



Keywords:

acquiring Nifas Silk Plant, Tekle Haimanot Plant, Gondar Plant, and Dessie Plant from the Ethiopian Privatization Agency with paid capital of Birr 108,654,000. e Company currently has seven operating units including Summit Plant, Bure Plant, and the recently inaugurated Hawassa Plant in the Southern Nations and Nationalities People's Region.

e major products of MOHA So Drinks Industry S.C. are: Pepsi Cola, Mirinda Orange, 7-Up, Mirinda Tonic, Mirinda Apple (all Pepsi Brands), and Kool (Bure Kool and Tossa bottled water products). e Annual Turn-over of the company has reached to Birr 556 million and sales stands at an average annual growth rate of 12%.

Method of sampling

are below the guidelines and standards, there is still the need for a view to ensuring compliance. treatment to ensure that the surface water is pathogen free.

Conclusions and Recommendations

Conclusion

the results showed as follows:

(a) the COD values ranged from 2,166 to 3,192 mg/L WHO guidelines gave an acceptable range of 2,166 to 3,192 indicating that based on COD values alone the effluents can be discharged into surface streams without any negative impact.

(b) the TS ranged from 440 to 703 mg/L, TVS ranged from 223 to 514 mg/L while the TSS ranged 0 to 230 mg/L. While the value for the TSS was higher than the maximum limit set in WHO Guidelines, the total solids concentration was well within the limit.

(c) the pH ranges from 6 to 7.5 for breweries and 7 to 8 for food processing. WHO guidelines gave an acceptable range of 6-9 indicating that based on pH values alone the effluents can be discharged into surface streams without any negative impact.

(d) the coliform count, measured as MPN/100 mL ranged from 43 to 150 while the value for the TKN ranged from 5.6 to 33.6 mg/L.

Recommendations

The basic responsibility for pollution control in Ethiopia lies with the federal state Environmental Protection Agencies. To ensure that our surface waters are safe from the negative impacts of effluent discharge from industries, the following recommendations are made as a way of oil WHO ohat Mgave 585 >>BDC>BDC 0 Tw Mno WI65 D 5coverto 703ml from hat Mrelevae foll6(DC 0..5(eendations are made as a 600)0.5(e

Finally, in the absence of standards for some certain pollution parameters, industries should set up their own in-house quality limits for these parameters as reported for the east Africa bolting company,

Anaerobic digestion

Acknowledgements

The authors are grateful to Asmel Abdu who was very useful and to the Department of Earth Science and Chemistry, Mekelle University for the Analysis of the sample the collection of samples for this study.

References

- 2 NHUHNH &' (QYLURQPHQWDO 3ROOXWLRQ Publication, Owerri, Nigeria.
- Otta JW, Cable JK (1987) Land application of wastes from brewing and distilling. In proc. of the 1987 food processing waste conference. Georgia Tech Research Institute, Atlanta, Georgia.
- Proceedings of the 1987 Food Processing Waste Conference (1987) Georgia Tech Research Institute, Atlanta, Georgia. pp. 129-144.
- Greenberg AE, Clesceri LS, Eaton AD (1985) Standard Method for the Examination of Water and Wastewater. 16th edn. American Public Health Association (APHA), Washington, USA.
- Environmental Protection Act. Second Schedule (Regulation 3). Government Press, Lagos.
- FEPA (1991) Guidelines and Standard for Environmental Control in Nigeria. Federal Environmental Protection Agency (FEPA).
- Chatterjee AK (2010) Water Supply, Waste Disposal and Environmental Engineering. 8th edn. Khanna Publishers, New Delhi, India.
- Journal of Applied Environmental Science and Technology 42: 5197-464.8141 Tr
- Tchobanoglous G, Burton FL, Stensel HD, Metcalf E (2003) Wastewater Engineering: Treatment and Reuse. TATA McGraw-Hill Publishing Company, New York, USA.
- Evaluation of the effects of industrial wastewater discharge on surface water (A case study of Nigeria Breweries Plc Enugu). Greener Journal of Physical Sciences 2: 056-063.