



Material Safety Data Sheet

Issue/Revision Date: 18th March, 2010

1. Identification of the substance/preparation and of the company/undertaking

Proper Shipping Name	Fructose/Glucose assay kit
Product code	K-FRUGL
Other Names	None
Company Name	Megazyme International Ireland Ltd.
Address	Bray Business Park, Southern Cross Road, Bray, Co. Wicklow, Ireland.
Contact point	Dr. Barry McCleary, PhD, DScAgr
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The quantities of the individual reagents supplied in this kit present no specific hazards, alone or in combination, when used and stored as directed. For more information refer to the K-FRUGL booklet.

2. Composition/information on ingredients

This kit contains the following reagents :-

Chemical name	CAS #	EC #	Symbol	R-Phrases	S-Phrases
Buffer containing :-					
Imidazole	288-32-4	206-019-2	C	R22, R34	S26, S36/37/39, S45
Magnesium chloride*	7791-18-6	232-094-6	-	-	-
Freeze dried powder containing :-					
NADP ⁺	1184-16-3	214-664-6	-	-	S22, S24/25
ATP	34369-07-8	213-579-1	-	-	-
PVP	9003-39-8	201-800-4	-	-	S22, S24/25
Stabilised suspension containing :-					
Hexokinase	9001-51-8	232-611-5	-	-	-
Glucose-6-phosphate dehydrogenase suspension	9001-40-5	232-602-6	-	-	S24/25
Stabilised suspension containing :-					
Phosphoglucose isomerase*	9001-41-6	232-603-1	-	-	-
Standard solution containing :-					
D-Glucose	50-99-7	200-075-1	-	-	-
D-Fructose	57-48-7	200-233-3	-	-	-
*Sodium azide	26628-22-8	247-852-1	T+, N	R28, R32, R50/53	S28, S45, S60, S61

3. Hazards identification

The quantities of the individual products supplied in this kit present no specific hazards, alone or in combination, when used and stored as directed. However, certain sensitive individuals may develop allergic reactions.

Physical/chemical hazards

Human health hazards

4. First aid

The information in this section is given as general advice.

General information	Seek medical advice in cases of accident or if you feel unwell when using this product. Show the label where possible.
Ingestion	If person is conscious immediately flush mouth with plenty of water. Never give anything by mouth to an unconscious person. Loosen any tight clothing (<i>i.e.</i> collar, tie, belt or waistband). Do not induce vomiting without medical advice. Get medical advice.
Eye contact	Remove contact lenses if fitted. Flush eyes with plenty of water for at least 15 minutes. Get medical advice.
Skin contact	Immediately flush skin with soap and plenty of water. Remove contaminated clothing and shoes. Wash clothing and clean shoes before re-use. Get medical advice.
Inhalation	Move to fresh air. If breathing becomes difficult get medical advice.

5. Fire-fighting measures

Flammability	Not determined
Extinguishing Media	Dry chemical powder, water spray, carbon dioxide or foam.
Specific hazards	Burning may produce toxic and irritant fumes (nitrogen oxides, carbon monoxide, carbon dioxide).
Fire Fighting Procedure	Wear breathing apparatus and full protective clothing.
Flash point	Not determined
Autoignition temperature	Not determined

6. Accidental release measures

Personal precautions	Use personal protective equipment.
Spill and leak	Use personal protective equipment. Spillages of should be dealt with immediately. Sweep or mop up (avoid raising dust or aerosol) and place in a suitable container ready for disposal. Ventilate area and carefully wash any contaminated surfaces. Wash all contaminated clothing.
Disposal	Waste may be disposed of in approved landfill sites, incineration or other method in accordance with local, state and federal regulations.

7. Handling and storage

Storage	Stable for 5 years when stored in a cool (4°C) dry place.
Handling	Handle according to good hygiene, laboratory and safety practices. Wash hands after use, before eating, drinking or smoking and at the end of the workday. Use only in areas with adequate ventilation. Keep away from heat and sources of ignition. Avoid ingesting, breathing dust or aerosol, contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Wear laboratory coats (or other suitable protective clothing), approved safety glasses (with side shields) and gloves.
Incompatible products	NA

8. Exposure controls and personal protection

Engineering measures	Ensure adequate ventilation
Respiratory protection	A protective dust mask (<i>e.g.</i> 3M 8810 mask, type N95 [US], type 1 [EN 143] <i>etc.</i>) is advisable to avoid breathing particulates when a powdered form of the product is being handled. Use an approved respirator when aerosol, vapour or dust is generated.
Eye Protection	Approved safety glasses with side shields

Hand Protection	Gloves (<i>e.g.</i> nitrile)
Protective clothing	Laboratory coat or any other protective clothing designed to minimise skin contact.

9. Physical and chemical properties

Appearance	The kit contains five (5) glass vials
Solubility in water	NA
Melting point	NA
Hazardous decomposition products	Not determined
Odour	NA

10. Stability and reactivity

Stability	Stable under recommended storage conditions.
Conditions to avoid	NA
Solubility in Water	NA
Melting point	NA

11. Toxicological information

To the best of our knowledge, the chemical, physical and toxicological properties of this product have not been fully investigated.

Chronic toxicity
Potential health effects

12. Ecological information

Ecotoxicity effects	No data available.
Bioaccumulation	No data available.
Persistence and degradability	No data available.

13. Disposal considerations

Product	Unused product may be disposed of in approved landfill sites, incineration or other method in accordance with local, state and federal regulations.
Contaminated packaging	Dispose of in the same manner as unused product.

14. Transport information

RID/ADR	Not controlled under ADR (Europe).
IMDG/IMO	Not hazardous for transport by sea.
ICAO/IATA	Not hazardous for transport by air.
DOT (US)	Not classified as dangerous goods.

15. Regulatory information

EU regulations	Classification	NA
	Risk phrases	NA
	Safety phrases	NA

16. Other information

Precautions	For laboratory use only. Not for drug, household or other uses.
Disclaimer	The information and recommendations contained herein are to the best of our knowledge reliable. However, Megazyme International Ireland Ltd. does not guarantee the accuracy or completeness of the information and as such this document should be used as a guide

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