

RECP Best Practice Catalogue

Better scheduling product changeovers
Developed within the framework of MED TEST II
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UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION



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Best Practice - Better scheduling product changeovers

SECTOR:	Food & Beverage
SUBSECTOR:	Manufacture of soft drinks; production of mineral waters and other bottled waters
PRODUCTS	Soft Drinks
CATEGORY	Good Housekeeping
APPLICABILITY	Process
COMPANY NAME	---
COMPANY SIZE	Large

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Description of the problem
(Base scenario):

The company changes the flavours of drinks 3 – 4 times a day which affects water usage due to switching from one flavour to the other. This is done based on demand. In order to keep high level of freshness, the company tries to ensure that products last for 60 days only when being distributed to the market.

Description of the solution

The company will try to reduce the flavour change per day to reduce the number of CIP cycles, however, the implementation of this measure is related to market demand.

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Economic Benefits

Reducing one CIP cycle each day shall lead to:

5 m³/day of water could be saved (25%); $5 * 300 \text{ days/year} * 2 \text{ Euro/m}^3 = 3,000 \text{ Euro/year}$

6 kWh/day of electricity could be saved; $6 * 300 * 0.12 \text{ Euro/kWh} = 214 \text{ Euro/year}$

35 kg/day of HFO could be saved; $35 * 300 * 0.408 \text{ Euro/kg} = 4,280 \text{ Euro/year}$
Total = 7,494 Euro/year

Note: This measure will not affect the total volume of production per year. It will organize the production schedule with regard to the number of flavors produced per day.

Environmental Benefits

25% reduction of resource intensity for inputs used in cleaning

Energy Saving = 1,800 kWh/year

Water Saving = 1,500 m³/year

HFO saving = 10.5 ton/year

Reduced CO₂ emissions = 34.5 ton/year

Health and safety impact

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Capital investments & financial indicators	Investment= €0 (GHK) Pay Back period= immediately
Suppliers	-----
Other aspects	-----
Implementation	Implemented.