BIBLIOMETRIC ANALYSIS ON PETROLEUM-DERIVED HYDROCARBONS AND ECOTOXICOLOGICAL EFFECTS IN BRAZIL

Giovanna Andreoli[1]; Maria Eduarda Basílio[1]; Jeamylle Nilin[1]

[1]Institute of Biology, Universidade Federal de Uberlândia

INTRODUCTION: When petroleum comes into contact with the environment, its original composition undergoes changes, releasing toxic compounds that can persist in the environment for many years. For this reason, studies are conducted to determine the potential ecotoxicological effects that petroleum-derived hydrocarbons may have on living organisms. OBJECTIVE: To map and analyze scientific publications addressing petroleum-derived hydrocarbons and their ecotoxicological effects in Brazil, in order to understand trends in the themes, temporal patterns, and connections among researchers and research centers. MATERIALS AND METHODS: Data collection was conducted through the Web of Science, covering publications from 1997 to 2024, using the keywords “hydrocarbons,” “toxicity,” and “Brazil,” which resulted in 464 publications. These were reviewed and selected according to the established objective, resulting in 142 articles. The collected data were tabulated according to the following items: first author, affiliation, year, keywords and journal. RESULTS: A total of 128 authors from 43 different institutions were observed, the majority (42.25%) located in the Southeast region. The articles were mainly published in the journals Marine Pollution Bulletin, Chemosphere, and Aquatic Toxicology, with 70.5% of them published between 2015 and 2025. The most frequent keywords were polycyclic aromatic hydrocarbon, toxicity, and marine pollution. CONCLUSION: Based on the analysis, the study revealed a growing interest in research related to hydrocarbon toxicity in Brazil over the past 10 years, mainly due to the increasing need for environmental health monitoring. Research efforts were mainly concentrated in the Southeast region, due to the higher number of productive activities and trained professionals in the field of ecotoxicology. The highest number of publications occurred in the Marine Pollution Bulletin, which may be associated with the fact that most tests involved the marine aquatic environment. The keywords highlighted that most scientific articles focused on the impacts of polycyclic aromatic hydrocarbons, their toxicity, and marine pollution in the brazilian context.

KEYWORDS: toxicity; ecotoxicology; environment; pollution

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