

Title of Article : Assessment of Regulated Disinfection By-products in Ahmadu Bello University Community Drinking Water Supply.

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Abstract: Ahmadu Bello University (ABU) water treatment plant was assessed for its quality in terms of its regulated disinfection by-products (DBPs) content between 2008 and 2010. There were highly significant differences in mean concentration levels of these DBPs in the stages of treatment and distribution of the drinking water ($F=4.86^{**}$ - THMs, $F=4.93^{**}$ - HAAs). The pattern of variation of the Trihalomethanes was varied among the regulated trihalomethanes (THMs) while that of the haloacetic acids was consistent, decreasing from after chlorination stage to house level. Only THMs are regulated under the Nigerian drinking water standard with a maximum contaminant level of 0.001 mg/l as against international limits of 0.080 mg/l (USEPA) and 0.10 mg/l (WHO, EU). Mean concentration levels at booster station storage tanks were 0.0013 mg/l (THMs) and 0.5934 mg/l HAAs while at house level mean levels were 0.0107 mg/l (THMs) and 0.4863 mg/l (HAAs). These values show that drinking water produced by the ABU water treatment plant is non-compliant with national standard, but is readily compliant with international standards - USEPA, WHO and EU. However in terms of haloacetic acids (HAAs) the treated water had higher than the maximum permissible limits for HAAs under any of the standards. This calls for more concerted effort in monitoring for these DBPs and reducing their levels in the treated water.