

RECP Best Practices Catalogue

Recycling process water

Developed within the framework of MED TEST II



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION



The SwitchMed Programme is
funded by the European Union

Best Practice - Recycling process water

SECTOR: Food & Beverage

SUBSECTOR: Manufacture of vegetable and animal oils and fats

PRODUCTS Margarine, cheese, pastry products, edible fats

CATEGORIES Process control or modification

APPLICABILITY Process

COMPANY SIZE Between 200 and 500



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Description of the Problem (Base Scenario): The company generates an average of 20 m³/ h of waste water that could be recycled for secondary use. Some pollution parameters of this waste water (such as COD, suspended solids) do not comply with the national regulations in force.

Description of the Solution

In order to allow the recycling of some of this water, it will be necessary to carry out the following steps:

- A preliminary assessment of water consumption to characterise qualitatively and quantitatively the liquid discharge leaving at each unit operation.
- We propose a technical feasibility study in the first phase, before tackling the actual implementation. Solutions to minimise consumption and releases will be proposed.
- A full feasibility study will be conducted to determine all the technical and financial details of the possible setting up of a waste water treatment plant.

NB. Treating and recycling the company's waste water will undoubtedly have a positive impact on the environment in general and this is the main objective of this project.



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Economic Gain	The evaluation of savings will be assessed on the basis of water savings. We estimate that more than 20% of the discharge can be recycled, which is a water savings of 26,400 m ³ /year, (20 m ³ /hour x 20 h/day x 330 days/year x 20%), or using the water supplier's rate (€1.19/m ³), that is a gain of about € 31,400/year
Environmental Gain	Approximately 26,400 m ³ of water resources preservation
Health and Safety Impact	None



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Investment & Financial Indicators	The details of cost will be determined after the completion of a feasibility study. (Time for Return on Investment: Less than 5 years)
Suppliers	Local
Other aspects	Compliance with national regulations on liquid discharges
Implementation and new indicator	Scheduled for 2018



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