65 – Chemicals known to cause cancer:</b>	7722-84-1 Hydrogen Peroxide
<b>Chemicals known to cause reproductive toxicity for females:</b>	None of the ingredients listed
<b>Chemicals known to cause reproductive toxicity for males:</b>	None of the ingredients listed
<b>Chemicals known to cause developmental toxicity:</b>	None of the ingredients listed
<b>Carcinogenic categories:</b>	
<b>IARC (International Agency for Research on Cancer):</b>	7722-84-1 Hydrogen Peroxide
<b>NTP (National Toxicology Program):</b>	None of the ingredients listed
<b>TLV (Threshold Limit Value established by ACGIH):</b>	None of the ingredients listed A4
<b>Product related hazard information:</b>	the product has been classified and marked in accordance with regulations on hazardous materials.
<b>Hazard symbols:</b>	Xn Harmful
<b>Hazard-determining components of labeling:</b>	Hydrogen peroxide
<b>Risk phrases:</b>	20/21/22 Harmful by inhalation, in contact with skin and if swallowed
<b>Safety phrases:</b>	
7/9 Keep container in a well-ventilated place.	
23 Do not breathe gas/fumes/vapor/spray.	
36/37 Wear suitable protective clothing and gloves.	
60 This material and container should be disposed of as hazardous waste.	
<b>Water hazard class:</b>	Water hazard class 2 (Self-assessment): hazardous for water.

**SECTION 16. Other information**

To the best of our knowledge, the information contained herein is accurate. However, Novus Biologicals does not assume any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

**Abbreviations and acronyms:**

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 RID: Règlement international concernant le transport des marchandises dangereuses par de fer (regulations Concerning the International Transport of Dangerous Goods by Rail)  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 ICAO: International Civil Aviation Organization  
 ACGIH: American Conference of Governmental Industrial Hygienists  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 NFPA: National Fire Protection Association (USA)

**SECTION 1. Identification of the substance/mixture and of the company/undertaking****Product name:** DAB Tablets (AHDAB24)**Manufacturer/Supplier:**

Novus Biologicals

10771 East Easter Avenue

Centennial, CO 80112, USA

Phone: 1-888-506-6887

**Information department:** Technical Support**Emergency telephone number:** (800) 424-9300 or 911**SECTION 2. Hazards identification****Classification of the substance or mixture:**

Danger H341 Germ cell mutagenicity H350 Carcinogenicity

**Classification according to EC No. 1272/2008**

Danger limited evidence of carcinogenic effect

**Classification system:**

The classification was made according to the latest editions of international substances lists expanded upon from company and literature data.

**Label elements**

Labeling according to EU guidelines:

The product has been classified and marked in accordance with regulations on hazardous materials.

**Code letter and hazard designation of product:**

Danger

**Hazard-determining components of labeling:**

a-Hydro-w-hydroxy-poly(oxy-1,2-ethanediyl),n ~3350

Biphenyl-3,3',4,4'-tetrayltertraammonium tetrachloride

**Risk phrases:**

20/21/22: Harmful by inhalation, in contact with skin and if swallowed.

**Safety phrases:**

9 Keep container in a well-ventilated place.

23 Do not breathe gas/fumes/vapor/spray.

36/37 Wear suitable protective clothing and gloves.

60 This material and its container should be disposed of as hazardous waste.

**Classification system****NFPA ratings (scale 0-4)**

Health = 2

Flammability = 0

Reactivity = 0

**SECTION 3. Composition/information on ingredients****Chemical characterization: Mixtures****Description:** Mixture of the substances listed below with nonhazardous additions

<b>CAS No.</b>	<b>Description</b>	<b>EC No.</b>	<b>%</b>
25322-68-3	<i>α</i> -Hydro-w-hydroxy-poly(oxy-1,2-ethanediyl),n ~3350	500-038-2	>=1- <5%
868272-85-9	Biphenyl-3,3',4,4'-tetrayltetraammonium tetrachloride	231-018-9	>=1- <5%

**SECTION 4. First aid measures****General information**

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

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

**After eye contact:** Rinse opened eye for several minutes under running water.

**After swallowing:** Seek immediate medical advice.

**After inhalation:** Supply fresh air. If required provide artificial respiration. Keep patient warm. Seek medical advice. In case of unconsciousness place patient on side position for transport.

**SECTION 5. Firefighting measures****Suitable extinguishing agents**

CO<sub>2</sub>, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Special hazards arising from the substance or mixture:** Formation of toxic gases is possible during heating or in case of fire.

**Protective equipment:** Self contained breathing apparatus and protective clothing.

**SECTION 6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** Not required.

**Environmental precautions:** Do not let product enter drains.

**Methods and materials for containment or cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).

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 protective equipment.

See Section 13 for disposal information.

**SECTION 7. Handling and storage****Handling****Precautions for safe handling:**

Ensure good ventilation/exhaustion at the workplace and prevent formation of aerosols.

**Information about protection against explosions and fires:**

No special measures required.

**Requirements to be met by storerooms and receptacles:** Store at -20C.

**Information about storage in one common storage facility:** Light sensitive, hygroscopic

**Further information about storage conditions:** Store at -20C in a well-sealed container.

**Specific end use (s):** No further relevant information available.

**SECTION 8. Exposure controls/personal protection**

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

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

25322-68-3 $\alpha$ -Hydro-w-hydroxy-poly(oxy-1,2-ethanediyl),n ~3350	
PEL 0	Short term value: 10mg/m <sup>3</sup> Long term value: 10mg/m <sup>3</sup>

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

**Personal Protective Equipment****General protective and hygienic measures**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

**Breathing equipment:** Required when dusts are generated

**Protection of hands:**

Chemical resistant gloves (i.e. nitrile or equivalent)

**Eye protection:**

Safety glasses, tightly sealed goggles.

**Body protection:** Protective work clothes (lab coat).

**SECTION 9. Physical and chemical properties****General Information****Appearance:**

<i>Form</i>	<i>Solid</i>
<i>Color</i>	<i>Brown</i>
<i>Odor</i>	<i>Odorless</i>
<i>pH-value</i>	<i>Not determined</i>
<i>Flash point</i>	<i>Not applicable</i>
<i>Flammability (solid, gaseous)</i>	<i>Not applicable</i>
<i>Decomposition temperature</i>	<i>Not determined</i>
<i>Auto ignition</i>	<i>Not determined</i>
<i>Danger of explosion</i>	<i>Product is not explosive.</i>
<i>Solubility in / Miscibility with water</i>	<i>Soluble</i>
<i>Solvent contents: N/A</i>	<i>N/A</i>

**SECTION 10. Stability and reactivity**

**Thermal decomposition/conditions to be avoided:** No decomposition if used according to specifications.

**Incompatible materials:** Incompatible material: strong oxidizers, acid materials and metals

**Hazardous decomposition products:** In the event of fire see section 5

**SECTION 11. Toxicological information**

**Acute toxicity:** Oral: No data available. Inhalation: No data available. Dermal: No data available

**Primary irritant effect:**

**Skin:** No irritating effect

**Eye:** No irritating effect

**Subacute to chronic toxicity:** Carcinogenicity. No ingredient present at levels identified as probable, possible or confirmed human carcinogen

**Additional toxicological information:** Vomiting, Diarrhea, Dehydration and congestion may occur in internal organs. Hypertonic salt solutions can produce inflammatory reactions in the gastrointestinal tract. Other dangerous properties can not be excluded. This substance should be handled with care.

**SECTION 12. Ecological information**

*The ecological effects have not been thoroughly investigated, but currently none have been identified.*

*General notes: Water hazard class 2 (self-assessment); hazardous for water.*

**SECTION 13. Disposal considerations****Waste treatment methods:**

**Recommendation:** *Should be disposed of with solid waste. Disposal of material in accordance with federal (40 CFR 261) state and local requirements. This product is not considered a RCRA hazardous waste. RCRA hazardous waste – RCRA# D004 (Arsenic)*

**Uncleaned packages: Recommendation:** *Disposal must be made according to state and federal regulations.*

**Recommended cleansing agent:** *Water, if necessary with cleansing agents.*

**SECTION 14. Transport information****UN-Number**

**DOT, ADR, ADN, IMDG, IATA**      **Void**

**UN proper shipping name**

**DOT, ADR, ADN, IMDG, IATA**      **Void**

**Transport hazard class (es)**

**DOT, IMDG, IATA, ADR, ADN**      **Void**

**Packing group**

**DOT, ADR, IMDG, IATA**      **Void**

**Environmental hazards:**

**Marine pollutant:**      **None**

**Special precautions for user**      **Not applicable**

**Transport in bulk according to Annex II of**

**MARPOL73/78 and the IBC Code**      **Not applicable**



**SECTION 15. Regulatory information**

<b>SARA Section 355 (extremely hazardous substances):</b>	None of the ingredients listed
<b>SARA Section 313 (specific toxic chemical listings)</b>	No ingredients exceed threshold
<b>TCSA (Toxic Substance Control Act):</b>	25322-68-3 a-Hydro-w-
hydroxy-poly(oxy-1,2-ethanediyl),n~3350	
<b>California Proposition 65 – Chemicals known to cause cancer:</b>	25322-68-3 a-Hydro-w-
hydroxy-poly(oxy-1,2-ethanediyl),n~3350	
<b>Chemicals known to cause reproductive toxicity for females:</b>	25322-68-3 a-Hydro-w-
hydroxy-poly(oxy-1,2-ethanediyl),n~3350	
<b>Chemicals known to cause reproductive toxicity for males:</b>	None of the ingredients listed
<b>Chemicals known to cause developmental toxicity:</b>	25322-68-3 a-Hydro-w-
hydroxy-poly(oxy-1,2-ethanediyl),n~3350	
<b>Carcinogenic categories:</b>	
<b>IARC (International Agency for Research on Cancer):</b>	25322-68-3 a-Hydro-w-
hydroxy-poly(oxy-1,2-ethanediyl),n~3350	
<b>NTP (National Toxicology Program):</b>	25322-68-3 a-Hydro-w-
hydroxy-poly(oxy-1,2-ethanediyl),n~3350	
<b>TLV (Threshold Limit Value established by ACGIH):</b>	25322-68-3 a-Hydro-w-
hydroxy-poly(oxy-1,2-ethanediyl),n~3350	
<b>Product related hazard information:</b>	the product has been classified and marked in accordance with regulations on hazardous materials.
<b>Hazard symbols:</b>	Danger
<b>Hazard-determining components of labeling:</b>	25322-68-3 a-Hydro-w-
hydroxy-poly(oxy-1,2-ethanediyl),n~3350	
<b>Risk phrases:</b>	20/21/22 Harmful by inhalation, in
contact with skin and if swallowed	
<b>Safety phrases:</b>	
7/9 Keep container in a well-ventilated place.	
23 Do not breathe gas/fumes/vapor/spray.	
36/37 Wear suitable protective clothing and gloves.	
<b>Water hazard class: Water hazard class 2 (Self-assessment):</b>	hazardous for water.

**SECTION 16. Other information**

To the best of our knowledge, the information contained herein is accurate. However, Novus Biologicals does not assume any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

**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)  
 RID: Règlement international concernant le transport des marchandises dangereuses par de fer (regulations Concerning the International Transport of Dangerous Goods by Rail)  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 ICAO: International Civil Aviation Organization  
 ACGIH: American Conference of Governmental Industrial Hygienists  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 NFPA: National Fire Protection Association (USA)

**SECTION 1. Identification of the substance/mixture and of the company/undertaking****Product name:** Br-dUTP (AHBU16)**Manufacturer/Supplier:**

Novus Biologicals

10771 East Easter Avenue

Centennial, CO 80112, USA

Phone: 1-888-506-6887

**Information department:** Technical Support**Emergency telephone number:** (800) 424-9300 or 911**SECTION 2. Hazards identification****Classification of the substance or mixture:***This product is not classified according to the Globally Harmonized System (GHS)***Classification according to EC No. 1272/2008**

*This product does not meet the criteria for classification in any hazard class according to Regulation (EC) no. 1272/2008 on classification, labelling and packaging for substances and mixtures and are below the regulatory threshold limits described by Occupational Safety Health Administration Hazard Communication standard 29 CFR 1910.1200. However a safety data sheet is being supplied for it upon request as it contains a substance for which there is a Union workplace exposure limit.*

**Classification system:**

*The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.*

**Label elements***Labeling according to EU guidelines:**Observe the general safety regulations when handling chemicals**The product is not subject to identification regulations pertaining to regulations on hazardous materials.***Classification system****NFPA ratings (scale 0-4)**

Health = 0

Flammability = 0

Reactivity = 0

**Other hazards:**

*This product contains material(s) of animal and human origin which have been rendered inactivated thru chemical fixation methods. Observe general safety guidelines for protection when handling this product*

**SECTION 3. Composition/information on ingredients****Chemical characterization: Mixtures****Description:** Mixture of the substances listed below with nonhazardous additions

CAS No.	Description	EC No.	%
102212-99-7	BrdUTP	Non- classified constituent	0.1M

**SECTION 4. First aid measures****General information***No special measures required***After skin contact:** Immediately wash with water and soap and rinse thoroughly.**After eye contact:** Rinse opened eye for several minutes under running water.**After swallowing:** If symptoms persist consult doctor.**After inhalation:** Seek medical treatment in case of complaints.**SECTION 5. Firefighting measures****Suitable extinguishing agents***CO<sub>2</sub>, ABC multipurpose dry chemical 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.**Protective equipment:** No special measures required.**SECTION 6. Accidental release measures****Personal precautions, protective equipment and emergency procedures:** Not required.**Environmental precautions:** Wipe up with damp sponge or mop.**Methods and materials for containment or cleaning up:** No special measures required.**Reference to other sections:***See Section 7 for information on safe handling.**See Section 8 for information on personal protective equipment.**See Section 13 for disposal information.***SECTION 7. Handling and storage****Handling****Precautions for safe handling:** No special measures required.**Information about protection against explosions and fires:** No special measures required.**Requirements to be met by storerooms and receptacles:** Store at -20C.**Information about storage in one common storage facility:** Store away from oxidizing agents.**Further information about storage conditions:** Store at -20C in a well-sealed container.**Specific end use (s):** No further relevant information available.

**SECTION 8. Exposure controls/personal protection**

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

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

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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

**Personal Protective Equipment**

**General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

**Breathing equipment:** Not required.

**Protection of hands:**



Chemical resistant gloves (i.e. nitrile or equivalent)

**Eye protection:**



Safety glasses, tightly sealed goggles.

**Body protection:** Protective work clothes (lab coat).

**SECTION 9. Physical and chemical properties**

**General Information**

**Appearance:**

Form	Liquid
Color	Clear
Odor	Odorless
pH-value	7.2-7.6
Flash point	Not applicable
Flammability (solid, gaseous)	Not applicable
Ignition temperature	Not determined
Auto ignition	Product is not self-igniting
Danger of explosion	Product is not explosive.
Vapor pressure at 20C (68F)	23 nPa (17 mm Hg)
Density	Not determined
Vapor Density	Not determined
Evaporation rate	Not determined
Solubility in / Miscibility with water	Soluble
Solvent contents:	
Organic solvents	0.0%
Water	50.0%
Other information	No further relevant information available

**SECTION 10. Stability and reactivity**

**Thermal decomposition/conditions to be avoided:** No decomposition if used according to specifications.

**Incompatible materials:** Incompatible material: strong oxidizers.

**Hazardous decomposition products:** No dangerous decomposition products known

**SECTION 11. Toxicological information****Acute toxicity****Primary irritant effect:****Skin:** No irritating effect**Eye:** No irritating effect**Sensitization:** No sensitization effects known.**Additional toxicological information:** This product is not subject to OSHA classification according to internally approved calculation methods for preparations.

When used and handled according to specifications, the product does not have any harmful effects according to our experience and information provided to us.

**SECTION 12. Ecological information**

The ecological effects have not been thoroughly investigated, but currently none have been identified.

General notes: Generally not hazardous for water.

**SECTION 13. Disposal considerations****Waste treatment methods:****Recommendation:** Should be disposed of with solid waste. Disposal of material in accordance with federal (40 CFR 261) state and local requirements. This product is not considered a RCRA hazardous waste.**Uncleaned packages: Recommendation:** Disposal must be made according to state and federal regulations.**Recommended cleansing agent:** Water, if necessary with cleansing agents.**SECTION 14. Transport information****UN-Number****DOT, ADR, ADN, IMDG, IATA** Void**UN proper shipping name****DOT, ADR, ADN, IMDG, IATA** Void**Transport hazard class (es)****DOT, IMDG, IATA, ADR, ADN** Void**Packing group****DOT, ADR, IMDG, IATA** Void**Environmental hazards:****Marine pollutant:** None**Special precautions for user**

Not applicable

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

**SECTION 15. Regulatory information**

**SARA Section 355 (extremely hazardous substances):** None of the ingredients listed.

**SARA Section 313 (specific toxic chemical listings)** None of the ingredients listed

**TCSA (Toxic Substance Control Act):** 7732-18-5  
water

**California 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 listed.

**Chemicals known to cause reproductive toxicity for males:** None of the ingredients listed.

**Chemicals known to cause developmental toxicity:** None of the ingredients listed

**Carcinogenic categories:**

**ARC (International Agency for Research on Cancer):** None of the ingredients listed

**NTP (National Toxicology Program):** None of the ingredients listed

**TLV (Threshold Limit Value established by ACGIH):** None of the ingredients listed

**Product related hazard information:**

Observe the general safety regulations when handling chemicals. The product is not subject to identification regulations pertaining to regulations on hazardous materials

**National regulations – Water hazard class:** Generally not hazardous for water

**SECTION 16. Other information**

To the best of our knowledge, the information contained herein is accurate. However, Novus Biologicals does not assume any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

**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)

RID: Règlement international concernant le transport des marchandises dangereuses par de fer (regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

**SECTION 1. Identification of the substance/mixture and of the company/undertaking****Product name:** 200x Conjugate (AHHR22)**Manufacturer/Supplier:**

Novus Biologicals

10771 East Easter Avenue

Centennial, CO 80112, USA

Phone: 1-888-506-6887


**Information department:** Technical Support**Emergency telephone number:** (800) 424-9300 or 911**SECTION 2. Hazards identification****Classification of the substance or mixture:***This product is not classified according to the Globally Harmonized System (GHS)***Classification according to EC No. 1272/2008***H315, H319, H317: Skin irritation, eye irritation and skin sensitization***Classification system:***The classification was made according to the latest editions of international substances lists expanded upon from company and literature data.***Label elements***Labeling according to EU guidelines:**The product has been classified and marked in accordance with regulations on hazardous materials.***Code letter and hazard designation of product:****Hazard-determining components of labeling:***Mixture of 5-chloro-2-methylisothiazol-3(2H)-one and 2-methylisothiazol-3(2H)-one. Glycerol***Risk phrases:***20/21/22: Harmful by inhalation, in contact with skin and if swallowed.***Safety phrases:***9 Keep container in a well-ventilated place.**23 Do not breathe gas/fumes/vapor/spray.**36/37 Wear suitable protective clothing and gloves.**60 This material and its container should be disposed of as hazardous waste.***Classification system****NFPA ratings (scale 0-4)**

Health = 2

Flammability = 0

Reactivity = 0

**SECTION 3. Composition/information on ingredients****Chemical characterization: Mixtures****Description:** Mixture of the substances listed below with nonhazardous additions

CAS No.	Description	EC No.	%
55965-84-9	Mixture of 5-chloro-2-methylisothiazol-3(2H)-one and 2-methylisothiazol-3(2H)-one 	None	0.1-0.25 %
56-81-5	Glycerol	200-289-5	50-60 %

**SECTION 4. First aid measures****General information***We recommend handling chemicals with care.***After skin contact:** Immediately wash with water and soap and rinse thoroughly.**After eye contact:** Rinse opened eye for several minutes under running water.**After swallowing:** Seek immediate medical advice.**After inhalation:** Supply fresh air. If required provide artificial respiration. Keep patient warm. Seek medical advice. In case of unconsciousness place patient on side position for transport.**SECTION 5. Firefighting measures****Suitable extinguishing agents***CO<sub>2</sub>, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.***Special hazards arising from the substance or mixture:** Not known.**Protective equipment:** Respiratory equipment recommended**SECTION 6. Accidental release measures****Personal precautions, protective equipment and emergency procedures:** Not required.**Environmental precautions:** Wipe up with damp sponge or mop.**Methods and materials for containment or cleaning up:***Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).**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 protective equipment.**See Section 13 for disposal information.*



**SECTION 7. Handling and storage****Handling****Precautions for safe handling:**

Ensure good ventilation/exhaustion at the workplace and prevent formation of aerosols.

**Information about protection against explosions and fires:**

No special measures required.

**Requirements to be met by storerooms and receptacles:** Store at -20C.

**Information about storage in one common storage facility:** Keep in a cool, dry well-ventilated area

**Further information about storage conditions:** Store at -20C in a well-sealed container.

**Specific end use (s):** No further relevant information available.

**SECTION 8. Exposure controls/personal protection**

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

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

55965-84-9 5-chloro-2-methylisothiazol-3(2H)-one and 2methylisothiazol-3(2H)-one	
PEL 0	None

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

**Personal Protective Equipment****General protective and hygienic measures**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

**Breathing equipment:** Not required if used in a well-ventilated area.

**Protection of hands:**

Chemical resistant gloves (i.e. nitrile or equivalent)

**Eye protection:**

Safety glasses, tightly sealed goggles.

**Body protection:** Protective work clothes (lab coat).

**SECTION 9. Physical and chemical properties****General Information****Appearance:**

Form	Liquid
Color	Amber Brown
Odor	Odorless
pH-value	Not applicable
Flash point	Not applicable
Flammability (solid, gaseous)	Not applicable
Decomposition temperature	Not determined
Auto ignition	Not determined
Danger of explosion	Not determined
Solubility in / Miscibility with water	Not determined
Solvent contents:	
None	

**SECTION 10. Stability and reactivity**

**Thermal decomposition/conditions to be avoided:** No decomposition if used according to specifications.

**Incompatible materials:** None under normal conditions of use.

**Hazardous decomposition products:** No known hazardous decomposition products.

**Additional information:**

None.

**SECTION 11. Toxicological information**

**Acute toxicity: LD/LD50 values that are relevant for classification:** 5-chloro-2-methylisothiazol-3(2H)-one and 2-methylisothiazol-3(2H)-one: Oral/LD50/ 53 mg/kg (rat)=481 mg/kg(rat) 232-249 mg/kg(rat) = 120 mg/kg(rat)

**Primary irritant effect:**

**Skin:** Irritates skin, may cause sensitization by skin contact

**Eye:** Irritates eyes

**Subacute to chronic toxicity:** Data are conclusive, but insufficient for classification.

**Additional toxicological information:** The product shows the following dangers according to internally approved calculation methods for preparation: Harmful

**SECTION 12. Ecological information**

*The ecological effects have not been thoroughly investigated, but currently none have been identified.*

*General notes: Water hazard class 2 (self-assessment); hazardous for water.*

**SECTION 13. Disposal considerations****Waste treatment methods:**

**Recommendation:** *Should be disposed of with solid waste. Disposal of material in accordance with federal (40 CFR 261) state and local requirements. This product is not considered a RCRA hazardous waste. RCRA hazardous waste – RCRA# D004 (Arsenic)*

**Uncleaned packages: Recommendation:** *Disposal must be made according to state and federal regulations.*

**Recommended cleansing agent:** *Water, if necessary with cleansing agents.*

**SECTION 14. Transport information****UN-Number**

**DOT, ADR, ADN, IMDG, IATA**      **Void**

**UN proper shipping name**

**DOT, ADR, ADN, IMDG, IATA**      **Void**

**Transport hazard class (es)**

**DOT, IMDG, IATA, ADR, ADN**      **Void**

**Packing group**

**DOT, ADR, IMDG, IATA**      **Void**

**Environmental hazards:**

**Marine pollutant:**      **None**

**Special precautions for user**      **Not applicable**

**Transport in bulk according to Annex II of**

**MARPOL73/78 and the IBC Code**      **Not applicable**

**SECTION 15. Regulatory information****SARA Section 355 (extremely hazardous substances):**

None of the ingredients listed

**SARA Section 313 (specific toxic chemical listings)**

None of the ingredients listed

**TCSA (Toxic Substance Control Act):**

55965-84-9 5-chloro-2-

methylisothiazol-3(2H)-one and 2-methylisothiazol-3(2H)-one

56-81-5 Glycerol

**California Proposition 65 – Chemicals known to cause cancer:**

None of the ingredients listed.

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients listed

**Chemicals known to cause reproductive toxicity for males:**

None of the ingredients listed

**Chemicals known to cause developmental toxicity:**

None of the ingredients listed

**Carcinogenic categories:****IARC (International Agency for Research on Cancer):**

None of the ingredients listed

**NTP (National Toxicology Program):**

None of the ingredients listed

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

None of the ingredients listed

**Product related hazard information:** the product has been classified and marked in accordance with regulations on hazardous materials.**Hazard symbols:****Hazard-determining components of labeling:**

55965-84-9 5-chloro-2-

methylisothiazol-3(2H)-one and 2-methylisothiazol-3(2H)-one

56-81-5 Glycerol

**Risk phrases:**

20/21/22 Harmful by inhalation, in

contact with skin and if swallowed

**Safety phrases:**

7/9 Keep container in a well-ventilated place.

23 Do not breathe gas/fumes/vapor/spray.

36/37 Wear suitable protective clothing and gloves.

60 This material and container should be disposed of as hazardous waste.

**Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.**SECTION 16. Other information**

To the best of our knowledge, the information contained herein is accurate. However, Novus Biologicals does not assume any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

**Abbreviations and acronyms:**

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IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

**SECTION 1. Identification of the substance/mixture and of the company/undertaking****Product name:** Proteinase K (AHPK25)**Manufacturer/Supplier:**

Novus Biologicals

10771 East Easter Avenue

Centennial, CO 80112, USA

Phone: 1-888-506-6887

**Information department:** Technical Support**Emergency telephone number:** (800) 424-9300 or 911**SECTION 2. Hazards identification****Classification of the substance or mixture:***This product is not classified according to the Globally Harmonized System (GHS)***Classification according to EC No. 1272/2008***H315, H319, H317: Skin irritation, eye irritation and skin sensitization. May cause respiratory irritation.***Classification system:***The classification was made according to the latest editions of international substances lists expanded upon from company and literature data.***Label elements***Labeling according to EU guidelines:**The product has been classified and marked in accordance with regulations on hazardous materials.***Code letter and hazard designation of product:****Hazard-determining components of labeling:**

Proteinase K



**Risk phrases:***20/21/22: Harmful by inhalation, in contact with skin and if swallowed.***Safety phrases:***9 Keep container in a well-ventilated place.**23 Do not breathe gas/fumes/vapor/spray.**36/37 Wear suitable protective clothing and gloves.**60 This material and its container should be disposed of as hazardous waste.***Classification system****NFPA ratings (scale 0-4)**

Health = 2

Flammability = 0

Reactivity = 0

**SECTION 3. Composition/information on ingredients****Chemical characterization: Mixtures****Description:** Mixture of the substances listed below with nonhazardous additions

CAS No.	Description	EC No.	%
39450-01-6	Proteinase K  	None	< 1 %
77-86-1	Tris	201-064-4	< 1 %

**SECTION 4. First aid measures****General information***If symptoms persist seek medical advice.***After skin contact:** Immediately wash with water and soap and rinse thoroughly.**After eye contact:** Rinse opened eye for several minutes under running water.**After swallowing:** Clean mouth with water and drink plenty of water.**After inhalation:** Supply fresh air. If required provide artificial respiration. Keep patient warm. Seek medical advice. In case of unconsciousness place patient on side position for transport.**SECTION 5. Firefighting measures****Suitable extinguishing agents***CO<sub>2</sub>, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.***Special hazards arising from the substance or mixture:** Not known.**Protective equipment:** Respiratory equipment recommended**SECTION 6. Accidental release measures****Personal precautions, protective equipment and emergency procedures:** Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation.**Environmental precautions:** Should not be released into the environment.**Methods and materials for containment or cleaning up:***Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).**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 protective equipment.**See Section 13 for disposal information.*

**SECTION 7. Handling and storage****Handling****Precautions for safe handling:**

Ensure good ventilation/exhaustion at the workplace and prevent formation of aerosols.

**Information about protection against explosions and fires:**

No special measures required.

**Requirements to be met by storerooms and receptacles:** Store at -20C.

**Information about storage in one common storage facility:** Keep in a cool, dry well-ventilated area

**Further information about storage conditions:** Store at -20C in a well-sealed container away from oxidizing agents.

**Specific end use (s):** No further relevant information available.

**SECTION 8. Exposure controls/personal protection**

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

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

This product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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

**Personal Protective Equipment****General protective and hygienic measures**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

**Breathing equipment:** Not required if used in a well-ventilated area.

**Protection of hands:**

Chemical resistant gloves (i.e. nitrile or equivalent)

**Eye protection:**

Safety glasses, tightly sealed goggles.

**Body protection:** Protective work clothes (lab coat).

**SECTION 9. Physical and chemical properties****General Information****Appearance:**

<i>Form</i>	<i>Liquid</i>
<i>Color</i>	<i>Clear</i>
<i>Odor</i>	<i>Odorless</i>
<i>pH-value</i>	<i>Not applicable</i>
<i>Flash point</i>	<i>Not applicable</i>
<i>Flammability (solid, gaseous)</i>	<i>Not applicable</i>
<i>Decomposition temperature</i>	<i>Not determined</i>
<i>Auto ignition</i>	<i>Not determined</i>
<i>Danger of explosion</i>	<i>Not determined</i>
<i>Solubility in / Miscibility with water</i>	<i>Soluble in water</i>
<i>Solvent contents:</i> <i>None</i>	

**SECTION 10. Stability and reactivity**

**Thermal decomposition/conditions to be avoided:** No decomposition if used according to specifications.

**Incompatible materials:** Excess heat. Avoid dust formation

**Hazardous decomposition products:** Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

**Additional information:**

*None.*

**SECTION 11. Toxicological information****Acute toxicity:****Primary irritant effect:**

**Skin:** No irritating effect

**Eye:** No irritating effect

**Sensitization:** No sensitization effects known.

**Additional toxicological information:** When used and handled according to specifications, the product does not have any harmful effects according to our experience and information provided to us.



**SECTION 12. Ecological information**

*The ecological effects have not been thoroughly investigated, but currently none have been identified.*

*General notes: Water hazard class 2 (self-assessment); hazardous for water.*

**SECTION 13. Disposal considerations****Waste treatment methods:**

**Recommendation:** *Should be disposed of with solid waste. Disposal of material in accordance with federal (40 CFR 261) state and local requirements. This product is not considered a RCRA hazardous waste. RCRA hazardous waste – RCRA# D004 (Arsenic)*

**Uncleaned packages: Recommendation:** *Disposal must be made according to state and federal regulations.*

**Recommended cleansing agent:** *Water, if necessary with cleansing agents.*

**SECTION 14. Transport information****UN-Number**

**DOT, ADR, ADN, IMDG, IATA**      **Void**

**UN proper shipping name**

**DOT, ADR, ADN, IMDG, IATA**      **Void**

**Transport hazard class (es)**

**DOT, IMDG, IATA, ADR, ADN**      **Void**

**Packing group**

**DOT, ADR, IMDG, IATA**      **Void**

**Environmental hazards:**

**Marine pollutant:**      **None**

**Special precautions for user**      **Not applicable**

**Transport in bulk according to Annex II of**

**MARPOL73/78 and the IBC Code**      **Not applicable**

**SECTION 15. Regulatory information****SARA Section 355 (extremely hazardous substances):**

None of the ingredients listed

**SARA Section 313 (specific toxic chemical listings)**

None of the ingredients listed

**TCSA (Toxic Substance Control Act):**

Not applicable

**California Proposition 65 – Chemicals known to cause cancer:**

None of the ingredients listed.

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients listed

**Chemicals known to cause reproductive toxicity for males:**

None of the ingredients listed

**Chemicals known to cause developmental toxicity:**

None of the ingredients listed

**Carcinogenic categories:****IARC (International Agency for Research on Cancer):**

None of the ingredients listed

**NTP (National Toxicology Program):**

None of the ingredients listed

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

None of the ingredients listed

**Product related hazard information:** the product has been classified and marked in accordance with regulations on hazardous materials.**Hazard symbols:****Hazard-determining components of labeling:**

Proteinase K

**Risk phrases:**

20/21/22 Harmful by inhalation, in

contact with skin and if swallowed

**Safety phrases:**

7/9 Keep container in a well-ventilated place.

23 Do not breathe gas/fumes/vapor/spray.

36/37 Wear suitable protective clothing and gloves.

60 This material and container should be disposed of as hazardous waste.

**Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.**SECTION 16. Other information**

To the best of our knowledge, the information contained herein is accurate. However, Novus Biologicals does not assume any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

**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)

RID: Règlement international concernant le transport des marchandises dangereuses par de fer (regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

**SECTION 1. Identification of the substance/mixture and of the company/undertaking****Product name:** TdT Enzyme (AHTDT15)**Manufacturer/Supplier:**

Novus Biologicals

10771 East Easter Avenue

Centennial, CO 80112, USA

Phone: 1-888-506-6887

**Information department:** Technical Support**Emergency telephone number:** (800) 424-9300 or 911**SECTION 2. Hazards identification****Classification of the substance or mixture:***This product is not classified according to the Globally Harmonized System (GHS)***Classification according to EC No. 1272/2008***This product does not meet the criteria for classification in any hazard class according to Regulation (EC) no. 1272/2008 on classification, labelling and packaging for substances and mixtures and are below the regulatory threshold limits described by Occupational Safety Health Administration Hazard Communication standard 29 CFR 1910.1200. However a safety data sheet is being supplied for it upon request as it contains a substance for which there is a Union workplace exposure limit.***Classification system:***The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.***Label elements***Labeling according to EU guidelines:**Observe the general safety regulations when handling chemicals**The product is not subject to identification regulations pertaining to regulations on hazardous materials.***Classification system****NFPA ratings (scale 0-4)***Health = 0**Flammability = 0**Reactivity = 0***Other hazards:***This product contains material(s) of animal and human origin which have been rendered inactivated thru chemical fixation methods. Observe general safety guidelines for protection when handling this product.*

**SECTION 3. Composition/information on ingredients****Chemical characterization: Mixtures****Description:** Mixture of the substances listed below with nonhazardous additions

CAS No.	Description	EC No.	%
9027-67-2	TdT Enzyme	232-819-6	20,000U/ml

**SECTION 4. First aid measures****General information***No special measures required***After skin contact:** Immediately wash with water and soap and rinse thoroughly.**After eye contact:** Rinse opened eye for several minutes under running water.**After swallowing:** If symptoms persist consult doctor.**After inhalation:** Seek medical treatment in case of complaints.**SECTION 5. Firefighting measures****Suitable extinguishing agents***CO<sub>2</sub>, ABC multipurpose dry chemical 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.**Protective equipment:** No special measures required.**SECTION 6. Accidental release measures****Personal precautions, protective equipment and emergency procedures:** Not required.**Environmental precautions:** Wipe up with damp sponge or mop.**Methods and materials for containment or cleaning up:** No special measures required.**Reference to other sections:***See Section 7 for information on safe handling.**See Section 8 for information on personal protective equipment.**See Section 13 for disposal information.***SECTION 7. Handling and storage****Handling****Precautions for safe handling:** No special measures required.**Information about protection against explosions and fires:** No special measures required.**Requirements to be met by storerooms and receptacles:** Store at -20C.**Information about storage in one common storage facility:** Store away from oxidizing agents.**Further information about storage conditions:** Store at -20C in a well-sealed container.**Specific end use (s):** No further relevant information available.

**SECTION 8. Exposure controls/personal protection**

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

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

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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

**Personal Protective Equipment**

**General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

**Breathing equipment:** Not required.

**Protection of hands:**



Chemical resistant gloves (i.e. nitrile or equivalent)

**Eye protection:**



Safety glasses, tightly sealed goggles.

**Body protection:** Protective work clothes (lab coat).

**SECTION 9. Physical and chemical properties**

**General Information**

**Appearance:**

Form	Liquid
Color	Clear
Odor	Odorless
pH-value	7.2-7.6
Flash point	Not applicable
Flammability (solid, gaseous)	Not applicable
Ignition temperature	Not determined
Auto ignition	Product is not self-igniting
Danger of explosion	Product is not explosive.
Vapor pressure at 20C (68F)	23 nPa (17 mm Hg)
Density	Not determined
Vapor Density	Not determined
Evaporation rate	Not determined
Solubility in / Miscibility with water	Not miscible or difficult to mix
Solvent contents:	
Organic solvents	0.0%
Water	50.0%
Other information	No further relevant information available

**SECTION 10. Stability and reactivity**

**Thermal decomposition/conditions to be avoided:** No decomposition if used according to specifications.

**Incompatible materials:** Incompatible material: strong oxidizers.

**Hazardous decomposition products:** No dangerous decomposition products known

**SECTION 11. Toxicological information****Acute toxicity****Primary irritant effect:****Skin:** No irritating effect**Eye:** No irritating effect**Sensitization:** No sensitization effects known.**Additional toxicological information:** This product is not subject to OSHA classification according to internally approved calculation methods for preparations.

When used and handled according to specifications, the product does not have any harmful effects according to our experience and information provided to us.

**SECTION 12. Ecological information**

The ecological effects have not been thoroughly investigated, but currently none have been identified.

General notes: Generally not hazardous for water.

**SECTION 13. Disposal considerations****Waste treatment methods:****Recommendation:** Should be disposed of with solid waste. Disposal of material in accordance with federal (40 CFR 261) state and local requirements. This product is not considered a RCRA hazardous waste.**Uncleaned packages: Recommendation:** Disposal must be made according to state and federal regulations.**Recommended cleansing agent:** Water, if necessary with cleansing agents.**SECTION 14. Transport information****UN-Number****DOT, ADR, ADN, IMDG, IATA** Void**UN proper shipping name****DOT, ADR, ADN, IMDG, IATA** Void**Transport hazard class (es)****DOT, IMDG, IATA, ADR, ADN** Void**Packing group****DOT, ADR, IMDG, IATA** Void**Environmental hazards:****Marine pollutant:** None**Special precautions for user**

Not applicable

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

**SECTION 15. Regulatory information**

<b>SARA Section 355 (extremely hazardous substances):</b>	None of the ingredients listed.
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<b>SARA Section 313 (specific toxic chemical listings)</b>	None of the ingredients listed
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<b>TCSA (Toxic Substance Control Act):</b> water	7732-18-5
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<b>California Proposition 65 – Chemicals known to cause cancer:</b>	None of the ingredients is listed.
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<b>Chemicals known to cause reproductive toxicity for females:</b>	None of the ingredients listed.
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<b>Chemicals known to cause reproductive toxicity for males:</b>	None of the ingredients listed.
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<b>Chemicals known to cause developmental toxicity:</b>	None of the ingredients listed
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**Carcinogenic categories:**

<b>ARC (International Agency for Research on Cancer):</b>	None of the ingredients listed
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<b>NTP (National Toxicology Program):</b>	None of the ingredients listed
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<b>TLV (Threshold Limit Value established by ACGIH):</b>	None of the ingredients listed
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**Product related hazard information:**

Observe the general safety regulations when handling chemicals. The product is not subject to identification regulations pertaining to regulations on hazardous materials

<b>National regulations – Water hazard class:</b>	Generally not hazardous for water
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**SECTION 16. Other information**

To the best of our knowledge, the information contained herein is accurate. However, Novus Biologicals does not assume any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

**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)

RID: Règlement international concernant le transport des marchandises dangereuses par de fer (regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

**SECTION 1. Identification of the substance/mixture and of the company/undertaking****Product name:** 5X Reaction Buffer (AHRXB14)**Manufacturer/Supplier:**

Novus Biologicals

10771 East Easter Avenue

Centennial, CO 80112, USA

Phone: 1-888-506-6887

**Information department:** Technical Support**Emergency telephone number:** (800) 424-9300 or 911**SECTION 2. Hazards identification****Classification of the substance or mixture:***This product is not classified according to the Globally Harmonized System (GHS)***Classification according to EC No. 1272/2008**

Xn ; Harmful

*R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.***Classification system:***The classification was made according to the latest editions of international substances lists expanded upon from company and literature data.***Label elements***Labeling according to EU guidelines:**The product has been classified and marked in accordance with regulations on hazardous materials.***Code letter and hazard designation of product:**

Xn Harmful

**Hazard-determining components of labeling:***Cacodylic acid***Risk phrases:***20/21/22: Harmful by inhalation, in contact with skin and if swallowed.***Safety phrases:***9 Keep container in a well-ventilated place.**23 Do not breathe gas/fumes/vapor/spray.**36/37 Wear suitable protective clothing and gloves.**60 This material and its container should be disposed of as hazardous waste.***Classification system****NFPA ratings (scale 0-4)**




Health = 2

Flammability = 0

Reactivity = 0



**SECTION 3. Composition/information on ingredients****Chemical characterization: Mixtures****Description:** Mixture of the substances listed below with nonhazardous additions

CAS No.	Description	EC No.	%
75-60-5	Cacodylic acid  Xn R40  F H302  H311; H331	200-883-4	0.2%

**SECTION 4. First aid measures****General information**

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

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

**After eye contact:** Rinse opened eye for several minutes under running water.

**After swallowing:** Seek immediate medical advice.

**After inhalation:** Supply fresh air. If required provide artificial respiration. Keep patient warm. Seek medical advice. In case of unconsciousness place patient on side position for transport.

**SECTION 5. Firefighting measures****Suitable extinguishing agents**

CO<sub>2</sub>, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Special hazards arising from the substance or mixture:** Formation of toxic gases is possible during heating or in case of fire.

**Protective equipment:** No special measures required.

**SECTION 6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** Not required.

**Environmental precautions:** Wipe up with damp sponge or mop.

**Methods and materials for containment or cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).

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 protective equipment.

See Section 13 for disposal information.

**SECTION 7. Handling and storage****Handling****Precautions for safe handling:**

Ensure good ventilation/exhaustion at the workplace and prevent formation of aerosols.

**Information about protection against explosions and fires:**

No special measures required.

**Requirements to be met by storerooms and receptacles:** Store at 2-8C.

**Information about storage in one common storage facility:** Store away from oxidizing agents.

**Further information about storage conditions:** Store at 2-8C in a well-sealed container.

**Specific end use (s):** No further relevant information available.

**SECTION 8. Exposure controls/personal protection**

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

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

75-60-5 cacodylic acid	
PEL 0	Short term value: 5mg/m <sup>3</sup> Long term value: 5mg/m <sup>3</sup> TWA 0.5 MG(As)/M3

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

**Personal Protective Equipment****General protective and hygienic measures**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

**Breathing equipment:** Not required.

**Protection of hands:**

Chemical resistant gloves (i.e. nitrile or equivalent)

**Eye protection:**

Safety glasses, tightly sealed goggles.

**Body protection:** Protective work clothes (lab coat).

**SECTION 9. Physical and chemical properties****General Information****Appearance:**

Form	Liquid
Color	Pale Pink
Odor	Odorless
pH-value	6.60 +/- 0.05
Flash point	Not applicable
Flammability (solid, gaseous)	Not applicable
Decomposition temperature	Not determined
Auto ignition	Product is not self-igniting
Danger of explosion	Product is not explosive.
Solubility in / Miscibility with water	Soluble
Solvent contents:	
Organic solvents	0.0%
Water	99.8%
Other information	No further relevant information available.

**SECTION 10. Stability and reactivity**

**Thermal decomposition/conditions to be avoided:** No decomposition if used according to specifications.

**Incompatible materials:** Incompatible material: strong oxidizers.

**Hazardous decomposition products:** Carbon monoxide (CO) and carbon dioxide (CO<sub>2</sub>). Arsenic compounds

**SECTION 11. Toxicological information**

**Acute toxicity: LD/LD50 values that are relevant for classification: 75-60-5 cacodylic acid:**

Oral/LD50/ 644 mg/kg (rat)

**Primary irritant effect:**

**Skin:** No irritating effect

**Eye:** No irritating effect

**Subacute to chronic toxicity:** Target organs: kidneys, heart, brain, skin, bone marrow, liver and nerves.

**Additional toxicological information:** The product shows the following dangers according to internally approved calculation methods for preparation: Harmful

**SECTION 12. Ecological information**

The ecological effects have not been thoroughly investigated, but currently none have been identified.

General notes: Water hazard class 2 (self-assessment); hazardous for water.

**SECTION 13. Disposal considerations****Waste treatment methods:**

**Recommendation:** Should be disposed of with solid waste. Disposal of material in accordance with federal (40 CFR 261) state and local requirements. This product is not considered a RCRA hazardous waste. RCRA hazardous waste – RCRA# D004 (Arsenic)

**Uncleaned packages: Recommendation:** Disposal must be made according to state and federal regulations.

**Recommended cleansing agent:** Water, if necessary with cleansing agents.

**SECTION 14. Transport information****UN-Number**DOT, ADR, ADN, IMDG, IATA      *Void***UN proper shipping name**DOT, ADR, ADN, IMDG, IATA      *Void***Transport hazard class (es)**DOT, IMDG, IATA, ADR, ADN      *Void***Packing group**DOT, ADR, IMDG, IATA      *Void***Environmental hazards:****Marine pollutant:**      *None***Special precautions for user***Not applicable***Transport in bulk according to Annex II of**MARPOL73/78 and the IBC Code      *Not applicable***SECTION 15. Regulatory information****SARA Section 355 (extremely hazardous substances):***None of the ingredients listed***SARA Section 313 (specific toxic chemical listings)***75-60-5 cacodylic acid***TCSA (Toxic Substance Control Act):***All ingredients are listed***California Proposition 65 – Chemicals known to cause cancer:***75-60-5 cacodylic acid.***Chemicals known to cause reproductive toxicity for females:***None of the ingredients listed***Chemicals known to cause reproductive toxicity for males:***None of the ingredients listed***Chemicals known to cause developmental toxicity:***None of the ingredients listed***Carcinogenic categories:****IARC (International Agency for Research on Cancer):***75-60-5 cacodylic acid    Group 1  
7646-79-9 cobalt dichloride    2B***NTP (National Toxicology Program):***None of the ingredients listed***TLV (Threshold Limit Value established by ACGIH):***None of the ingredients listed***Product related hazard information:** the product has been classified and marked in accordance with regulations on hazardous materials.**Hazard symbols:***Xn Harmful***Hazard-determining components of labeling:***cacodylic acid***Risk phrases:***20/21/22 Harmful by inhalation, in**contact with skin and if swallowed***Safety phrases:***7/9 Keep container in a well-ventilated place.**23 Do not breathe gas/fumes/vapor/spray.**36/37 Wear suitable protective clothing and gloves.**60 This material and container should be disposed of as hazardous waste.***Water hazard class:** Water hazard class 2 (Self-assessment): *hazardous for water.*

**SECTION 16. Other information**

*To the best of our knowledge, the information contained herein is accurate. However, Novus Biologicals does not assume any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.*

**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)*

*RID: Règlement international concernant le transport des marchandises dangereuses par de fer (regulations Concerning the International Transport of Dangerous Goods by Rail)*

*IMDG: International Maritime Code for Dangerous Goods*

*IATA: International Air Transport Association*

*ICAO: International Civil Aviation Organization*

*ACGIH: American Conference of Governmental Industrial Hygienists*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*NFPA: National Fire Protection Association (USA)*

**SECTION 1. Identification of the substance/mixture and of the company/undertaking****Product name:** Anti-BrdU Biotin mAb (AHBIO18)**Manufacturer/Supplier:**

Novus Biologicals

10771 East Easter Avenue

Centennial, CO 80112, USA

Phone: 1-888-506-6887

**Information department:** Technical Support**Emergency telephone number:** (800) 424-9300 or 911**SECTION 2. Hazards identification****Classification of the substance or mixture:***This product is not classified according to the Globally Harmonized System (GHS)***Classification according to EC No. 1272/2008**

*This product does not meet the criteria for classification in any hazard class according to Regulation (EC) no. 1272/2008 on classification, labelling and packaging for substances and mixtures and are below the regulatory threshold limits described by Occupational Safety Health Administration Hazard Communication standard 29 CFR 1910.1200. However a safety data sheet is being supplied for it upon request as it contains a substance for which there is a Union workplace exposure limit.*

**Classification system:**

*The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.*

**Label elements***Labeling according to EU guidelines:**Observe the general safety regulations when handling chemicals**The product is not subject to identification regulations pertaining to regulations on hazardous materials.***Classification system****NFPA ratings (scale 0-4)***Health = 0**Flammability = 0**Reactivity = 0***Other hazards:**

*This product contains material(s) of animal and human origin which have been rendered inactivated thru chemical fixation methods. Observe general safety guidelines for protection when handling this product*

**SECTION 3. Composition/information on ingredients****Chemical characterization: Mixtures****Description:** Mixture of the substances listed below with nonhazardous additions

CAS No.	Description	EC No.	%
26628-22-8	Sodium Azide	247-852-1	0.05%

**SECTION 4. First aid measures****General information***No special measures required***After skin contact:** Immediately wash with water and soap and rinse thoroughly.**After eye contact:** Rinse opened eye for several minutes under running water.**After swallowing:** If symptoms persist consult doctor.**After inhalation:** Seek medical treatment in case of complaints.**SECTION 5. Firefighting measures****Suitable extinguishing agents***CO<sub>2</sub>, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.***Special hazards arising from the substance or mixture:** Nitrogen oxides (NO<sub>x</sub>)**Protective equipment:** No special measures required.**SECTION 6. Accidental release measures****Personal precautions, protective equipment and emergency procedures:** Not required.**Environmental precautions:** Wipe up with damp sponge or mop.**Methods and materials for containment or cleaning up:** No special measures required.**Reference to other sections:***See Section 7 for information on safe handling.**See Section 8 for information on personal protective equipment.**See Section 13 for disposal information.***SECTION 7. Handling and storage****Handling****Precautions for safe handling:** No special measures required.**Information about protection against explosions and fires:** No special measures required.**Requirements to be met by storerooms and receptacles:** Store at 4C.**Information about storage in one common storage facility:** Store away from oxidizing agents as well as heavy metal compounds.**Further information about storage conditions:** Store in cool, dry conditions in well-sealed container.**Specific end use (s):** No further relevant information available.

**SECTION 8. Exposure controls/personal protection**

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

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

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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

**Personal Protective Equipment**

**General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

**Breathing equipment:** Not required.

**Protection of hands:**



Chemical resistant gloves (i.e. nitrile or equivalent)

**Eye protection:**



Safety glasses, tightly sealed goggles.

**Body protection:** Protective work clothes (lab coat).

**SECTION 9. Physical and chemical properties**

**General Information**

**Appearance:**

Form	Liquid
Color	Clear
Odor	Odorless
pH-value	7.2-7.6
Flash point	Not applicable
Flammability (solid, gaseous)	Not applicable
Ignition temperature	Not determined
Auto ignition	Product is not self-igniting
Danger of explosion	Product is not explosive.
Vapor pressure at 20C (68F)	23 nPa (17 mm Hg)
Density	Not determined
Vapor Density	Not determined
Evaporation rate	Not determined
Solubility in / Miscibility with water	Soluble
Solvent contents:	
Organic solvents	0.0%
Water	89.8%
Other information	No further relevant information available



**SECTION 10. Stability and reactivity**

**Thermal decomposition/conditions to be avoided:** No decomposition if used according to specifications.

**Incompatible materials:**

*Incompatible material:* strong oxidizers.

*Incompatible material:* acidic materials and metals

*No further relevant information available*

**Hazardous decomposition products:** Nitrogen oxides (NO<sub>x</sub>).

**Additional information:**

Sodium azide is present in this product. Contact with acidic solutions and metal compounds over time may form potentially explosive metal azides. Should any of this material be introduced into a sanitary sewer system, flush with copious amounts of water

**SECTION 11. Toxicological information****Acute toxicity****Primary irritant effect:**

**Skin:** No irritating effect

**Eye:** No irritating effect

**Sensitization:** No sensitization effects known.

**Additional toxicological information:** This product is not subject to OSHA classification according to internally approved calculation methods for preparations.

When used and handled according to specifications, the product does not have any harmful effects according to our experience and information provided to us.

**SECTION 12. Ecological information**

The ecological effects have not been thoroughly investigated, but currently none have been identified.

*General notes:* Generally not hazardous for water.

**SECTION 13. Disposal considerations****Waste treatment methods:**

**Recommendation:** Should be disposed of with solid waste. Disposal of material in accordance with federal (40 CFR 261) state and local requirements. This product is not considered a RCRA hazardous waste.

**Uncleaned packages: Recommendation:** Disposal must be made according to state and federal regulations.

**Recommended cleansing agent:** Water, if necessary with cleansing agents.

**SECTION 14. Transport information****UN-Number**

**DOT, ADR, ADN, IMDG, IATA**      **Void**

**UN proper shipping name**

**DOT, ADR, ADN, IMDG, IATA**      **Void**

**Transport hazard class (es)**

**DOT, IMDG, IATA, ADR, ADN**      **Void**

**Packing group**

**DOT, ADR, IMDG, IATA**      **Void**

**Environmental hazards:**

**Marine pollutant:**      **None**

**Special precautions for user**      **Not applicable**

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

**SECTION 15. Regulatory information**

**SARA Section 355 (extremely hazardous substances):** None of the ingredients listed.

**SARA Section 313 (specific toxic chemical listings)** None of the ingredients listed

**TCSA (Toxic Substance Control Act):** 7647-14-5 Sodium Chloride  
7558-80-7 Sodium Phosphate, monobasic  
26628-22-8 Sodium azide  
7732-18-5 water

**California 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 listed.

**Chemicals known to cause reproductive toxicity for males:** None of the ingredients listed.

**Chemicals known to cause developmental toxicity:** None of the ingredients listed

**Carcinogenic categories:**

**ARC (International Agency for Research on Cancer):** None of the ingredients listed

**NTP (National Toxicology Program):** None of the ingredients listed

**TLV (Threshold Limit Value established by ACGIH):** 26628-22-8 Sodium azide

A4

**Product related hazard information:**

Observe the general safety regulations when handling chemicals. The product is not subject to identification regulations pertaining to regulations on hazardous materials

**National regulations – Water hazard class:** Generally not hazardous for water

**SECTION 16. Other information**

To the best of our knowledge, the information contained herein is accurate. However, Novus Biologicals does not assume any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

**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)

RID: Règlement international concernant le transport des marchandises dangereuses par de fer (regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

**SECTION 1. Identification of the substance/mixture and of the company/undertaking****Product name:** Blocking Buffer (AHBB23)**Manufacturer/Supplier:**

Novus Biologicals

10771 East Easter Avenue

Centennial, CO 80112, USA

Phone: 1-888-506-6887

**Information department:** Technical Support**Emergency telephone number:** (800) 424-9300 or 911**SECTION 2. Hazards identification****Classification of the substance or mixture:***This product is not classified according to the Globally Harmonized System (GHS)***Classification according to EC No. 1272/2008***H315, H319, H317: Skin irritation, eye irritation and skin sensitization. May cause respiratory irritation.***Classification system:***The classification was made according to the latest editions of international substances lists expanded upon from company and literature data.***Label elements***Labeling according to EU guidelines:**The product has been classified and marked in accordance with regulations on hazardous materials.***Code letter and hazard designation of product:****Hazard-determining components of labeling:***Antibiotic Antimycotic***Risk phrases:***20/21/22: Harmful by inhalation, in contact with skin and if swallowed.***Safety phrases:***9 Keep container in a well-ventilated place.**23 Do not breathe gas/fumes/vapor/spray.**36/37 Wear suitable protective clothing and gloves.**60 This material and its container should be disposed of as hazardous waste.***Classification system****NFPA ratings (scale 0-4)***Health = 2**Flammability = 0**Reactivity = 0*

**SECTION 3. Composition/information on ingredients****Chemical characterization: Mixtures****Description:** Mixture of the substances listed below with nonhazardous additions

CAS No.	Description	EC No.	%
9048-46-8	BSA FRACTION V CE PROT FREE	232-936-2	< 1%
69-57-8	Penicillin G Sodium Salt		< 1%
3810-74-0	Streptomycin sulfate	223-286-0	

**SECTION 4. First aid measures****General information***No special measures required***After skin contact:** Immediately wash with water and soap and rinse thoroughly.**After eye contact:** Rinse opened eye for several minutes under running water.**After swallowing:** If symptoms persist consult doctor.**After inhalation:** Seek medical treatment in case of complaints.**SECTION 5. Firefighting measures****Suitable extinguishing agents***CO<sub>2</sub>, ABC multipurpose dry chemical 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.**Protective equipment:** No special measures required.**SECTION 6. Accidental release measures****Personal precautions, protective equipment and emergency procedures:** Not required.**Environmental precautions:** Wipe up with damp sponge or mop.**Methods and materials for containment or cleaning up:** No special measures required.**Reference to other sections:***See Section 7 for information on safe handling.**See Section 8 for information on personal protective equipment.**See Section 13 for disposal information.***SECTION 7. Handling and storage****Handling****Precautions for safe handling:** No special measures required.**Information about protection against explosions and fires:** No special measures required.**Requirements to be met by storerooms and receptacles:** Store at -15 to -25C.**Information about storage in one common storage facility:** Store away from oxidizing agents.**Further information about storage conditions:** Store at -15 to -25C in a well-sealed container.**Specific end use (s):** No further relevant information available.

**SECTION 8. Exposure controls/personal protection**

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

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

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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

**Personal Protective Equipment**

**General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

**Breathing equipment:** Not required.

**Protection of hands:**



Chemical resistant gloves (i.e. nitrile or equivalent)

**Eye protection:**



Safety glasses, tightly sealed goggles.

**Body protection:** Protective work clothes (lab coat).

**SECTION 9. Physical and chemical properties**

**General Information**

**Appearance:**

Form	Liquid
Color	White opaque
Odor	Odorless
pH-value	Not applicable
Flash point	Not applicable
Flammability (solid, gaseous)	Not applicable
Ignition temperature	Not determined
Auto ignition	Product is not self-igniting
Danger of explosion	Product is not explosive.
Vapor pressure at 20C (68F)	Not determined
Density	Not determined
Vapor Density	Not determined
Evaporation rate	Not determined
Solubility in / Miscibility with water	Soluble
Solvent contents:	
Organic solvents	0.0%
Water	89.8%
Other information	No further relevant information available

**SECTION 10. Stability and reactivity**

**Thermal decomposition/conditions to be avoided:** No decomposition if used according to specifications.

**Incompatible materials:** Incompatible material: strong oxidizers.

**Hazardous decomposition products:** No dangerous decomposition products known

**SECTION 11. Toxicological information****Acute toxicity****Primary irritant effect:***Skin: Inconclusive data.**Eye: Inconclusive data.***Sensitization:** *May cause sensitization.***Additional toxicological information:** *This product is not subject to OSHA classification according to internally approved calculation methods for preparations.**When used and handled according to specifications, the product does not have any harmful effects according to our experience and information provided to us.***SECTION 12. Ecological information***The ecological effects have not been thoroughly investigated, but currently none have been identified.**General notes: Generally not hazardous for water.***SECTION 13. Disposal considerations****Waste treatment methods:****Recommendation:** *Should be disposed of with solid waste. Disposal of material in accordance with federal (40 CFR 261) state and local requirements. This product is not considered a RCRA hazardous waste.***Uncleaned packages: Recommendation:** *Disposal must be made according to state and federal regulations.***Recommended cleansing agent:** *Water, if necessary with cleansing agents.***SECTION 14. Transport information****UN-Number****DOT, ADR, ADN, IMDG, IATA**      **Void****UN proper shipping name****DOT, ADR, ADN, IMDG, IATA**      **Void****Transport hazard class (es)****DOT, IMDG, IATA, ADR, ADN**      **Void****Packing group****DOT, ADR, IMDG, IATA**      **Void****Environmental hazards:****Marine pollutant:**      **None****Special precautions for user****Not applicable****Transport in bulk according to Annex II of****MARPOL73/78 and the IBC Code**      **Not applicable**

**SECTION 15. Regulatory information**

<b>SARA Section 355 (extremely hazardous substances):</b>	None of the ingredients listed.
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<b>SARA Section 313 (specific toxic chemical listings)</b>	None of the ingredients listed
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<b>TCSA (Toxic Substance Control Act):</b> water	7732-18-5
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<b>California Proposition 65 – Chemicals known to cause cancer:</b>	3810-74-0 Streptomycin sulfate <1%
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<b>Chemicals known to cause reproductive toxicity for females:</b>	None of the ingredients listed.
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<b>Chemicals known to cause reproductive toxicity for males:</b>	None of the ingredients listed.
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<b>Chemicals known to cause developmental toxicity:</b>	None of the ingredients listed
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**Carcinogenic categories:**

<b>ARC (International Agency for Research on Cancer):</b>	None of the ingredients listed
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<b>NTP (National Toxicology Program):</b>	None of the ingredients listed
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<b>TLV (Threshold Limit Value established by ACGIH):</b>	None of the ingredients listed
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**Product related hazard information:**

Observe the general safety regulations when handling chemicals. The product is not subject to identification regulations pertaining to regulations on hazardous materials

<b>National regulations – Water hazard class:</b>	Generally not hazardous for water
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**SECTION 16. Other information**

To the best of our knowledge, the information contained herein is accurate. However, Novus Biologicals does not assume any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

**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)

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IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

**SECTION 1. Identification of the substance/mixture and of the company/undertaking****Product name:** Methyl Green (AHMG21)**Manufacturer/Supplier:**

Novus Biologicals

10771 East Easter Avenue


Centennial, CO 80112, USA

Phone: 1-888-506-6887

**Information department:** Technical Support**Emergency telephone number:** (800) 424-9300 or 911**SECTION 2. Hazards identification****Classification of the substance or mixture:***This product is not classified according to the Globally Harmonized System (GHS)***Classification according to EC No. 1272/2008***H315, H319, H317: Skin irritation, eye irritation and skin sensitization. May cause respiratory irritation.***Classification system:***The classification was made according to the latest editions of international substances lists expanded upon from company and literature data.***Label elements***Labeling according to EU guidelines:**The product has been classified and marked in accordance with regulations on hazardous materials.***Code letter and hazard designation of product:****Hazard-determining components of labeling:***Methyl Green***Risk phrases:***20/21/22: Harmful by inhalation, in contact with skin and if swallowed.***Safety phrases:***9 Keep container in a well-ventilated place.**23 Do not breathe gas/fumes/vapor/spray.**36/37 Wear suitable protective clothing and gloves.**60 This material and its container should be disposed of as hazardous waste.***Classification system****NFPA ratings (scale 0-4)***Health = 2**Flammability = 0**Reactivity = 0*



**SECTION 3. Composition/information on ingredients****Chemical characterization: Mixtures****Description:** Mixture of the substances listed below with nonhazardous additions

CAS No.	Description	EC No.	%
7114-03-6	Methyl Green 	230-415-4	< 1 %

**SECTION 4. First aid measures****General information***If symptoms persist seek medical advice.***After skin contact:** Immediately wash with water and soap and rinse thoroughly.**After eye contact:** Rinse opened eye for several minutes under running water.**After swallowing:** Clean mouth with water and drink plenty of water.**After inhalation:** Supply fresh air. If required provide artificial respiration. Keep patient warm. Seek medical advice. In case of unconsciousness place patient on side position for transport.**SECTION 5. Firefighting measures****Suitable extinguishing agents***CO2, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.***Special hazards arising from the substance or mixture:** Not known.**Protective equipment:** Respiratory equipment recommended**SECTION 6. Accidental release measures****Personal precautions, protective equipment and emergency procedures:** Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation.**Environmental precautions:** Should not be released into the environment.**Methods and materials for containment or cleaning up:***Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).**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 protective equipment.**See Section 13 for disposal information.*

**SECTION 7. Handling and storage****Handling****Precautions for safe handling:**

Ensure good ventilation/exhaustion at the workplace and prevent formation of aerosols.

**Information about protection against explosions and fires:**

No special measures required.

**Requirements to be met by storerooms and receptacles:** Store at 4-8C.

**Information about storage in one common storage facility:** Keep in a cool, dry well-ventilated area

**Further information about storage conditions:** Store at 4-8C in a well-sealed container away from oxidizing agents.

**Specific end use (s):** No further relevant information available.

**SECTION 8. Exposure controls/personal protection**

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

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

This product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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

**Personal Protective Equipment****General protective and hygienic measures**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

**Breathing equipment:** Not required if used in a well-ventilated area.

**Protection of hands:**

Chemical resistant gloves (i.e. nitrile or equivalent)

**Eye protection:**

Safety glasses, tightly sealed goggles.

**Body protection:** Protective work clothes (lab coat).

**SECTION 9. Physical and chemical properties****General Information****Appearance:**

<i>Form</i>	<i>Liquid</i>
<i>Color</i>	<i>Dark Blue/Green</i>
<i>Odor</i>	<i>Odorless</i>
<i>pH-value</i>	<i>Not applicable</i>
<i>Flash point</i>	<i>Not determined</i>
<i>Flammability (solid, gaseous)</i>	<i>Not applicable</i>
<i>Decomposition temperature</i>	<i>Not determined</i>
<i>Auto ignition</i>	<i>Not determined</i>
<i>Danger of explosion</i>	<i>Not determined</i>
<i>Solubility in / Miscibility with water</i>	<i>Soluble</i>
<i>Solvent contents:</i>	
<i>Water</i>	<i>99.7%</i>

**SECTION 10. Stability and reactivity**

**Thermal decomposition/conditions to be avoided:** No decomposition if used according to specifications.

**Incompatible materials:** Strong oxidizing agents.

**Hazardous decomposition products:** Carbon oxides, nitrogen oxides, hydrogen chloride gas, hydrogen bromide gas, zinc oxides

**Additional information:**

None.

**SECTION 11. Toxicological information**

**Acute toxicity:** No data available

**Primary irritant effect:**

**Skin:** May have irritating effect

**Eye:** May have irritating effect

**Sensitization:** No sensitization effects known.

**Additional toxicological information:** When used and handled according to specifications, the product does not have any harmful effects according to our experience and information provided to us.

**SECTION 12. Ecological information**

*The ecological effects have not been thoroughly investigated, but currently none have been identified.*

*General notes: Water hazard class 2 (self-assessment); hazardous for water.*

**SECTION 13. Disposal considerations****Waste treatment methods:**

**Recommendation:** *Should be disposed of with solid waste. Disposal of material in accordance with federal (40 CFR 261) state and local requirements. This product is not considered a RCRA hazardous waste. RCRA hazardous waste – RCRA# D004 (Arsenic)*

**Uncleaned packages: Recommendation:** *Disposal must be made according to state and federal regulations.*

**Recommended cleansing agent:** *Water, if necessary with cleansing agents.*

**SECTION 14. Transport information****UN-Number**

**DOT, ADR, ADN, IMDG, IATA**      **Void**

**UN proper shipping name**

**DOT, ADR, ADN, IMDG, IATA**      **Void**

**Transport hazard class (es)**

**DOT, IMDG, IATA, ADR, ADN**      **Void**

**Packing group**

**DOT, ADR, IMDG, IATA**      **Void**

**Environmental hazards:**

**Marine pollutant:**      **None**

**Special precautions for user**      **Not applicable**

**Transport in bulk according to Annex II of**

**MARPOL73/78 and the IBC Code**      **Not applicable**

**SECTION 15. Regulatory information****SARA Section 355 (extremely hazardous substances):**

None of the ingredients listed

**SARA Section 313 (specific toxic chemical listings)**

Methyl Green Cas no. 7114-03-6

**TCSA (Toxic Substance Control Act):**

7732-18-5

water

**California Proposition 65 – Chemicals known to cause cancer:**

None of the ingredients listed.

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients listed

**Chemicals known to cause reproductive toxicity for males:**

None of the ingredients listed

**Chemicals known to cause developmental toxicity:**

None of the ingredients listed

**Carcinogenic categories:****IARC (International Agency for Research on Cancer):**

None of the ingredients listed

**NTP (National Toxicology Program):**

None of the ingredients listed

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

None of the ingredients listed

**Product related hazard information:** the product has been classified and marked in accordance with regulations on hazardous materials.**Hazard symbols:****Hazard-determining components of labeling:**

Methyl Green

**Risk phrases:**

20/21/22 Harmful by inhalation, in

contact with skin and if swallowed

**Safety phrases:**

7/9 Keep container in a well-ventilated place.

23 Do not breathe gas/fumes/vapor/spray.

36/37 Wear suitable protective clothing and gloves.

60 This material and container should be disposed of as hazardous waste.

**Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.**SECTION 16. Other information**

To the best of our knowledge, the information contained herein is accurate. However, Novus Biologicals does not assume any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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