1. Information related to lead

1.1 What is lead?

Lead is a naturally occurring heavy metal. Lead and its compounds may be found in products such as batteries, paints, ceramics, solder and additive to petrol. Lead can be found everywhere in our surrounding environment, usually generated by the combustion of fossil fuels, mining, industrial manufacturing, and other human activities.

1.2 How do people get exposed to lead?

Major exposure source of lead included contact with contaminated dust and soil, or consumption of contaminated food. In general, the risk of lead exposure is not high. In order to reduce the chance of exposure to lead in air, the sale and supply of leaded petrol, which is a known major source of lead, was banned from 1 April 1999.

Moreover, lead may be contaminated with hazardous concentrations in lead paint, cosmetics and traditional medicines.

1.3 What is the recommended limit of lead in drinking water?

The World Health Organization's Guidelines for Drinking-water Quality has set a provisional guideline value of not more than 10 micrograms per litre for lead. Exposure to this level of lead in drinking water is unlikely to cause acute toxicity. Every effort should be made to achieve drinking water that is as safe as practicable.

1.4 What is the health effect of Lead?

Our body does not need lead since it has no role in bodily functions. However, lead is a very common substance and exists in everywhere in the environment. For example, lead can contaminate air when lead soldering in construction work, lead in soil contaminates vegetables and waters, lead in the fume generated when smoking, lead in cosmetics and some traditional herbal medicines. Through inhalation and ingestion, a certain amount of lead will inevitably enter the body and be present in the blood. Notwithstanding this, it is always good for health to achieve the lowest possible lead level in blood. When lead is absorbed into the body in excessive amount, it is toxic to many organs and systems. Depending on

the lead level inside the body, significant exposure to lead is associated with a wide range of effects, including neurodevelopmental effects, anaemia, high blood pressure, gastrointestinal symptoms, impaired kidney function, neurological impairment, impaired fertility and adverse pregnancy outcomes. Infants, young children (especially those under six years of age), pregnant women and lactating women are more likely to be affected by its adverse effects.

1.5 Is lead carcinogenic?

There is some evidence that long-term occupational exposure to inorganic lead may contribute to the development of cancer. The International Agency for Research on Cancer (IARC) under the World Health Organization in 2006 classified inorganic lead compounds as Group 2A agent (i.e. probably carcinogenic to humans) and organic lead compounds as Group 3 agent (i.e., not classifiable as to its carcinogenicity to humans).

1.6 Can our body remove lead?

If intake of lead is stopped, our body can eliminate lead in our body over time. Lead can be eliminated from our body through urine or bile. For adults, the half-life of lead in blood is approximately 30 days

1.7 Who are the easily affected group?

Infants, young children, pregnant women and lactating women are most susceptible to the adverse effects of lead.

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