

TITLE: ANALYSIS OF CHLORINE EFFICIENCY IN THE REDUCING COLIFORMS IN THE SANITARY EFFLUENT OF SEPTIC TANK TREATMENT SYSTEMS WITH ANAEROBIC FILTER AND CALCIUM HYPOCHLORITE

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ABSTRACT:

The lack of basic sanitation is still a problem in Brazil, only about half of all sewage produced undergoes treatment, due to difficulties in introducing sanitary effluent treatment plants considering that most Brazilian cities do not have financial resources for implementation and maintenance of these stations. In this way, many cities have been adopting different methods for treating sewage before discarding into the rain network. Thus, this work aimed to analyze the efficiency of chlorine in the reduction of coliforms in the sanitary effluent of a treatment system with septic tank, anaerobic filter and disinfection. Six sanitary sewage treatment systems were evaluated from different condominiums from august to december 2019. To check its efficiency, the following parameters were analyzed: pH, thermotolerant coliforms, free residual chlorine and chemical oxygen demand (COD). The results showed that of the six stations evaluated, only one (16,78%) presented the amount of thermotolerant coliforms within the permissible standards. Furthermore, of these only three stations (50%) presented the concentrations of free residual chlorine according to the required parameters. In addition, COD was high at four (66,66%) of the analyzed stations. These data allow us to conclude that the efficiency of chlorine in the reduction of coliforms in the sanitary effluent from a septic tank treatment system, anaerobic filter and disinfection unfortunately may not be happening, because this type of system needs to be well operated and inspected frequently, since the operation is mostly done by users.

Keywords: Coliforms; Disinfection; Sanitary effluent.

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