
ABSTRACTS

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INHIBITORY EFFECT OF EMPTY PALM FRUIT BUNCHES' BIO-OILS AGAINST SEED GERMINATION AND SEEDLING GROWTH OF THREE SELECTED SEEDS

(pages 33-41)

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Keywords: allelopathy, seed germination, tomatoes, okra, Amaranthus.

Abstract: In a search for effective methods for controlling seed germination and growth, bio-oils were produced from pyrolysis of bunches of empty palm fruit at different temperatures. Physicochemical chemical characteristics of the bio-oils were evaluated using standard analytical procedures. Allelopathic activities of the bio-oils were evaluated against three selected seeds (tomatoes, okra and Amaranthus). The percentage germination inhibition was calculated for each seed after 72 h of germination. The yields of the bio-oils are 22.07%, 35.13% and 37.47% at 400 °C, 500 °C, and 600 °C, respectively. The bio-oils are acidic and contain compounds such as phenols, phenol derivatives, alkanes, and organic acids. The results revealed that the empty palm fruit bunches' bio-oils have inhibitory effects on the three selected seeds. The percentage seed germination decreased with increasing concentration of the bio-oils while the inhibitory effect of the bio-oils on seedling growth increased significantly with increasing concentration of the empty palm fruit bunches' bio-oils. The bio-oils obtained at different pyrolytic temperatures showed appreciable allelopathic activities.

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INTERDISCIPLINARITY IN SCIENTIFIC RESEARCH: THE EMPLOYMENT OF TECHNOLOGICAL TOOLS IN DATA ANALYSIS WITHIN AN INTERDISCIPLINARY CONTEXT

(pages 42-45)

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Keywords: interdisciplinary, technology, data analysis.

Abstract: This article aims to present the importance of using technologies in data analysis for scientific research in an interdisciplinary context. It is known that technology currently constitutes a tool in common between different areas of knowledge, which makes it an instrument of great relevance for both parties, as it facilitates the researcher to analyze large amounts of information in different areas in a technical, practical and technical way, minimizing the margin of error. These relationships between different areas of knowledge, especially within scientific research, are very important to have a better understanding of a subject under discussion, and to find explanations for such facts and questions. In view of this, to evidence such facts, bibliographical research was carried out as methodological procedures, in which already published works were used as a source, such as: articles, master's dissertation, doctoral thesis and books, to validate/relate in order to present the contributions of several authors on the proposed theme. Finally, the research findings could show that, with the advancement of technology, as discussed in the text, much software with the help of the internet and some electronic devices such as notebooks, tablets, smartphones, among other resources, have been favoring this type of work and providing the speed and precision in obtaining and analyzing data, improving the execution of tasks in an agile, precise and compensatory way.

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HAVE COMPANIES IN INDONESIA DISCLOSE ENVIRONMENTAL ACCOUNTING?

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Keywords: Fekrat scoring, environmental, CSR, business continuity, Indonesia.

Abstract: Environmental accounting is an effort to minimize the negative impact on the environment of the company's operational activities, both monetary and non-monetary. This effort is carried out by identifying the environmental impacts of the company's operations and the costs of handling these impacts. There have been several regulations referring environmental accounting disclosures, but the application of these disclosures is still voluntary. The investigation focuses on the importance of environmental accounting disclosures, i.e. to find out whether companies in Indonesia have disclosed environmental problems from their operations. The data is supported by the annual reports of companies listed on the Indonesia Stock Exchange (IDX) in 2021 in all industries. Methods of data analysis using scoring techniques or assessments using the Frictional scoring method and descriptive analysis. We found that the average disclosure in each aspect of the assessment model Fekrat shows zero and one. The other side shows that most of the companies sampled in this study have not made environmental disclosures. The contribution of this finding can serve as a basis for policymakers in Indonesia to assess the effectiveness of related regulations in environmental protection efforts. Apart from that, other

facts also show the need for the legitimacy of the IDX as a capital market operator to require companies to disclose environmental accounting in their annual reports. The professional practical and research implications for the future relative also to the concept of dealing with, changing, and significantly implementing consortia in sustainable environmental accounting mechanism.

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POSSIBILITIES OF THERAPY IN THE DENTAL AREA WITHOUT THE USE OF DENTAL PROSTHESES - REVIEW

(pages 58-66)

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Keywords: regenerative medicine, stem cells, regenerative therapy, dental stem cells, maxillofacial defects.

Abstract: Dental regeneration therapy opens up access to the provision of biocompatible and living functional tissues, in contrast to current therapies based on prostheses and implants. The identification of dental stem cells has supported research and the effectiveness of therapies for dental defects. For maxillofacial defects after various tooth extractions, traumas and other conditions caused by periodontal diseases, categorized grafts, such as autografts, allografts and xenografts, are also used to regenerate lost bone.

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PROPOSAL FOR OPTIMIZATION OF BIOMEDICAL FILAMENT PRODUCTION

(pages 67-70)

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Keywords: Laminar box, filament, filament maker, extrusion.

Abstract: Filament production is a demanding process, which we decided to optimize by designing a laminar box in this scientific study. From a number of designs, we decided to choose a purposeful design for the future construction of the laminar box. The production of filaments takes place on a filament maker, which must be placed in a laminar box. The laminar box then provides ideal conditions in the production process, such as the optimum ambient temperature, which according to standards should be in the range of 18 to 19 degrees Celsius. Furthermore, this laminar box is equipped with a thermometer, hygrometer and control unit. All technical specifications are written in this scientific study. The study contains a number of illustrations for a better idea. The laminar box represents a significant contribution to the production and optimization of the conditions for the production of biomedical filaments. His design is unique and follows from the scientific research of the authors of the scientific study.
