Bioremediation of pulp and paper mill effluent using isolated Bacillus strain and its impact on the pH of effluent

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ABSTRACT: This study focussed on the effect exerted by Bacillus strain on the pH of the pulp and paper mill effluent. The study aimed at bioremediation of paper mill effluent using Bacillus stratosphericus, the result of the experiment indicated that after 48 hours of treatment a reduction in colour (47%), COD (73%) and lignin (33%) was observed suggesting its potential tool for treatment of wastewater. In addition, the pH of the effluent was varied from 4-9 at regular interval of 1 unit and was inoculated with bacterial strain and was kept at 35°C at 200 RPM for 48 hours. The study indicated that Bacillus possessed inherent capacity to adjust pH favourable for its growth ranging from pH 7.4-8.7.