Removal of 17 alpha-methyltestosterone in synthetic wastewater with UVC and *Salvinia* based reactor

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17α-methyl testosterone (MT) is one of the synthetic hormones in endocrine-disrupting chemicals (EDCs). MT is normally used to induce sex reversal in *Tilapia* to accomplish all-male population. The residual hormones in masculinization, MT-impregnated food are introduced into the aquatic environment when discharging wastewater. Reported effects include altered sex ratios, intersexuality, reduced fertility, or increase in breast and testicular cancer prevalence in human beings. This work presents removal of MT in synthetic wastewater with UVC and *Salvinia* based reactors. In the experiment, the initial concentration of MT was 5, 10 and 20 ppm, and three reactors were employed—UVC reactor (A), *Salvinia* plant reactor (B), and UVC – *Salvinia* plant reactor (C). HPLC-UV was used to determine the quantities of MT in the water samples. It was found that the initial concentration of MT had to do with removal efficiencies of reactors A and B and that increasing the concentration caused the removal efficiencies to be decreased. In contrast, increasing the concentration had no effect on reactor C. The highest efficiency of removal was observed in reactor A. Furthermore, the results indicated that this plant was very active in 5-day duration.

Keywords: 17α-methyl testosterone; endocrine disrupting compounds; MT-impregnated food, masculinization, *Salvinia cucullata Roxb.*