### KIT COMPONENTS

<table>
<thead>
<tr>
<th>Product code</th>
<th>Product Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>95085-100</td>
<td>AccuStart™ Taq DNA Polymerase HiFi</td>
</tr>
<tr>
<td>95085-250</td>
<td></td>
</tr>
<tr>
<td>95085-01K</td>
<td></td>
</tr>
<tr>
<td>95085-05K</td>
<td></td>
</tr>
</tbody>
</table>

**Components**

<table>
<thead>
<tr>
<th>Components</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>84121</td>
<td>AccuStart Taq DNA Polymerase HiFi</td>
</tr>
<tr>
<td>84122</td>
<td></td>
</tr>
<tr>
<td>84123</td>
<td></td>
</tr>
<tr>
<td>84124</td>
<td></td>
</tr>
<tr>
<td>84125</td>
<td>HiFi PCR Buffer (10X)</td>
</tr>
<tr>
<td>84127</td>
<td></td>
</tr>
<tr>
<td>84126</td>
<td>50 mM magnesium sulfate</td>
</tr>
<tr>
<td>84128</td>
<td></td>
</tr>
</tbody>
</table>
1. PRODUCT AND COMPANY IDENTIFICATION

Product code 84121, 84122, 84123, 84124
Product name AccuStart™ Taq DNA Polymerase HiFi

Manufacturer QUANTA BIOSCIENCES INC.
202 PERRY PKWY., SUITE 1
GAITHERSBURG, MD 20877
800-364-2149

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous/Non-hazardous Components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLYCEROL</td>
<td>56-81-5</td>
<td>40-60%</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Emergency Overview
Irritating to eyes. Irritating to skin.

Form
Liquid

Principal Routes of Exposure/
Potential Health Effects

| Eyes          | May cause eye irritation with susceptible persons. |
| Skin         | May cause skin irritation in susceptible persons. |
| Inhalation   | No information available                        |
| Ingestion    | No information available                        |

Specific Effects

| Carcinogenic effects | No information available |
| Mutagenic effects    | No information available |
| Reproductive toxicity| No information available |
| Sensitization        | No information available |

Target Organ Effects
Eyes. Skin.

HMIS
Health       1
Flammability 1
Reactivity   0

4. FIRST AID MEASURES

Skin contact  Wash off immediately with plenty of soap and water. If irritation develops, get medical attention.
Eye contact   Rinse thoroughly with plenty of water, also under the eyelids, for at least 15 minutes. If irritation persists, get medical attention.
Ingestion     Never give anything by mouth to an unconscious person
Inhalation    Move to fresh air
Notes to physician Treat symptomatically
5. **FIRE-FIGHTING MEASURES**

**Suitable extinguishing media**
- Dry chemical

**Special protective equipment for firefighters**
- Wear self-contained breathing apparatus and protective suit

6. **ACCIDENTAL RELEASE MEASURES**

**Personal precautions**
- Use personal protective equipment

**Methods for cleaning up**
- Soak up with inert absorbent material

7. **HANDLING AND STORAGE**

**Handling**
- No special handling advice required

**Storage**
- Keep in properly labeled containers

8. **EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Occupational exposure controls**

**Exposure limits**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>OSHA PEL (TWA)</th>
<th>OSHA PEL (Ceiling)</th>
<th>ACGIH OEL (TWA)</th>
<th>ACGIH OEL (STEL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLYCEROL</td>
<td>15 mg/m³ total dust</td>
<td>-</td>
<td>10 mg/m³</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>5 mg/m³ respirable fraction</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Engineering measures**
- Ensure adequate ventilation, especially in confined areas

**Personal protective equipment**
- Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment
- Hand protection: Protective gloves
- Eye protection: Safety glasses with side-shields
- Skin and body protection: Lightweight protective clothing
- Hygiene measures: Handle in accordance with good industrial hygiene and safety practice
- Environmental exposure controls: Prevent product from entering drains

9. **PHYSICAL AND CHEMICAL PROPERTIES**

**General Information**
- Form: Liquid

**Important Health, Safety and Environmental Information**

<table>
<thead>
<tr>
<th>Property</th>
<th>°C</th>
<th>°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling point/range</td>
<td>289.7</td>
<td>554</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>17.8</td>
<td>64.04</td>
</tr>
<tr>
<td>Flash point</td>
<td>92.78</td>
<td>199</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>No data available</td>
<td></td>
</tr>
</tbody>
</table>

10. **STABILITY AND REACTIVITY**

**Stability**
- Stable under normal conditions

**Materials to avoid**
- No information available

**Hazardous decomposition products**
- No information available

**Polymerization**
- Hazardous polymerization does not occur

11. **TOXICOLOGICAL INFORMATION**
Acute Toxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 (oral, rat/mouse)</th>
<th>LD50 (dermal, rat/rabbit)</th>
<th>LC50 (inhalation, rat/mouse)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLYCEROL</td>
<td>12600 mg/kg (Rat)</td>
<td>10 g/kg (Rabbit)</td>
<td>570 mg/m³ (Rat)</td>
</tr>
</tbody>
</table>

Principle Routes of Exposure/
Potential Health Effects

- **Eyes** May cause eye irritation with susceptible persons.
- **Skin** May cause skin irritation in susceptible persons.
- **Inhalation** No information available
- **Ingestion** No information available

Specific Effects

- **Carcinogenic effects** No information available
- **Mutagenic effects** No information available
- **Reproductive toxicity** No information available
- **Sensitization** No information available

Target Organ Effects

Eyes, Skin.

12. ECOLOGICAL INFORMATION

- **Ecotoxicity effects** No information available
- **Mobility** No information available
- **Biodegradation** No information available
- **Bioaccumulation** No information available

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulations

14. TRANSPORT INFORMATION

- **IATA** Non-hazardous for air transport
- **RIS/ADR** Non-hazardous for road transport
- **IMDG** Non-hazardous for sea transport

15. REGULATORY INFORMATION

<table>
<thead>
<tr>
<th>International Inventories</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chemical Name</strong></td>
</tr>
<tr>
<td>GLYCEROL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>U.S. Federal Regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SARA 313</strong> Not regulated</td>
</tr>
</tbody>
</table>

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product contains the following HAPs:
**U.S. State Regulations**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Massachusetts - RTK</th>
<th>New Jersey - RTK</th>
<th>Pennsylvania - RTK</th>
<th>Illinois - RTK</th>
<th>Rhode Island - RTK</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLYCEROL</td>
<td>Listed</td>
<td>-</td>
<td>Listed</td>
<td>-</td>
<td>Listed</td>
</tr>
</tbody>
</table>

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

**WHMIS Hazard class:**
D2B Toxic materials

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.

### 16. OTHER INFORMATION

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.
1. PRODUCT AND COMPANY IDENTIFICATION

Product code 84125, 84127
Product name HiFi PCR Buffer (10X)

Manufacturer
QUANTA BIOSCIENCES INC.
202 PERRY PKWY., SUITE 1
GAIHERSBURG, MD 20877
800-364-2149

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous/Non-hazardous Components
The product contains no substances which at their given concentration, are considered to be hazardous to health.

3. HAZARDS IDENTIFICATION

Emergency Overview
The product contains no substances which at their given concentration, are considered to be hazardous to health.

Form
Liquid

Potential Health Hazards
- Eyes: No information available
- Skin: No information available
- Inhalation: No information available
- Ingestion: No information available

Specific Effects
- Carcinogenic effects: No information available
- Mutagenic effects: No information available
- Reproductive toxicity: No information available
- Sensitization: No information available

Target Organ Effects
No information available

HMIS
- Health: 0
- Flammability: 0
- Reactivity: 0

4. FIRST AID MEASURES

Skin contact
Wash off immediately with plenty of soap and water. If irritation develops, get medical attention.

Eye contact
Rinse thoroughly with plenty of water, also under the eyelids. If irritation persists, get medical attention.

Ingestion
Never give anything by mouth to an unconscious person

Inhalation
Move to fresh air

Notes to physician
Treat symptomatically
5. **FIRE-FIGHTING MEASURES**

<table>
<thead>
<tr>
<th>Suitable extinguishing media</th>
<th>Dry chemical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special protective equipment for firefighters</td>
<td>Wear self-contained breathing apparatus and protective suit</td>
</tr>
</tbody>
</table>

6. **ACCIDENTAL RELEASE MEASURES**

<table>
<thead>
<tr>
<th>Personal precautions</th>
<th>Use personal protective equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methods for cleaning up</td>
<td>Soak up with inert absorbent material</td>
</tr>
</tbody>
</table>

7. **HANDLING AND STORAGE**

<table>
<thead>
<tr>
<th>Handling</th>
<th>No special handling advice required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage</td>
<td>Keep in properly labeled containers</td>
</tr>
</tbody>
</table>

8. **EXPOSURE CONTROLS / PERSONAL PROTECTION**

<table>
<thead>
<tr>
<th>Occupational exposure controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure limits</td>
</tr>
<tr>
<td><strong>Engineering measures</strong></td>
</tr>
<tr>
<td><strong>Personal protective equipment</strong></td>
</tr>
<tr>
<td><strong>Respiratory protection</strong></td>
</tr>
<tr>
<td><strong>Hand protection</strong></td>
</tr>
<tr>
<td><strong>Eye protection</strong></td>
</tr>
<tr>
<td><strong>Skin and body protection</strong></td>
</tr>
<tr>
<td><strong>Hygiene measures</strong></td>
</tr>
<tr>
<td><strong>Environmental exposure controls</strong></td>
</tr>
</tbody>
</table>

9. **PHYSICAL AND CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>General Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Form</strong></td>
</tr>
<tr>
<td><strong>Important Health Safety and Environmental Information</strong></td>
</tr>
<tr>
<td><strong>Boiling point/range</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Melting point/range</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Autoignition temperature</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Oxidizing properties</strong></td>
</tr>
<tr>
<td><strong>Water solubility</strong></td>
</tr>
</tbody>
</table>

10. **STABILITY AND REACTIVITY**

<table>
<thead>
<tr>
<th>Stability</th>
<th>Stable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials to avoid</td>
<td>No information available</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>No information available</td>
</tr>
<tr>
<td>Polymerization</td>
<td>Hazardous polymerization does not occur</td>
</tr>
</tbody>
</table>
11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Principle Routes of Exposure/ Potential Health Effects

- **Eyes**: No information available
- **Skin**: No information available
- **Inhalation**: No information available
- **Ingestion**: No information available

Specific Effects

- **Carcinogenic effects**: No information available
- **Mutagenic effects**: No information available
- **Reproductive toxicity**: No information available
- **Sensitization**: No information available

Target Organ Effects: No information available

12. ECOLOGICAL INFORMATION

- **Ecotoxicity effects**: No information available
- **Mobility**: No information available
- **Biodegradation**: Inherently biodegradable
- **Bioaccumulation**: No information available

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulations

14. TRANSPORT INFORMATION

IATA

- **Proper shipping name**: Not classified as dangerous in the meaning of transport regulations
- **Hazard Class**: No information available
- **Subsidiary Class**: No information available
- **Packing group**: No information available
- **UN-No**: No information available

15. REGULATORY INFORMATION

International Inventories

U.S. Federal Regulations

SARA 313

Not regulated

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following HAPs:

U.S. State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:

WHMIS Hazard class

Non-controlled

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
16. OTHER INFORMATION

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17. PRODUCT AND COMPANY IDENTIFICATION

Product code 84126, 84128
Product name 50 mM Magnesium Sulfate
Manufacturer QUANTA BIOSCIENCES INC.
202 PERRY PKWY., SUITE 1
GAITHERSBURG, MD 20877
800-364-2149

18. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous/Non-hazardous Components
The product contains no substances which at their given concentration, are considered to be hazardous to health.

19. HAZARDS IDENTIFICATION

Emergency Overview
The product contains no substances which at their given concentration, are considered to be hazardous to health.

Form
Liquid

Potential Health Hazards
- Eyes: No information available
- Skin: No information available
- Inhalation: No information available
- Ingestion: No information available

Specific Effects
- Carcinogenic effects: No information available
- Mutagenic effects: No information available
- Reproductive toxicity: No information available
- Sensitization: No information available

Target Organ Effects: No information available

HMIS
- Health: 0
- Flammability: 0
- Reactivity: 0

20. FIRST AID MEASURES

Skin contact Wash off immediately with plenty of soap and water. If irritation develops, get medical attention.
Eye contact Rinse thoroughly with plenty of water, also under the eyelids. If irritation persists, get medical attention.
Ingestion Never give anything by mouth to an unconscious person
Inhalation Move to fresh air
Notes to physician Treat symptomatically
## 21. FIRE-FIGHTING MEASURES

| Suitable extinguishing media | Dry chemical |
| Special protective equipment for firefighters | Wear self-contained breathing apparatus and protective suit |

## 22. ACCIDENTAL RELEASE MEASURES

| Personal precautions | Use personal protective equipment |
| Methods for cleaning up | Soak up with inert absorbent material |

## 23. HANDLING AND STORAGE

| Handling | No special handling advice required |
| Storage | Keep in properly labeled containers |

## 24. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Occupational exposure controls

| Exposure limits | Engineering measures | Ensure adequate ventilation, especially in confined areas |
| Personal protective equipment | Respiratory protection | In case of insufficient ventilation, wear suitable respiratory equipment |
| | Hand protection | Protective gloves |
| | Eye protection | Safety glasses with side-shields |
| | Skin and body protection | Lightweight protective clothing |
| | Hygiene measures | Handle in accordance with good industrial hygiene and safety practice |
| | Environmental exposure controls | Prevent product from entering drains |

## 25. PHYSICAL AND CHEMICAL PROPERTIES

| General Information | Liquid |
| Important Health Safety and Environmental Information | Boiling point/range °C | No data available °F | No data available |
| | Melting point/range °C | No data available °F | No data available |
| | Flash point °C | No data available °F | No data available |
| | Autoignition temperature °C | No data available °F | No data available |
| | Oxidizing properties | No information available |
| | Water solubility | No data available |

## 26. STABILITY AND REACTIVITY

| Stability | Stable |
| Materials to avoid | No information available |
| Hazardous decomposition products | No information available |
| Polymerization | Hazardous polymerization does not occur |
27. TOXICOLOGICAL INFORMATION

Acute Toxicity
Principle Routes of Exposure/ Potential Health Effects

Eyes
   No information available

Skin
   No information available

Inhalation
   No information available

Ingestion
   No information available

Specific Effects

Carcinogenic effects
   No information available

Mutagenic effects
   No information available

Reproductive toxicity
   No information available

Sensitization
   No information available

Target Organ Effects
   No information available

28. ECOLOGICAL INFORMATION

Ecotoxicity effects
   No information available

Mobility
   No information available

Biodegradation
   Inherently biodegradable

Bioaccumulation
   No information available

29. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulations

30. TRANSPORT INFORMATION

IATA

Proper shipping name
   Not classified as dangerous in the meaning of transport regulations

Hazard Class
   No information available

Subsidiary Class
   No information available

Packing group
   No information available

UN-No
   No information available

31. REGULATORY INFORMATION

International Inventories

U.S. Federal Regulations

SARA 313
   Not regulated

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
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END OF SAFETY DATA SHEET