

ASSESSMENT OF
TRIHALOMETHANES IN
DRINKING WATER IN
COLOMBO



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ABSTRACT

The Trihalomethane (THM) compounds have been found in most chlorinated water supplies. Typically they are produced in the treatment process as a result of chlorination. The organic matter in water will react with residual chlorine which comes from chlorination to give THM. Toxicological studies suggest that chloroform is a potential human carcinogen. Therefore it is essential to assess the content of THM in drinking water.

Purge and Trap gas chromatographic method is used to assess THMs. The detector is micro electron capture detector. The water of three sub chlorination water plants where chlorination is carried out was analysed.

They are:

Ambatale water plant

Labugama water plant

Kalatuwawa water plant

Three different standard mixtures were used. These standard mixtures were made from Chloroform (CHCl_3), Bromoform (CHBr_3), Dichlorobromomethane (CHCl_2Br) and Dibromochloromethane (CHBr_2Cl).

Results indicated that total Trihalomethane (TTHM) level of all samples is less than 10 ppb, where the guide lines of World Health Organization (WHO) is 100 ppb.

As all the results obtained are below 10 ppb which is much lower than the WHO guideline which is 100 ppb, currently the water supplied after chlorination from the above three plants can be considered safe with respect to TTHM.

