

# Safety Data Sheet

# 1. Chemical product and company identification

Product name: <u>LuciPac Pen</u>

Product code: 60331

Responsible company: Kikkoman Biochemifa Company

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### 2. Hazards identification

GHS Classification: Not classified

WARNING:

Avoid contact with eyes, skin and clothing.

Avoid breathing vapour.

Wash thoroughly after handling.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Wear suitable protective clothing.

Enzyme powders are dusty substances. Inhalation of the enzyme dust resulting from handling may induce sensitisation and cause allergic reactions in sensitised individuals.

# 3. Composition/information on ingredients

Product name: LuciPac Pen

Description: Reagent mixture, liquid and lyophilised powder

Luminescent reagent: Lyophilised powder

Ingredients	Formula or chemical name	CAS#	Remarks
Firefly luciferase	(Protein)	61970-00-1	
Pyruvate, orthophosphate dikinase	(Protein)	9027-40-1	
Phosphoenolpyruvate monopotassium	$C_3H_4KO_6P$	4265-07-0	
Pyrophosphate tetrapotassium	$K_4P_2O_7$	7320-34-5	
D-Luciferin	4,5-Dihydro-2-[6-hydroxy-2-benzo-thiazol yl]-4-thiazolecarboxylic acid	2591-17-5	
Magnesium acetate	$C_4H_6O_4Mg\cdot 4H_2O$	16674-78-5	
EDTA·2Na	Ethylenediamine-N,N,N',N'-tetraacetic acid disodium salt, dihydrate	6318-92-6	<1%
MES	2-[N-morpholino]ethanesulfonic acid	145224-94-8	
Dithiothreitol	$C_4H_{10}O_2S_2$	27565-41-9	
Trehalose	$C_{12}H_{22}O_{11} \cdot 2H_2O$	6138-23-4	
Dextrin	$(C_6H_{10}O_5)n$	9004-53-9	

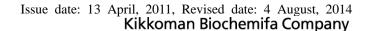
Identified hazardous ingredients: None

Releasing reagent: Liquid

Ingredients	Formula or chemical name	CAS#	Remarks
Tricine	N-Tris [hydroxymethyl] methylglycine	5704-04-1	
EDTA·2Na	Ethylenediamine-N,N,N',N'-tetraacetic acid disodium salt, dihydrate	6318-92-6	<1%
Benzalkonium chloride	Alkyl dimethylbenzyl ammonium chloride	68391-01-5	

Identified hazardous ingredients: None

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#### 4. First aid measures

Skin contact Wash skin with plenty of water. If symptoms occur, see a doctor.

Eye contact Rinse eyes with plenty of water for at least 15 minutes and see an eye specialist. If symptoms

occur, see a doctor.

Ingestion Rinse mouth and throat thoroughly with water. Drink water. If symptoms occur, see a doctor.

Inhalation Remove from exposure. If symptoms of irritation or sensitisation occur (shortness of breath,

wheezing or laboured coughing), call a doctor.

## 5. Fire-fighting measures

Protection against fire and explosions No special requirements.

Suitable fire extinguishing media Water, foam.
Non-suitable media None.
Special exposure hazards None.

### 6. Accidental release measures

Spilled substance should be removed immediately. Avoid formation of dust. Take up by mechanical means, preferably by a vacuum equipped with a high efficiency filter. Flush carefully with plenty of water. Avoid splashing and high-pressure washing. Ensure sufficient ventilation. Wash contaminated clothing.

# 7. Handling and storage

Safety shower and eye bath.

Mechanical exhaust required.

Wash thoroughly after handling.

Avoid formation of dust. Ensure good ventilation of the room when handling this substance.

Store at 2-8°C.

## 8. Exposure controls/personal protection

Recommended personal protective equipment (PPE)
Respiratory protection Respirator with filter.
Hand protection Impermeable gloves.

Eye protection Protective glasses or eye shield.

#### 9. Physical and chemical properties

Appearance Luminescent reagen: White or almost white

Releasing reagent: no colour

Odour None

pH Luminescent reagen: not available

Releasing reagent: pH 8.3

Melting point/freezing point Not available

Boiling point, initial boiling point and boiling range Not available

Flashpoint Not available

Upper/lower flammability or explosive limits Not available

Vapour pressure Not available
Vapour density Not available
Density/relative density Not available
Solubility(ies) Water soluble

n-octanol/water partition coefficient Not available Auto-ignition temperature Not available Decomposition temperature Not available

### 10. Stability and reactivity

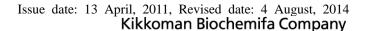
This substance is stable under normal conditions of use.

Conditions to avoid None.

Materials to avoid None.

Hazardous decomposition products None.

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# 11. Toxicological information

Acute toxicity Not available

Skin irritation/corrosion Not available Eye damage/irritation Not available

Respiratory or skin sensitization Not available

Inhalation of enzyme dust may induce sensitisation and cause allergic reactions in sensitised individuals

Reproductive cell mutagenicity Not available

Carcinogenicity Not available Reproductive toxicity Not available

Specific target organ toxicity — single exposure Not available Specific target organ toxicity — repeated exposure Not available

Aspiration hazard Not available

#### 12. Ecological information

Anticipated behavior of a chemical product in environment/possible environmental impact/ecotoxicity

Not available

Persistence and degradability Not available Bioaccumulative potential Not available

Mobility in soil Not available

#### 13. Disposal considerations

No special disposal method required, except that in accordance with local authority regulations.

#### 14. Transport information

UN number: Not applicable. Sea: Not applicable. Road/Rail: Not applicable. Air: Not applicable.

# 15. Regulatory information

European information

CAUTION: Substance not yet fully tested.

Irritant R 36/37/38

Irritating to eyes, respiratory system and skin.

S 26

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37/39

Wear suitable protective clothing, gloves and eye/face protection

#### 16. Other information

The information contained in this Safety Data Sheet, as of the issue date, is believed to be true and correct. However, this information is only intended as a guide, and any recommendations or suggestions are made without warranty or guarantee.

Since the conditions of use are beyond the control of our Company, it is the responsibility of the user to determine the conditions of safe use of this substance. The information in this sheet does not represent analytical specifications, for which please refer to our product specification.

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