

**Edesia Inc.**

A Mellifiq reference project



# Mellifiq ensures product quality for American nutrient food producer

**SteriMaid™ prevents microbial intrusion into critical production areas**

**MELLIFIQ**

# Edesia Inc., Rhode Island, USA

Edesia Nutrition is a non-profit organization founded in 2009 to help prevent malnutrition, a health crisis responsible for the deaths of 3 million children each year. Based in Providence, RI Edesia has grown rapidly and now produces 1.2 million packets of ready-to-use food. Plumpy'Nut® is their main product, which complies with the WHO definition of RUTF (Ready-to-use therapeutic food) by using a special F-100 milk formulation. The production of Plumpy'Nut® is completely automated, with the highest standards of hygiene and contamination prevention.

## Facts

Name:	Edesia Inc.
Location:	Providence, Rhode Island, USA
Industry:	Food production
Air volume:	12,000 m <sup>3</sup>
Room layout:	Two warehouses, seven rooms in total
Purpose:	Room sanitation for bacteria and viruses
Performance:	More than 3 ppm ozone concentration with 4-log bacteria reduction

## Solution:

### SteriMaid™ sanitation solution and Ozonetech RENA Pro C6

Dimensions (HxWxD):	1,800 x 1,200 x 800 mm
Weight:	190 kg
Input power:	2.8 kW
Number of wireless ozone sensors:	10

## The problem

The production plant at Edesia Nutrition is very large, due to its high capacity and the various processing steps. The facilities are divided into two main warehouses, with a total air volume of 12,000 m<sup>3</sup>, which consists of several individual production areas.

Bacteria contamination is one of the most common problems in the food industry, which may lead to sudden



Plumpy'Nut® peanut-based nutrient pouch.

production losses. Even if the standard at Edesia Nutrition was the highest, they wanted to add an additional layer of protection. The quality assurance implementation needed to be performed with ozonation. The sanitation of each room needed to be effective, fast and automated, with no disturbance to the production process. It was also crucial for Edesia to be able to

prevent risks from inadvertant external contamination due to human factors. This case was particularly challenging due to the large volumes and complex room layout. In addition, the ozone concentration needed to be continuously measured in the sanitized room.



The home screen of the SteriMaid™ with wireless ozone sensor communication.

## The solution

A treatment cycle is considered successful only when a certain ozone concentration is maintained for a predetermined period.

The SteriMaid™ was the ozone system chosen for this application, due to its high degree of automation and out-of-the-box-functionality. This product is an upgrade of the regular version of the RENA Pro C-series, with a special module designed for sanitation applications. This addon allows to define the desired ozone concentration and sanitation time. In addition, settings for multiple rooms can be saved, with possibility

of selecting the treated room easily from the included user interface. The user friendly interface touch panel also presents information about the progress and completion of the sanitation cycle.

The SteriMaid™ module is actively controlled through a user-defined set of wireless ozone sensor. The sanitation progress can be closely monitored and automated through a functionality with customizable sanitation cycles.

## Evaluation

Mellifiq performed commissioning with the plant operations manager. The system outperformed the 0.7 ppm active sanitation requirements. The SteriMaid™ was integrated in Edesia's operations, implementing a routine of regular sanitation cycles. Each room is treated with no disturbance to the production line and is a completely automated operation. After each sanitation cycle, no microbial contamination can be dedected. At the same time, the system is adding an additional layer of protection for operators.

The plant's operation manager is satisfied with the new sanitation levels reached, coupled with a safer environment for employees.



*The SteriMaid™ tested at Mellifiq factory.*

# About Mellifiq

Mellifiq is a multi-awarded environmental service company group, that has since the early nineties evolved into a world leading system and solution provider with multiple groundbreaking applications for industrial, municipal, and real estate clients. We supply cutting-edge technologies to manage the most sophisticated air, water, and energy challenges.

Mellifiq offers a complete range of air and water treatment technologies and solutions across multiple industries such as processing industry, energy sector, food and beverage, pharmaceutical, wastewater treatment and commercial real estate.

Mellifiq offers strong and renowned brands, such as Ozonotech, Nodora and Water Maid, and world-class engineering services combined an excellent track record of more than 40 years of innovation. We help our clients achieve the most efficient and sustainable solutions while creating the maximum value for their businesses.

With several business units across Europe, Mellifiq is headquartered in Stockholm where research and development, production, QA and certification all take place. Our unique technology and our extensive expertise have made us the Center of Excellence for the world's most complex projects, and a global player with installations on all six continents.

Everyday millions of people rely on our solutions for ventilation, disinfection, sanitation, and odor control. We are committed to raising the bar for the concept of clean and the industry standard for engineering, technical services and general contracting.

For additional information, visit our website at [www.mellifiq.com](http://www.mellifiq.com)

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