Development of a Compact Easy-to-Use Carbon Footprint Analysis Software for Food and Beverage Packaging

CFPack Software (Copyright)

CFPack software was specially developed for packaging designers and manufacturers to estimate carbon footprint of food and beverage packaging products. This is an easy-to-use program to help reducing greenhouse gas (GHG) emissions, and to support your Eco-design products.

The software requires ONLY Microsoft® Excel version 2003 or 2007.

This is available on 5 types of packaging as follows:

1. Plastic containers: food grade e.g. PE, PP, PET,PS.
2. Corrugated box: FEFCO and ESVO standard
3. Glass bottle, and
4. Aluminum can

Structure of Software

The structure of software is separated into two main spreadsheets, namely input sheet and result sheet, including diagram& graphillustration.

There are five parts to enter data covering the entire product's life cycle to analyze the carbon footprint including:

- Characteristic of packaging
- Raw Material procurement and Manufacturing phase
- Use/Consumption phase
- Transportation phase
- Final disposal

The software will calculate the carbon footprint automatically and display the result in terms of kilograms of carbon dioxide equivalent (kg CO_2eq) for each phase and for the total product's life cycle in form of table, diagram and graph.

Input

Result (Diagram and Graph)

Example of input sheet: Raw Material procurement and manufacturing phase

Source: Master's Theses – Department of Sanitary Engineering, Faculty of Public Health, Mahidol University