

A Preliminary Investigation on some Selected Drinking Water Quality Parameters at Three Locations around Batticaloa

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A preliminary analysis was done to determine the Sodium, Potassium, Nitrate, Phosphate and the pH content in well water in Kalady, Sittandy and Sathurukondan areas in Batticaloa district after heavy flooding in last wet season, 2012. Thirty drinking water wells have been selected from three divisional secretariat (DS) areas to be analyzed. Sodium and Potassium were assessed using Atomic Absorption Spectrometry (AAS) and Nitrate, Phosphate, pH were analyzed using HANNA portable low range Nitrate meter, Phosphate meter & pH meter respectively. The sodium (Na) and Potassium (K) contents in the well waters analyzed were within the recommended maximum acceptable level. Among the nitrate content analysis most of the wells (86 %) showed safe levels according to the WHO drinking water quality level (<10 mg/l). While highest nitrate contents at sittandy (10.80 mg/l), and lowest nitrate content (0.40 mg/l) and also 10.40 mg/l content of nitrate was observed in drinking water in Sathurukondan. 90% of wells contain phosphate content safe by European Community (1980) standard (0.4-5mg/l) and 76 % of wells contain safe level of pH by WHO (6.5 - 8.5). Highest level of phosphate content (>5mg/l) and lowest level of pH (<6.5) were observed in Sittandy and Sathurukondan areas. Therefore the analysis suggested the purity and management of affected wells water are important for Sittandy and Sathurukondan areas after heavy flooding.

Keywords: Atomic Absorption Spectrometry (AAS), Acceptable level, Drinking water wells