

“LEVELS OF HEXAVALENT CHROMIUM IN DRINKING WATER FROM INDUSTRIAL AND NON-INDUSTRIAL AREAS OF AHMEDABAD CITY”

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A total number of 415 drinking water samples (Ahmedabad Municipal Corporation, AMC, N=125: Personal tube well bore water, N=290) were collected and analysed for the content of hexavalent chromium (Cr 6+) by ionchromatography. A wide variation in the level of Cr 6+ was observed. Over all, an average level of Cr 6+ in personal tube well water (N= 290) was found to be 14.57 µg/L (range 0.0 - 322.64 µg/L) with a median value of 6.39 µg/L. In these samples Cr+6 was not detected in ~ about 19% of the samples (detection limit 0.3 ppb). On contrary, AMC water supply had a considerably low level of Cr 6+ (mean 3.58 µg/L, range 0.0 – 13.78 µg/L, median 2.58 µg/L) and it was not detected in 39.5% of the water samples. Seven of the 290 tube-well water samples had Cr 6+ concentration that exceeded the prescribed limit of WHO (50 µg/L). None of the samples in AMC water supply exceeded the prescribed limit. Relatively higher levels of Cr 6+ in water samples were detected in industrial area when compared to non-industrial area.