RECP Best Practice Catalogue

Dough recovery

Developed within the framework of MED TEST II

July 2018

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

switchmed

The SwitchMed Programme is funded by the European Union

Best Practice - Dough recovery

SECTOR:	**Food & Beverage**
SUBSECTOR:	Bakery and farinaceous products
PRODUCTS	Different types of sweets
CATEGORY	Good Housekeeping
APPLICABILITY	Process

COMPANY NAME	---
COMPANY SIZE	Medium

Best Practice - Dough recovery

Description of the problem (Base scenario):	21 tons of dough were lost per year based on the conducted measurements in the relevant processes (mainly from the filling process of the rough processed dough by which 17.5 ton of waste was generated). 209 tons Flour & Water → Mixing → LPG roasting machines → Filling, oil firing and products' cutting processes (188 tons of dough in the final product) ↓ 0.5 tons ↓ 3.0 tons ↓ 7.5 tons of solid waste
Description of the solution	Improving the operational procedures and providing staff training shall lead to a reduction of the generated waste flows. There will be implemented the following GHK measures: – Feeding rate of the rough processed dough to the roasting machines is reduced for the sake of better control. – Specific length of the rough roasted dough is allowed (by using a metal ruler and the rectangular plates) in filling process to prepare filled rolls with the same length and relatively short unfilled edges. – Reduce the amount of the soft processed dough in the roasting machines and put a plate under the outlet of each machine to collect the spillages and return them to the process. – Apply regular calibration of the speed and direction of roasting machines and ensure that they are well emptied from the soft roasted dough.

Best Practice - Dough recovery

Economic Benefits	Based on the conducted measurements of the generated waste after applying the GHK measures, following quantities could be saved: Saving of dough = 14 ton/year since the generated waste of dough (raw and processed) was reduced to only 7 ton/year based on daily measurements of generated waste flows. Which leads to a saving of around € 1,000/year
Environmental Benefits	Total solid waste reduced and raw materials saved= 14.0 ton/year (67% of the generated waste and 6.7% of the total input of raw materials used to prepare the dough (=14/209*100%))
Health and safety impact	---

Best Practice - Dough recovery

Capital investments & financial indicators	Investment= Negligible Payback period= immediately
Suppliers	----
Other aspects	The productivity of production of dough is increased by 7.4% (=(188+14)/188*100%)-100)).
Implementation	Implemented. Results provided in this best practice were verified as per the measurements conducted before and after implementation of this measure. The company applies a daily weighing of the generated waste from each process to properly monitor the performance of its staff and savings.