Análisis de ciclo de vida en aceites esenciales y productos agroindustriales: una revisión de aspectos metodológicos. [

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Analítica

Contextualization: Life Cycle Assessment [LCA] is a useful tool for assessing the potential environmental impacts of a product. Due to the growing interest in climate change mitigation and on the implementation of sustainable practices of production, it is interesting to study the environmental profile of essential oil products and similar products to identify shortcomings in current technologies and possibilities for improvement. Knowledge gap: the existing literature about the essential oil production lines is quite limited, although its production is similar to other products derived from agricultural materials, for which the bibliography is more extensive. Purpose: to review the methodological aspects addressed in research related to life cycle analysis of agricultural feedstocks, with focus on essential oil production. The study was focused on those studies that employed a non-conventional approach describing the reasons for their methodological choices. Methodology: research papers from the last 12 years, which analysed the life cycle of agro-industrial products, were searched and filtered. The aspects reviewed included the scope, the impact categories, the functional unit, the sources of information, the allocation methods, and the tools (software and database) used. Results and conclusions: using the previous aspects, it was possible to identify methodological trends such as the general use of a cradle-to-gate approach, the use of SimaPro software coupled with the Ecoinvent database, and mass and economic allocation methods. Regarding the last method, it was found that the economic allocation is more accentuated in the case of essential oils, due to the significant differences that exist between their mass and economic value
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