

# MATERIAL SAFETY DATA SHEET

Not classified as dangerous according to criteria of  
Australian National Occupational Health and Safety Commission

## 1 IDENTIFICATION OF MATERIAL AND SUPPLIER

Product: Human Alpha-1 antitrypsin (A1AT) ELISA kit

Recommended use: This product is laboratory research use only and is not intended for human or animal diagnostic, therapeutic or other clinical uses.

Supplier: ImmunoDiagnostics Limited. Address: 5/F, Biotech Centre 2, No. 11 Science Park West Avenue, Hong Kong Science Park, Shatin, N.T., Hong Kong

Technical assistance: antibody@hku.hk

Emergency phone number: Please contact your local Poison Control Centre  
Australia - 131126  
New Zealand - (0)34747000  
United States - 1800 222 1222

Revision date: May 2011

Revision number: 1

## 2. INFORMATION ON PRODUCT/PREPARATION COMPOSITION

The product contains the following hazardous substances and those with the following highest permissible concentrations in the working environment:

### 2.1 Microtiter strips (96 wells, coated with anti-human A1AT polyclonal antibody, sealed)

| Identification numbers | Chemical name of substance | Concentrations | Risk and safety statements |
|------------------------|----------------------------|----------------|----------------------------|
| CAS: None              | None                       |                |                            |
| EC (EINECS): None      |                            |                |                            |

### 2.2 Human A1AT standard and control (recombinant protein, human A1AT, lyophilised)

| Identification numbers | Chemical name of substance | Concentrations | Risk and safety statements |
|------------------------|----------------------------|----------------|----------------------------|
| CAS: None              | None                       |                |                            |
| EC (EINECS): None      |                            |                |                            |

### 2.3 HRP Labeled Antibody Solution (anti-human A1AT polyclonal antibody, HRP conjugate, in phosphate buffer solution)

| Identification numbers | Chemical name of substance | Concentrations | Risk and safety statements |
|------------------------|----------------------------|----------------|----------------------------|
| CAS: None              | None                       |                |                            |
| EC (EINECS): None      |                            |                |                            |

### 2.4 Assay buffer concentrate

| Identification numbers | Chemical name of substance | Concentrations | Risk and safety statements |
|------------------------|----------------------------|----------------|----------------------------|
| CAS: None              | None                       |                |                            |
| EC (EINECS): None      |                            |                |                            |

### 2.5 Wash buffer concentrate

| Identification numbers | Chemical name of substance | Concentrations | Risk and safety statements |
|------------------------|----------------------------|----------------|----------------------------|
| CAS: None              | None                       |                |                            |
| EC (EINECS): None      |                            |                |                            |

### 2.6 Substrate solution

| Identification numbers | Chemical name of substance     | Concentrations | Risk and safety statements       |
|------------------------|--------------------------------|----------------|----------------------------------|
| CAS: 54827-17-7        | 3,3',5,5'-Tetramethylbenzidine | 0.4 g/L        | R20/21/22-36/37/38-40, S26-36/37 |
| EC (EINECS): 259-364-6 |                                |                |                                  |

### 2.7 Stop solution

| Identification numbers | Chemical name of substance | Concentrations | Risk and safety statements |
|------------------------|----------------------------|----------------|----------------------------|
| CAS: 7664-93-9         | Sulfuric acid              | 2 N            | R35, S26-30-45             |
| EC (EINECS): 231-639-5 |                            |                |                            |

### Risk symbols

C Corrosive

**Risk phrases**

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed

R21/22 Harmful in contact with skin and if swallowed

R22 Harmful if swallowed

R35 Causes severe burns

R36/37/38 Irritating to eyes, respiratory system and skin

R40 Possible risk of irreversible effects

**Safety phrases**

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S30 Never add water to this product

S36/37 Wear suitable protective clothing and gloves

S45 In case of accident or if you feel unwell, seek medical advice immediately (show label where possible)

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**3. SUBSTANCE/PREPARATION HAZARDS DATA**

The amount of dangerous substance is under the limit on which the kit is considered dangerous as a whole.

**When used, the most adverse impacts of the substance/preparation on human health include:**

The followed components can damage health if ingested and/or can irritate eyes and skin: Stop solution, Substrate A and B solutions.

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**4 FIRST AID MEASURES****Eye Contact:**

Check for and remove contact lenses. Flush eyes with water for at least 15 minutes. Get medical attention.

**Skin contact:**

Wash skin thoroughly with soap and water. Remove and wash contaminated clothing. Should irritation occur get medical attention.

**Inhalation:**

If inhaled remove to fresh air. If breathing is affected seek medical attention.

**Ingestion:**

Flush out mouth and drink large amounts of water. Seek medical attention if symptoms appear.

**Wounds:**

Allow to bleed freely. Wash thoroughly with soap and water. Get medical attention.

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**5 FIRE FIGHTING MEASURES**

**Suitable fire-extinguishing media:** Carbon dioxide, dry powder, foam, water.

**Thermal decomposition:** No thermal decomposition degradation products are expected.

**Special hazards:** None.

**Special protective means for firemen:** None.

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**6 ACCIDENTAL RELEASE MEASURES**

**Safety measures to protect humans:** Avoid contact with skin and eyes.

**Environmental safety measures:** Avoid penetration into sewerage systems, surface and ground water. Avoid soil pollution.

**Recommended cleaning and disposal methods:** Cover with suitable absorbing material. After removing the substance, rinse the spot of spilling thoroughly with water and soap.

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**7 HANDLING AND STORAGE**

**Handling instructions:** Avoid contact with skin, eyes and clothing. Use suitable protective means to work with the substance.

**Storage instructions:** Store at temperatures between + 2 and + 8°C in a dry and dark place.

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**8 EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Technical measures:** Do not eat, drink and smoke when working with the kit. Use the kit only in rooms enabling good ventilation. Local exhaustion is necessary, general (forced) exhaustion is recommended.

**Personal protective means – protection of respiratory organs:** None

**Personal protective means – eye protection:** None

**Personal protective means – hand protection:** Protective gloves (wash your hands before and after work)

**Personal protective means – body protection:** Protective clothing

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**9 PHYSICAL AND CHEMICAL PROPERTIES****State (at 20°C):**

Solid: Microtiter strips.

Liquids: A1AT standard, HPR labeled antibody Solution, Assay buffer concentrate, Wash buffer concentrate, Substrate solution, Stop solution.

**Colour:**

Colorless: A1AT standard, HRP labeled antibody Solution, Assay buffer, Stop solution, Wash buffer concentrate, Substrate solution.

**pH value (at 25°C):** Stop solution: < 1

Others: 6.8 - 7.4

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**10 STABILITY AND REACTIVITY**

**Conditions to be avoided:** Heat

**Substances and materials with which the product is not allowed to get in touch:** Acids

**Hazardous decomposition products:** Not known

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**11 TOXICOLOGICAL INFORMATION****Toxicological information**

The product contains sulphuric acid in total concentration of 2N.

**Acute toxicity-LD50 orally, rat (mg/kg):** 2140mg/kg - sulphuric acid

**Irritability:** No data available

**Mutagenicity:** No data available

**Reproduction toxicity:** No data available

**Tests on animals:** No data available

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**12 ECOLOGICAL INFORMATION**

Water hazard class: 2 (water-damaging substances)

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**13 DISPOSAL CONSIDERATIONS****The manner of disposing the substance/preparation:**

Mix or dissolve the material in a combustible solvent and burn up in a facility whose equipment matches all regulations in effect. Every waste disposal must be carried out in coincidence with national and local legislation or administrative regulations respectively.

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**14 TRANSPORT INFORMATION**

**Overland transportation (ADR/RID):** As a mixture, the substance is subject to no limitations.

**Transatlantic transportation (IMDG):** As a mixture, the substance is subject to no limitations.

**Air transportation (ICAO/IATA):** As a mixture, the substance is subject to no limitations.

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**15. INFORMATION ON LEGAL REGULATIONS**

According to the Act No. 356/2003 Coll. on chemical substances and chemical preparations and on amendments in some other laws and acts, components contained in the Human A1AT ELISA are non-hazardous substances in said concentrations.

Human A1AT ELISA kit is subject to special marking regulations according to the EC regulations (28/10/1999).

Human A1AT ELISA:

R20/21/22-21/22-22-35-36/37/38-40

S26-30-36/37-45

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**16 OTHER INFORMATION**

*The material safety data sheet contains data necessary to ensure safety and health and environmental protection in working with chemical substances. The above-stated data match the contemporary state of knowledge and experience and are in coincidence with legal regulations currently in effect. This product is a chemical substance and can be solely used by persons with chemical education at their own risk.*

*Human A1AT ELISA is designed for biomedical research. The manufacturer has no responsibility for damage caused by unsuitable use and by disrespecting the enclosed working instructions.*

*The above-stated information cannot be considered as complete and must be understood to be only a methodical instruction.*