

MED TEST III Palestine

Transfer of Environmentally Sound Technologies

Food and beverage sector *Al-Rawafed food company*

Company overview

Number of employees:

85 Full time- employees

Key products:

Concentrated syrups, dry powder products

Main markets:

Palestine

Standards & certifications before MED TEST III:

None

Located in Nablus – Palestine, the Al-Rawafed Company for Food Industries and Juice is a leading manufacturer in the Palestinian food industry. Established in 1960, the Al-Rawafed company imports, produces and supplies a full range of food products for households, confectioneries and bakeries. The company produces more than 30 well-known food products distributed in Palestine using the most advanced machinery and packing technology. All products are prepared from ingredients listed as GRA (Generally Recognized As Safe) by the FDA, and they comply with international standards and regulations.

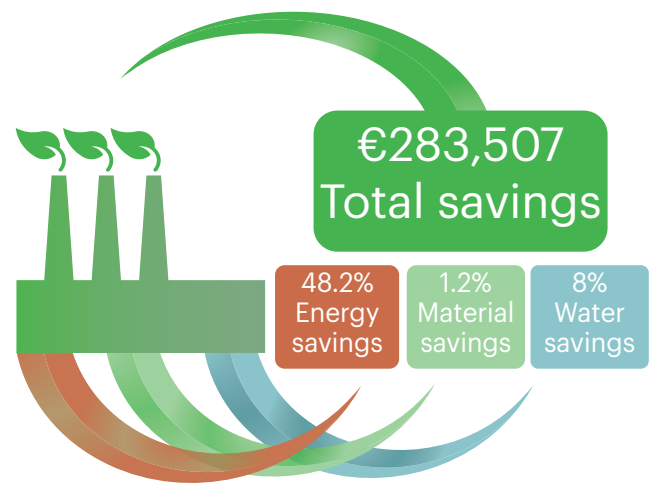
Benefits

The MED TEST III project could identify significant cost savings in the Al-Rawafed manufacturing facility. The total annual savings achieved from the identified saving measures account for 283,507 Euro* (1,046,142 NIS) with an investment of 207,291 Euro* (764,905 NIS). The average payback period for the whole project is 0.7 years.

Implementing cleaner production methods in the technological process resulted in an annual water savings of 8%, energy savings of 48,2% and raw material can be saved by 1,2%. In addition to cost savings, the project also reduced waste and emissions and minimized the facility's impact on the environment.

Implementing the project also helped improve the efficiency of production processes, leading to improved product quality and consistency, which increased customer satisfaction and loyalty. The project's success has improved economic outcomes and enhanced the facility's reputation as a socially responsible business, benefiting both the environment and the community.

Identified annual savings



“

Bringing in a third party to assist us in adopting more efficient and sustainable practices is a strategic decision that will allow us to identify areas for improvement and continue to elevate our operations to the next level. We believe that investing in sustainability is the right thing to do and makes good business sense in the long term.

Saed Zaatr
Procurement manager

”



Visit SwitchMed.eu

As part of the EU-funded SwitchMed programme, UNIDO demonstrates in the MED TEST III project pathways for industries in the Southern Mediterranean to become more resource efficient and to generate savings for improved competitiveness and environmental performance.

This publication has been produced with the financial assistance of the European Union (EU) and SwitchMed co-funding partners. The contents of this publication are the sole responsibility of UNIDO and can in no way be taken to reflect the views of the EU.

SwitchMed is co-funded by:

Saving opportunities**

Actions	Economic key figures			Resource savings & Environmental impacts		
	Investment Euro*	Savings Euro* per year	Payback period years	Water & Materials per year	Energy MWh per year	Environmental impact per year
Steam boiler maintenance and optimization	68,012	29,553	2.3	1 ton	249	115 tons CO ₂ 414 m ³ wastewater 4,3 tons of solid waste
Other energy conservation measures	8,493	7,350	1.2	-	50	
Resource efficiency in the syrup production unit	63,035	89,948	1.5	414 m ³	58	
Resource efficiency in the dry powders production unit	67,751	156,656	0.4	48 tons	-	
TOTAL	207,291	283,507	0.7	414 m³ 49 tons	357	

*Exchange rate as 1 Euro = 3.69 NIS (New Israeli Shekel)
** Numbers based on production value from 2021

Steam boiler maintenance and optimization

The factory's 3.5-ton-per-hour capacity boiler, which produces 4-bar steam for sugar syrup and rose water production, offers several saving opportunities. These include excess air calibration, steam network insulation and leaks maintenance, blow-down control and intake water preheating.

Other energy conservation measures

The two outside containers operating as storage refrigerators need door maintenance. Installing Variable Frequency Drives (VFD) on the outside unit will also provide a good saving opportunity. Heat recovery from syrup production can be utilized to preheat the boiler input water, while retrofitting fluorescent lamps with LED and installing occupancy sensors in the storage area will reduce electricity consumption due to unnecessary lighting. In addition, Standard Operating Procedures (SOPs) for detecting leaks and periodically fixing these, have yet to be developed. These SOPs will ensure fixing the leaks quickly and efficiently.

Resource efficiency in the syrup production unit

Automating the concentrated syrup line will optimize the process and reduce waste in filling line drippings and sugar preparation. By fixing the filling line drippings and by shifting to sugar preparation with a continuous homogenizer, the process will be optimized in a significant manner due to continuous production compared to the existing batch operation. This is especially important as the company's concentrated syrup products are top-selling items.

Resource efficiency in the dry powders production line

The dry powder production line presents several opportunities for optimization to reduce raw material losses and labour costs. The major step in achieving savings is optimizing the filling line dosing. In addition to this, replacing plastic barrels to store mixed dry powders with vacuum pipes will save space and make the process much more efficient.

“

Looking back on the project, we take pride in its achievements and benefits to our business.

By implementing cleaner production methods, we have successfully reduced waste, improved resource efficiency, and reinforced our reputation as a responsible Palestinian company. We firmly believe in investing in sustainability is not only an ethical, but also a wise business choice. The data and numbers obtained from the MED TEST III project have played a crucial role in shaping our approach to resource conservation and have provided new insights to our team.

Nidal Zatr
CEO

”

For more information contact:



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

United Nations Industrial Development Organization
Ms. Ulvinur Müge Dolun
Division of Circular Economy and Environmental Protection
Circular Economy and Resource Efficiency Unit
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
E-mail: u.dolun@unido.org Web: www.unido.org