

Safety Data Sheet

1. Chemical product and company identification

Product name: **LuciPac Pen**
 Product code: 60331
 Responsible company: Kikkoman Biochemifa Company
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 Tokyo 105-0003, Japan
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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

<i>Ingredients</i>	<i>Formula or chemical name</i>	<i>CAS #</i>	<i>Remarks</i>
Firefly luciferase	(Protein)	61970-00-1	
Pyruvate, orthophosphate dikinase	(Protein)	9027-40-1	
Phosphoenolpyruvate monopotassium	C ₃ H ₄ KO ₆ P	4265-07-0	
Pyrophosphate tetrapotassium	K ₄ P ₂ O ₇	7320-34-5	
D-Luciferin	4,5-Dihydro-2-[6-hydroxy-2-benzo-thiazolyl]-4-thiazolecarboxylic acid	2591-17-5	
Magnesium acetate	C ₄ H ₆ O ₄ Mg·4H ₂ O	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 ₄ H ₁₀ O ₂ S ₂	27565-41-9	
Trehalose	C ₁₂ H ₂₂ O ₁₁ ·2H ₂ O	6138-23-4	
Dextrin	(C ₆ H ₁₀ O ₅) _n	9004-53-9	

Identified hazardous ingredients: None

Releasing reagent: Liquid

<i>Ingredients</i>	<i>Formula or chemical name</i>	<i>CAS #</i>	<i>Remarks</i>
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

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.

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.