

MATERIAL SAFETY DATA SHEET**KIT COMPONENTS**

Product code	Product Name
95141-100 95141-250 95141-01K 95141-05K	AccuStart™ II Taq DNA Polymerase

Components

84247 84249 84250 84251	AccuStart II Taq DNA Polymerase
84248 84252	10X PCR Buffer II
84030 84031	50 mM magnesium chloride

MATERIAL SAFETY DATA SHEET**SECTION 1 – IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/ UNDERTAKING**

Product Name: **AccuStart™ II Taq DNA Polymerase**
Product Code(s): 84247, 84249, 84250, 84251

General Use: Laboratory reagent
For Research Use Only, Not for Use in Diagnostic Procedures

MSDS Issue Date: 17 December, 2012

Manufacturer:
QUANTA BIOSCIENCES INC.
202 PERRY PKWY., SUITE 1
GAITHERSBURG, MD 20877
USA
Phone: (800) 364-2149
FAX: (301) 956-1681
Email: technical.support@quantabio.com
www.quantabio.com

Emergency Telephone:
Quanta BioSciences: (240) 454-8912 (09:00 to 17:00 EST)
Or contact your local distributor for Quanta BioSciences products.

SECTION 2 – HAZARDS IDENTIFICATION

Emergency Overview: May cause eye, skin or respiratory irritation.

Potential Health Effects:

EYES: May cause eye irritation. Exposed individuals may experience eye tearing, redness, and discomfort.

SKIN: May cause skin irritation.

INGESTION: May be harmful if swallowed in large quantities.

INHALATION: May cause irritation to the respiratory system if liquid is splashed or aerosolized.

Chronic Effects / Carcinogenicity: No chemical components in this material at reportable thresholds are listed by IARC, OSHA or NTP.

Potential Environmental Effects: The product components are not classified as environmentally hazardous.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

<u>Hazardous Ingredients</u>	<u>CAS Registry No.</u>	<u>Percentage (wt/wt)</u>
Glycerol	56-81-5	40–60

OSHA Regulatory Status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

SECTION 4 – FIRST AID MEASURES

EYES: Immediately flush with contaminated eye(s) with lukewarm, gently flowing water for at least 5 minutes, while holding the eyelids(s) open. Remove any contact lenses and continue rinsing. Get medical attention if irritation persists after washing.

MATERIAL SAFETY DATA SHEET

SKIN: Remove contaminated clothes and rinse skin thoroughly with water for at least 15 minutes. If irritation develops and persists, Get medical attention.

INGESTION: Rinse mouth thoroughly with water. If large amounts have been ingested, give 2 to 8 ounces of water. Get medical attention.

INHALATION: If symptoms are experienced, remove source of contamination or move victim to fresh air. Obtain medical advice.

SECTION 5 – FIRE FIGHTING MEASURES

Flammable Properties

Flash Point: Not flammable Method: Not applicable
 Flammable Limits: LFL: Not applicable UFL: Not applicable
 Autoignition Temperature: Not applicable

EXTINGUISHING MEDIA: Dry chemical

FIRE & EXPLOSION HAZARDS: None. Product will not support combustion.

FIRE FIGHTING INSTRUCTIONS: Wear self-contained breathing apparatus and protective suit for surrounding fire.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Use personal protective equipment. See Section 8.

METHODS FOR CLEANING UP: Soak up with inert absorbent material.

SECTION 7 – HANDLING AND STORAGE

HANDLING: Local exhaust is recommended. Avoid inhalation of vapors and spray mist and contact with skin and eyes. Wear approved safety goggles. Wear protective gloves and appropriate clothing to prevent skin contact. Observe good industrial hygiene practices.

STORAGE: Store in closed original container in a dry place. Keep away from food, drink and animal feeding stuffs. Store away from incompatible materials.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide adequate ventilation and minimize the risk of inhalation of vapors and mists.

RESPIRATORY PROTECTION: Not needed if ventilation is adequate to control occupational exposures. If needed, refer to 29 CFR 1910.134, CSA Z94.4-93, or European Standard EN 149 for complete regulations. Seek advice from local supervisor.

SKIN PROTECTION: Wear protective gloves. Use skin protection. Apron and long sleeves are recommended.

EYE PROTECTION: Risk of contact: Wear approved safety goggles.

EXPOSURE GUIDELINES: Glycerin (mist) total dust: 15 mg/m³ TWA (OSHA)
 Glycerin (mist) respirable fraction: 5 mg/m³ TWA (OSHA)

MATERIAL SAFETY DATA SHEET

Glycerin mist: 10 mg/m³ TWA (ACGIH)

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear liquid
ODOR:	Odorless
BOILING POINT:	No data available
VAPOR PRESSURE:	No data available
SOLUBILITY IN WATER:	Complete
SPECIFIC GRAVITY:	No data available
pH:	8.0
VOC:	No data available

SECTION 10 – STABILITY AND REACTIVITY

STABILITY:	This product is stable under expected conditions of use.
MATERIALS TO AVOID:	Oxidizing agents; alkalies.
CONDITIONS TO AVOID:	Heat.
HAZARDOUS DECOMPOSITION PRODUCTS:	At elevated temperatures, acrolein, carbon oxides, nitrogen oxides

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute Toxicity

<u>Chemical Name</u>	<u>Oral</u> <u>LD₅₀ (rat/mouse)</u>	<u>Dermal</u> <u>LD₅₀ (rat/rabbit)</u>	<u>Inhalation</u> <u>LC₅₀ (rat/mouse)</u>
Glycerol	12600 mg/kg (rat)	>1000 mg/kg (rabbit)	>570 mg/m ³ (rat)

Chronic Toxicity

Carcinogenic effects: The components of this product are not designated as potential carcinogens by IARC (Group 1, 2A or 2B), NTP or OSHA.

Mutagenic effects: No data available.

Teratogenic effects: No data available.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity: The product components are not classified as environmentally hazardous.

<u>Chemical Name</u>	<u>Fish</u> <u>LC₅₀ (species, hours)</u>	<u>Invertebrates</u> <u>EC₅₀ or IC₅₀</u> <u>(species, hours)</u>	<u>Plant</u> <u>EC₅₀ (species, hours)</u>
Glycerol	5000 mg/l (Goldfish)	-	-

Mobility: The product is water soluble and may spread in water systems.

MATERIAL SAFETY DATA SHEET

Persistence and Degradability: No data available.

Bioaccumulation Potential: No data available.

SECTION 13 – DISPOSAL CONSIDERATIONS

Dispose of waste and residues in accordance with local authority requirements.

SECTION 14 – TRANSPORT INFORMATION

US DOT Not regulated

Proper Shipping Name
UN Number
Hazard Class
Packing Group
Special Instructions

IATA Not regulated

Proper Shipping Name
UN Number
Hazard Class
Packing Group
Special Instructions

IMDG Not regulated

Proper Shipping Name
UN Number
Hazard Class
Packing Group
Special Instructions

SECTION 15 – REGULATORY INFORMATION

U.S. State Regulations

California Proposition 65 - This product contains the following Proposition 65 chemicals:
None

Canada

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

WHMIS Hazard class: D2B



SECTION 16 – OTHER INFORMATION

MATERIAL SAFETY DATA SHEET

MSDS Status: Original

This material is sold for research and development purposes only. It is not for any human or animal therapeutic or clinical diagnostic use. It is not intended for food, drug, household, agricultural, or cosmetic use. An individual technically qualified to handle potentially hazardous chemicals must supervise the use of this material.

The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may be present unknown hazards and should be used with caution. Since Quanta BioSciences cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS MSDS DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

AccuStart is a trademark of Quanta BioSciences, Inc.

MATERIAL SAFETY DATA SHEET

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

Product Name: PCR Buffer II (10X)

Product Code(s): 84248; 84252

General Use: Laboratory reagent
For Research Use Only, Not for Use in Diagnostic Procedures

MSDS Issue Date: 17 December, 2012

Manufacturer:
QUANTA BIOSCIENCES INC.
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SECTION 2 – HAZARDS IDENTIFICATION

Emergency Overview: May cause eye, skin or respiratory irritation.

Potential Health Effects:

EYES: May cause eye irritation. Exposed individuals may experience eye tearing, redness, and discomfort.

SKIN: May cause skin irritation.

INGESTION: May be harmful if swallowed in large quantities.

INHALATION: May cause irritation to the respiratory system if liquid is splashed or aerosolized.

Chronic Effects / Carcinogenicity: No chemical components in this material at reportable thresholds are listed by IARC, OSHA or NTP.

Potential Environmental Effects: The product components are not classified as environmentally hazardous.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients	CAS Registry No.	Percentage (wt/wt)
Tris-hydroxymethylaminomethane	77-88-1	1–5

OSHA Regulatory Status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

SECTION 4 – FIRST AID MEASURES

EYES: Immediately flush with contaminated eye(s) with lukewarm, gently flowing water for at least 5 minutes, while holding the eyelids(s) open. Remove any contact lenses and continue rinsing. Get medical attention if irritation persists after washing.

MATERIAL SAFETY DATA SHEET

SKIN: Remove contaminated clothes and rinse skin thoroughly with water for at least 15 minutes. If irritation develops and persists, Get medical attention.

INGESTION: Rinse mouth thoroughly with water. If large amounts have been ingested, give 2 to 8 ounces of water. Get medical attention.

INHALATION: If symptoms are experienced, remove source of contamination or move victim to fresh air. Obtain medical advice.

SECTION 5 – FIRE FIGHTING MEASURES

Flammable Properties

Flash Point: Does not flash Method: Not applicable
Flammable Limits: LFL: Not applicable UFL: Not applicable
Autoignition Temperature: Not applicable

EXTINGUISHING MEDIA: Dry chemical

FIRE & EXPLOSION HAZARDS: None. Product will not support combustion.

FIRE FIGHTING INSTRUCTIONS: Wear self-contained breathing apparatus and protective suit for surrounding fire.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Use personal protective equipment. See Section 8.

METHODS FOR CLEANING UP: Soak up with inert absorbent material.

SECTION 7 – HANDLING AND STORAGE

HANDLING: Local exhaust is recommended. Avoid inhalation of vapors and spray mist and contact with skin and eyes. Wear approved safety goggles. Wear protective gloves and appropriate clothing to prevent skin contact. Observe good industrial hygiene practices.

STORAGE: Store in closed original container in a dry place. Keep away from food, drink and animal feeding stuffs. Store away from incompatible materials.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide adequate ventilation and minimize the risk of inhalation of vapors and mists.

RESPIRATORY PROTECTION: Not needed if ventilation is adequate to control occupational exposures. If needed, refer to 29 CFR 1910.134, CSA Z94.4-93, or European Standard EN 149 for complete regulations. Seek advice from local supervisor.

SKIN PROTECTION: Wear protective gloves. Use skin protection. Apron and long sleeves are recommended.

EYE PROTECTION: Risk of contact: Wear approved safety goggles.

EXPOSURE GUIDELINES: None

MATERIAL SAFETY DATA SHEET

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear liquid
ODOR:	Odorless
BOILING POINT:	No data available
VAPOR PRESSURE:	No data available
SOLUBILITY IN WATER:	Complete
SPECIFIC GRAVITY:	No data available
pH:	8.7 (+/- 0.1)
VOC:	No data available

SECTION 10 – STABILITY AND REACTIVITY

STABILITY:	This product is stable under expected conditions of use.
MATERIALS TO AVOID:	Oxidizing agents; alkalies.
CONDITIONS TO AVOID:	Heat.
HAZARDOUS DECOMPOSITION PRODUCTS:	At elevated temperatures, acrolein, carbon oxides, nitrogen oxides

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute Toxicity

<u>Chemical Name</u>	<u>Oral</u> <u>LD₅₀ (rat/mouse)</u>	<u>Dermal</u> <u>LD₅₀ (rat/rabbit)</u>	<u>Inhalation</u> <u>LC₅₀ (rat/mouse)</u>
Tris(hydroxymethyl) aminomethane	5900 mg/kg (rat)	-	-

Chronic Toxicity

Carcinogenic effects: The components of this product are not designated as potential carcinogens by IARC (Group 1, 2A or 2B), NTP or OSHA.

Mutagenic effects: No data available.

Teratogenic effects: No data available.

Target organs: No data available.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity: The product components are not classified as environmentally hazardous.

<u>Chemical Name</u>	<u>Fish</u> <u>LC₅₀ (species, hours)</u>	<u>Invertebrates</u> <u>EC₅₀ or IC₅₀</u> <u>(species, hours)</u>	<u>Plant</u> <u>EC₅₀ (species, hours)</u>
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Mobility: The product is water soluble and may spread in water systems.

MATERIAL SAFETY DATA SHEET

Persistence and Degradability: No data available.

Bioaccumulation Potential: No data available.

SECTION 13 – DISPOSAL CONSIDERATIONS

Dispose of waste and residues in accordance with local, state, provincial or federal requirements, as applicable

SECTION 14 – TRANSPORT INFORMATION

US DOT Not regulated

Proper Shipping Name
UN Number
Hazard Class
Packing Group
Special Instructions

IATA Not regulated

Proper Shipping Name
UN Number
Hazard Class
Packing Group
Special Instructions

IMDG Not regulated

Proper Shipping Name
UN Number
Hazard Class
Packing Group
Special Instructions

SECTION 15 – REGULATORY INFORMATION

U.S. State Regulations

California Proposition 65 - This product contains the following Proposition 65 chemicals:
None

Canada

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

WHMIS Hazard class: D2B



SECTION 16 – OTHER INFORMATION

MSDS Status: Original

MATERIAL SAFETY DATA SHEET

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MATERIAL SAFETY DATA SHEET

Product Name: 50 mM Magnesium Chloride
Product Code(s): 84030, 84031

General Use: Laboratory reagent
For Research Use Only, Not for Use in Diagnostic Procedures

MSDS Issue Date: 17, December, 2012

Manufacturer:
QUANTA BIOSCIENCES INC.
202 PERRY PKWY., SUITE 1
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SECTION 2 – HAZARDS IDENTIFICATION

Emergency Overview: May cause eye, skin or respiratory irritation.

Potential Health Effects:

EYES: May cause eye irritation. Exposed individuals may experience eye tearing, redness, and discomfort.

SKIN: May cause skin irritation.

INGESTION: May be harmful if swallowed in large quantities.

INHALATION: May cause irritation to the respiratory system if liquid is splashed or aerosolized.

Chronic Effects / Carcinogenicity: No chemical components in this material at reportable thresholds are listed by IARC, OSHA or NTP.

Potential Environmental Effects: The product components are not classified as environmentally hazardous.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

<u>Hazardous Ingredients</u>	<u>CAS Registry No.</u>	<u>Percentage (wt/wt)</u>
None		

OSHA Regulatory Status: While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

SECTION 4 – FIRST AID MEASURES

EYES: Immediately flush with contaminated eye(s) with lukewarm, gently flowing water for at least 5 minutes, while holding the eyelids(s) open. Remove any contact lenses and continue rinsing. Get medical attention if irritation persists after washing.

SKIN: Remove contaminated clothes and rinse skin thoroughly with water for at least 15 minutes. If

MATERIAL SAFETY DATA SHEET

irritation develops and persists, Get medical attention.

INGESTION: Rinse mouth thoroughly with water. If large amounts have been ingested, give 2 to 8 ounces of water. Get medical attention.

INHALATION: If symptoms are experienced, remove source of contamination or move victim to fresh air. Obtain medical advice.

SECTION 5 – FIRE FIGHTING MEASURES

Flammable Properties

Flash Point:	Not Determined	Method: Not available
Flammable Limits:	LFL: Not determined	UFL: Not determined
Autoignition Temperature:	Not determined	

EXTINGUISHING MEDIA: Dry chemical

FIRE & EXPLOSION HAZARDS: None. Product will not support combustion.

FIRE FIGHTING INSTRUCTIONS: Wear self-contained breathing apparatus and protective suit for surrounding fire.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Use personal protective equipment. See Section 8.

METHODS FOR CLEANING UP: Soak up with inert absorbent material.

SECTION 7 – HANDLING AND STORAGE

HANDLING: Local exhaust is recommended. Avoid inhalation of vapors and spray mist and contact with skin and eyes. Wear approved safety goggles. Wear protective gloves and appropriate clothing to prevent skin contact. Observe good industrial hygiene practices.

STORAGE: Store in closed original container in a dry place. Keep away from food, drink and animal feeding stuffs. Store away from incompatible materials.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide adequate ventilation and minimize the risk of inhalation of vapors and mists.

RESPIRATORY PROTECTION: Not needed if ventilation is adequate to control occupational exposures. If needed, refer to 29 CFR 1910.134, CSA Z94.4-93, or European Standard EN 149 for complete regulations. Seek advice from local supervisor.

SKIN PROTECTION: Wear protective gloves. Use skin protection.

EYE PROTECTION: Wear approved safety goggles.

EXPOSURE GUIDELINES: None

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

MATERIAL SAFETY DATA SHEET

APPEARANCE:	Clear liquid
ODOR:	No data available
BOILING POINT:	No data available
VAPOR PRESSURE:	No data available
SOLUBILITY IN WATER:	Complete
SPECIFIC GRAVITY:	No data available
pH:	Approximately 7
VOC:	No data available

SECTION 10 – STABILITY AND REACTIVITY

STABILITY:	This product is stable under expected conditions of use.
MATERIALS TO AVOID:	None.
CONDITIONS TO AVOID:	None.
HAZARDOUS DECOMPOSITION PRODUCTS:	None

SECTION 11 – TOXICOLOGICAL INFORMATION

Carcinogenic effects: The components of this product are not designated as potential carcinogens by IARC (Group 1, 2A or 2B), NTP or OSHA.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity: The product components are not classified as environmentally hazardous.

Mobility: The product is water soluble and may spread in water systems.

Persistence and Degradability: No data available.

Bioaccumulation Potential: No data available.

SECTION 13 – DISPOSAL CONSIDERATIONS

Dispose of waste and residues in accordance with local, state, provincial or federal requirements, as applicable

SECTION 14 – TRANSPORT INFORMATION

US DOT	Not regulated
Proper Shipping Name	
UN Number	
Hazard Class	
Packing Group	
Special Instructions	
IATA	Not regulated

MATERIAL SAFETY DATA SHEET

Proper Shipping Name

UN Number

Hazard Class

Packing Group

Special Instructions

IMDG

Not regulated

Proper Shipping Name

UN Number

Hazard Class

Packing Group

Special Instructions

SECTION 15 – REGULATORY INFORMATION

U.S. State Regulations

California Proposition 65 - This product contains the following Proposition 65 chemicals:

None

Canada

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

WHMIS Hazard class: Not controlled

SECTION 16 – OTHER INFORMATION

MSDS Status: Original

This material is sold for research and development purposes only. It is not for any human or animal therapeutic or clinical diagnostic use. It is not intended for food, drug, household, agricultural, or cosmetic use. An individual technically qualified to handle potentially hazardous chemicals must supervise the use of this material.

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