

## **ESTIMATE ON DIFFUSION RATE OF CONTAMINANT IN RECYCLING LINE OF FOOD-TRAYS BY FPCO'S METHODS**

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**ABSTRACT.** Reduction of the amount of wastes coming from food containers and packaging is one of urgent issues for the humankind. Japanese manufacturers, including F. P. Corporation, are devising their own recycling system of disposable food containers for reusing resources in containers and packagings. Without waiting the Guidelines issued by the Ministry of Health, Labour and Welfare of Japanese Government, it is indispensable to ensure food safety when the manufacturer uses such recycled materials. This paper then intends to present methods for estimating a diffusion rate of contaminant if it is contained in post-consumer food containers and enters the recycling line. Our methods will be explained by applying them to the recycling line realized by F. P. Corporation. As our methods are quite general, they may easily be applied to any other recycling lines.

*Key words and phrases.* Diffusion Rate, Contaminant, Recycling Line, Food-Trays.