

1. Information of the substance/mixture and of the company/undertaking	
1.1 Commercial product name	AMMONIA (ENZYMATIC METHOD)
Cat. No.:	AM1015
1.2 Company:	RANDOX Laboratories Ltd., 55 Diamond Road, Crumlin, Co. Antrim, United Kingdom, BT29 4QY Tel: +44 (0) 28 9442 2413; Fax: +44 (0) 28 9445 2912 Email: msds@randox.com Website: www.randox.com
1.3 In Emergencies:	Tel: +44 (0) 28 9442 2413

2. Hazards identification	
	Ammonia Buffer (R1b) - Contains Sodium Hydroxide (0.52%) & Sodium Azide (< 0.1%) Ammonia GLDH Reagent (R2) - Contains Sodium Azide (0.2%) Ammonia Standard - Contains Sodium Azide (0.2%)
Classification:	Ammonia Buffer (R1b) - Xi; Irritant Ammonia GLDH Reagent (R2) - Xn; Harmful Ammonia Standard - Xn; Harmful

3. Composition / Information on Ingredients	
Warnings:	For <i>in vitro</i> diagnostic use only. Do not pipette by mouth. Handle laboratory reagents in accordance with Good Laboratory Practice. Avoid ingestion or contact with skin or mucous membranes. In case of skin contact, flush affected area with copious amounts of water. In case of contact with eyes or if ingested, seek immediate medical attention. Sodium Azide reacts with lead and copper plumbing, to form potentially explosive azides. When disposing of such reagents flush with large volumes of water to prevent azide build up. Exposed metal surfaces should be cleaned with 10% sodium hydroxide.
<u>Ammonia Buffer (R1b)</u>	
Risk Phrases:	R36/38; Irritating to eyes and skin
Safety Phrases:	S26; In case of contact with eyes, rinse immediately with plenty of water and seek medical advice S36/37/39; Wear suitable protective clothing, gloves and eye/face protection S45; In case of accident or you feel unwell seek medical advice immediately (show label where possible)
<u>GLDH Reagent (R2) & Ammonia Standard</u>	
Risk Phrases:	R22: Harmful if swallowed. R32; Contact with acids liberates very toxic gas R52/23; Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment
Safety Phrases:	S28: After contact with skin wash immediately with plenty of water S45; In case of accident or if you feel unwell, seek medical advice immediately (show label where possible) S60; This material and its container must be disposed of as hazardous waste S61; Avoid release to the environment. Refer to special instructions/safety data sheet

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4. First aid measures	
Emergency First Aid:	Call an internal First Aider where available or else contact a physician immediately.
Inhalation:	If inhaled, remove to fresh air. If breathing becomes difficult call a physician.
Ingestion:	If patient is conscious wash out mouth with water. Get immediate medical attention
Skin contact:	Wash off skin with plenty of water.
Eye contact:	Rinse immediately with water. Transport to hospital for further medical attention.

5. Fire-fighting measures	
Flash point:	Not determined
Flammable limits:	Not determined
Extinguishing media:	No restriction
Special Fire Fighting Procedures:	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes
Unusual Fire and Explosion Hazards:	May emit toxic fumes under fire conditions
Thermal decomposition:	Gases which are damaging to health do not form in dangerous quantities

6. Accidental release measures	
After spillage:	Use appropriate spill absorbent kit as instructed by the manufacturer. Alternatively, mop up with an absorbent material and hold for waste disposal. Appropriate Personal Protective Equipment should be worn, e.g. laboratory coat, gloves, safety glasses and mask. Ventilate area and wash spill site after material pick up is complete.
Absorbent material:	No restriction

7. Handling and storage	
7.1 Handling:	Wash thoroughly after handling. Do not use if skin is cut or scratched. Avoid contact with eyes, skin and clothing.
7.2 Storage:	Store at temperatures and conditions as indicated on the product label.
Do not store together:	N/A

8. Exposure controls/personal protection	
MEL/OES	Not determined
Respiratory protection:	None
Eye protection:	Protective glasses
Hand protection:	Standard laboratory rubber or latex gloves.
Skin protection:	A laboratory coat or apron is recommended

9. Physical and chemical properties	
Physical state:	Liquid (Buffer (R1b), GLDH Reagent (R2) and Standard) Solid (NADPH Reagent (R1a))
Colour:	Buffer, Standard & GLDH Reagent - Colourless NADPH Reagent - Pale yellow solution after preparation.
Odour:	Odourless
pH value:	Not determined
Boiling point	Not determined
Melting point:	Not determined
Oxidising properties:	Not determined
Ignition temperature	Not determined
Explosion limits:	Not determined
Density:	Not determined
Solubility in water:	Soluble

10. Stability and reactivity	
Stability:	Stability:
Conditions to avoid:	Conditions to avoid:
Substances to avoid:	Substances to avoid:
Hazardous decomposition products:	Hazardous decomposition products:

11. Toxicological information:	
LD50 oral	Not determined
LD50 intraperitoneal	Not determined
LD50 skin	Not determined
LC50 inhalation	Not determined
Toxicologic information:	Not thoroughly investigated

12. Ecological information	
Water hazard class:	Data not yet available

13. Disposal considerations	<p>Each disposal facility must determine proper disposal methods of the substance or preparation and any contaminated packaging to comply with Local and National Environmental Regulations</p> <p>Refer to Section 6.</p>
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14. Transport Information			
GGVE/GGVS:	Data not yet available	RID/ADR	Data not yet available
ICAO/IATA-DGR:	Data not yet available	UN-Nr.:	Data not yet available
IMDG-CODE:	Data not yet available	MFAG	Data not yet available
		EMS:	Data not yet available

15. Regulatory information	
	Classified according to CHIP 3.
Hazard symbol:	<p>Ammonia Buffer (R1b) - Xi; Irritant</p> <p>Ammonia GLDH Reagent (R2) and Ammonia Standard - Xn; Harmful</p>
<p><u>Ammonia Buffer (R1b)</u></p> <p>Risk Phrases:</p> <p>Safety Phrases:</p>	<p>R36/38; Irritating to eyes and skin</p> <p>S26; In case of contact with eyes, rinse immediately with plenty of water and seek medical advice</p> <p>S36/37/39; Wear suitable protective clothing, gloves and eye/face protection</p> <p>S45; In case of accident or you feel unwell seek medical advice immediately (show label where possible)</p>
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Precautions:	See Section 3.

16. Other information	
	The information herein is believed to be correct as of the date hereof but is provided without warranty of any kind. The recipient of our products is responsible for observing any National laws and guidelines applicable.