NATIONAL PUBLIC HEALTH LABORATORY

INDUSTRIAL POLLUTION AND FOOD ENVIRONMENTAL ANALYSIS

MINISTRY OF HEALTH

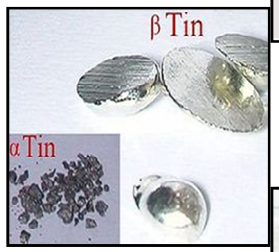
INTRODUCTION

- Heavy metals are natural components of the Earth's crust. They cannot be degraded or destroyed. To a small extent they enter our bodies via food, drinking water and air. Heavy metal poisoning could result, for instance, from drinking-water contamination (e.g. lead pipes), high ambient air concentrations near emission sources, or intake via the food chain.
- Heavy metal contamination is a general term given to describe a condition in which people have abnormally high levels of toxic metals in the body. Common examples are mercury, lead, cadmium and arsenic.
- Industrial contaminant such as bisphenol A leached from the food contact materials like polycarbonate plastics and epoxy resins in can coating are also harmful to consumer's health.
- This contamination can be very real detrimental to health and deadly.

Analyte	Adverse Effect/ Health
Mercury (Hg)	Risk to the fetus (pregnant women), neurological problem (paralysis & memory loss)
Cadmium (Cd)	Cancer, toxic to the kidney, bone demineralization, carcinogenic to humans
Arsenic (As)	Skin cancer, skin lesions (hyperkeratosis & pigmentation changes), lung cancer
Lead (Pb)	Neurological disorders, reproductive problems
Stanum (Sn)	Stomach upsets & irritates the digestive tract of sensitive people
Antimony (Sb)	Lung cancer, liver damage, respiratory tract-related diseases, premature birth/ abortion (pregnant women)
Bisphenol A	An endocrine distruptor which can mimic the body's hormones and has estrogenic activity which may lead to negative health effects.

PURPOSE

- Provides the analysis for the identification of causative agent in outbreaks and crisis, the monitoring and surveillance of safe and quality of food.



SAMPLE REQUIREMENT

Sample Type	Amount
All type of food (Refer Food Regulation Schedule 14)	500gm/ 500ml 1kg (with shell)
Ceramic ware	10 pieces from same lot
Plastic utencil (PP & PE)	250 g
Canned food (Bisphenol A analysis)	500gm/500ml