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“CLEANER PRODUCTION INITIATIVES AND CHALLENGES FOR A SUSTAINABLE WORLD”

Electrochemical Remediation of 17 α -Ethinylestradiol under Different Agitation and Electromotive Force

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Abstract

Among many species that exist in urban or industrial wastewater, endocrine disruptors are substances that can alter the functioning of the reproductive system, causing feminization of species, causing diseases like breast cancer, uterine cancer and prostate cancer, abnormal sexual development, reduced male fertility, increased incidence of polycystic ovaries, disturbances in the functions of the ovary (follicular growth and ovulation), fertilization and pregnancy. In animals may deregulate the reproduction and development of organisms. Among these substances is the 17 α -ethinylestradiol as synthetic estrogen developed for medical use in hormone replacement therapies and contraceptive methods, having high potential estrogen and has been ranked as one of the most responsible in triggering endocrine changes in organisms exposed to surface water. This paper presents a study of the use of sheets of carbon as electrode material for electrochemical remediation of 17 α -ethinylestradiol. In this context we evaluated the efficiency of electrochemical oxidation for ethinyl estradiol at different flow conditions, potential and electrolytic means.

Keywords: *endocrine disruptors, cardboard, carbon electrochemical oxidation.*

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