

A Comparison of Transmittance of the Wastewater from Pan African Paper Mills (EA) Limited and River Nzoia Water in Kenya

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Abstract

Colour (nuisance) chromophoric materials cause visible and negative impacts on water bodies. Coloured materials get into water via natural processes and industrial wastes. Visible colour is characterised by dominant wavelength (D/WL), purity and hue. These characteristics were determined by obtaining the luminous transmittance of wastewater from the kraft pulp and paper mills at Webuye and River Nzoia water samples using a spectrophotometer. The chromophoric materials in the samples were determined at original and adjusted (7.6) pH. It was found that the treated wastewater (DP) contained a higher content of chromophoric materials than both the untreated wastewater (BC) and River Nzoia water (WSC). Seasons did not seem to affect the content of chromophoric materials in treated wastewater as they did in untreated wastewater and River Nzoia water.

Keywords; colour, chromophoric materials, dominant wavelength, purity, hue, luminous transmittance, wastewater.

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