

MATERIAL SAFETY DATA SHEET

I PRODUCT IDENTIFICATION AND USE

MANUFACTURER'S NAME: Diagnostic Chemicals Limited
16 McCarville Street
West Royalty Industrial Park
Charlottetown, P.E.I.
Canada C1E-2A6
902-566-1396

CHEMICAL/PRODUCT NAME: **Ethanol Assay**

CATALOGUE NUMBER: **229-29, 229-29S***

* indicates standard only.

NOTE: Physical and health hazard information on reagent mixtures have not been determined. Any physical and health information noted is based 1) on evaluation of data for the pure ingredients, and 2) concentration of ingredients as packaged.

PRODUCT DESCRIPTION: For the quantitative determination of ethanol.

II HAZARDOUS INGREDIENTS (NE not established)

	<u>ACGIH TLV</u>	<u>CAS</u>
Ethanol Buffer:		
Sodium pyrophosphate 3.3%	5 mg/m ³	7722-88-5
Hydrazine Sulphate: 0.9%	NE	10034-93-2
Ethanol Standard: n.ap.		
NAD-ADH Reagent: n.ap.		

EYES: Immediately flush eyes with plenty of water for at least 15 minutes and get medical attention.

ORAL: If ingested drink plenty of fluids and contact a physician.

INHALATION: If inhaled remove victim to fresh air. If not breathing give artificial respiration. If breathing is difficult give oxygen, and call a physician.

III TOXICOLOGICAL PROPERTIES

ROUTE OF ENTRY/EXPOSURE

SKIN CONTACT: [x] EYE CONTACT: [x] INHALATION: [x]
INGESTION: [x] SKIN ABSORPTION [x]

EFFECTS OF ACUTE EXPOSURE:

SKIN CONTACT: Ethanol Buffer causes irritation

EYE CONTACT: Ethanol Buffer causes severe irritation.

INGESTION: Ethanol Buffer harmful if swallowed.

INHALATION: Ethanol Buffer harmful if inhaled.

EFFECTS OF CHRONIC EXPOSURE: Prolonged or repeated exposure to the NAD-ADH Reagent may cause an allergic reaction in certain sensitive individuals. Prolonged or repeated exposure to hydrazine sulphate may promote liver damage.

EVIDENCE OF CARCINOGENICITY, TERATOGENICITY, REPRODUCTIVE TOXICITY, MUTAGENICITY: The National Toxicology Program has classified hydrazine and its salts as carcinogenic. Mutation references are also cited.

SENSITIZATION TO PRODUCT: n.av.

SYNERGISTIC PRODUCTS: n.av.

LD50: Hydrazine sulphate 601 mg/kg, oral rat.

LD50: Sodium pyrophosphate n.av.

IV EMERGENCY AND FIRST AID MEASURES

SKIN: In case of contact, immediately flush area with plenty of water.

V PHYSICAL DATA

PHYSICAL STATE: The NAD-ADH Reagent is a solid, The Buffer and the Ethanol Standard are liquids.

APPEARANCE AND ODOUR: The NAD-ADH Reagent is an off white lyophilized powder, the Buffer and the Standard are clear and colourless.

ODOUR THRESHOLD: n.av.

VAPOUR PRESSURE: n.av.

VAPOUR DENSITY: n.av.

SPECIFIC GRAVITY: n.av.

EVAPORATION RATE: n.av.

MELTING POINT: n.av.

BOILING POINT: n.av.

SOLUBILITY IN WATER: Soluble

pH: Buffer = 9.2, NAD-ADH Reagent = 8, Standard n.av.

COEFFICIENT OF OIL/WATER DISTRIBUTION: n.av

VI FIRE AND EXPLOSION HAZARD DATA

FLAMMABLE: No

EXTINGUISHING MEDIA: As appropriate for fire in surrounding materials.

FLASH POINT: n.ap.

UPPER FLAMMABLE LIMIT: n.ap.

LOWER FLAMMABLE LIMIT: n.ap.

AUTOIGNITION TEMPERATURE: n.ap.

HAZARDOUS COMBUSTION PRODUCTS: n.av.

EXPLOSION DATA:

SENSITIVITY TO MECHANICAL IMPACT: n.ap.

SENSITIVITY TO STATIC DISCHARGE: n.ap.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Unknown

VII REACTIVITY DATA

STABLE: Yes

HAZARDOUS POLYMERIZATION: Will not occur

INCOMPATIBILITY WITH OTHER SUBSTANCES: The buffer is incompatible with strong oxidizing agents and strong bases.

HAZARDOUS DECOMPOSITION PRODUCTS: n.av.

VIII PREVENTIVE MEASURES

LOCAL EXHAUST: Not required

PROTECTIVE CLOTHING: Lab coat

PROTECTIVE GLOVES: Rubber nitrile or other impermeable gloves

EYE PROTECTION: Safety glasses with side-shields

OTHER PRECAUTIONS: Avoid contact and inhalation, do not get in eyes, on skin or clothing. Do not pipette by mouth. Wash contaminated clothing before reuse.

RESPIRATORY PROTECTION: Recommended for the Ethanol Buffer.

LEAK AND SPILL PROCEDURE: Absorb small leaks or spills with sponge, mop up large spills with plenty of soap and water.

WASTE DISPOSAL: Dilute with a large volume of water and dispose of into sewer system, in accordance with local regulations.

STORAGE REQUIREMENTS: Refrigerate, 2-8 °C.

SHIPPING INFORMATION: Not regulated

IX PREPARATION OF THE M.S.D.S.

PREPARED BY: John Gabriel

PHONE NO: 902-566-1396

DATE: January 31, 2006

** n.av. not available n.ap. not applicable*

The information provided on this Material Safety Data Sheet is provided in the interest of promoting safe handling of the material. While this information is believed to be correct DCL makes no warranty in respect to any of the information disclosed. Observe all federal, provincial, state and local laws concerning health and pollution.

MSDS22929-3