

# ASSESSMENT OF IODINE NUTRITION STATUS AMONG SCHOOL AGE CHILDREN OF NEPAL BY URINARY IODINE ASSAY

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**Abstract.** The present study was undertaken to evaluate the iodine status of Nepalese school age children by measuring urinary iodine excretion (UIE). A population based cross-sectional study was conducted during November-December 2006 among 1,094 school age children. Spot urine samples were collected from all children and UIE was measured during February to March 2007 by an ammonium persulfate digestion microplate (APDM) method. The median UIE at the national level was 193.10 µg/l, indicating adequate iodine intake in Nepalese schoolchildren. The proportion of the population having UIE below 50 µg/l and below 100 µg/l were 4.5% and 22.0%, respectively. Determination of precision of the method was done following calculation of the inter- and intra-assay coefficient of variation (CV). At low, medium and high concentrations of urinary iodine the intra-assay CVs were 6.3, 1.8 and 1.9%, respectively. The inter-assay CVs for low, medium and high concentrations of urinary iodine were 11.9, 4.9 and 6.2%, respectively. Therefore, current iodine nutrition status is at satisfactory levels in Nepal. An effective monitoring program must be continued to ensure optimal iodine status and prevent the population from developing iodine deficiency disorder (IDD).

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