

・研究課題名＝”Systematization and application of analytical and evaluative methods of waste prevention”

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・要旨 ( 200 語以内 ) ＝

In this study, we systematized the methodologies for the analysis and evaluation of waste prevention, and applied several methods to evaluate some waste-prevention activities. We developed the waste-prevention index system based on a decomposition analysis. We also estimated the potential reduction of packaging achieved by the change of packages and containers, utilizing the method with POS data.

We also evaluated the replacement of home appliances with energy-saving ones in various replacement conditions, such as purchasing larger-size or top-runner products, postponing replacement to next year, and taking various environmental impacts into account, by using an original prescriptive LCA. Results showed that replacing a refrigerator was energy-saving in all cases examined, but replacing an air conditioner that is not often used was not necessarily energy-saving, and replacing a TV with a larger one increased the energy consumption in many cases.

As for packaging waste prevention activities by retailers, we examined the practice of selling meat in plastic bags instead of PSP trays, and showed that it could reduce packaging waste and be accepted by consumers. We also developed a new gaming tool CROSS ROAD on 2Rs and a random parameter logit model for clarifying the structure of awareness about waste prevention behaviors.

(199 語)

・キーワード ( 5 語以内 ) ＝ Waste prevention methodology, packaging waste, selling technique, energy consuming products, replacement judgment