

O 124. WHICH IS GREENER: PLASTIC BOTTLES OR ALUMINUM CANS?

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ABSTRACT: Bottled and canned drinks are big business in the world. For soft drinks, the same product comes packaged in a variety of different containers. So, what is the best environmental option – plastic bottle or aluminium can? This study aims to compare the life cycle environmental sustainability of plastic and aluminium packaging. Life cycle assessment (LCA) study has been carried out in compliance with the ISO 14040 and 14044 standards. The scope of the study is from cradle to grave starting with the extraction of natural resources to final disposal of the product. LCA study is conducted on the packaging of 1000 litres soft drink in 330 ml Al-cans and 200 ml PET bottles produced. LCA software tool CCaLC2 has been used for calculating carbon footprint. The comparative LCA study reveals that the Aluminium cans are found to have the higher environmental impact than PET bottles. In addition, the resulted environmental impacts could be significantly reduced via increasing the respective recycling rates of the two investigated packaging materials.

Keywords: Life cycle analysis, sustainability, packaging, carbon footprint and environmental impact