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PHYSICO -CHEMICAL ANALYSIS OF EFFLUENTS FROM COSMETICS AND TOILETRIES INDUSTRIES

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ABSTRACT

Samples of effluents were randomly collected from three cosmetics and toiletries industries within the Lagos metropolis. Control samples were equally collected from a ground water source. The effluents were analyzed for arsenic, cadmium, chromium, lead, zinc, iron, chloride, phosphates, biochemial oxygen demand (BOD), Chemical oxygen demand (COD), oil and grease, total suspended solids (TSS), total dissolved solids (TDS), turbidity, conductance and total hardness. The levels of these parameters were higher in the effluent samples compared to the control samples. The TDS, BOD, chloride, phosphate, chromium and zinc of the effluents collected from the industries have mean values (mg/L) of 299.58 8 ± 48.40, 234.31 ± 32.44, 336.38 ± 36.49; 206.68 ± 23.39, 8.66 ± 0.45, 2163.15 ± 1327.97; 39.11 ± 13.99; 34.30 ± 6.65; 6.23 ± 3.18, 10.77 ± 5.90, 0.02 ± 0.01, 1.42 ± 0.96; 15.20 ± 3.91, Not Detected, 23.25 ± 25 ± 22.64; 1.35 ± 0.90, 0.46 ± 0.16, 0.89 ± 1.13 respectively. While control means of 264.00 ± 52.26 mg/L, 6.00 ± 1.63 mg/L, 0.04 ± 0.03 mg/L, 0.01± 0.01 mg/L Not Detected, and 0.06 ±0.02 mg/L respectively were recorded for TDS, BOD, chloride, phosphate chromium and zinc. These values were compared with the effluent discharge limits set by the Federal Environmental Protection Agency. (FEPA).

Key words: Effluent, wastewater parameters, pollution, heavy metals. .