HYGENIKX™

# HyGenikx Independently Proven to Prolong the Shelf-life of Fresh Food

**HyGenikx** is an advanced air and surface sanitisation system proven to extend the shelf-life of fresh food. Independently tested and verified, it has been shown to increase the shelf-life of products by an average of 58% (approximately 7.5 days)—with some produce proving to last as much as 150% longer!

Mechline's advanced air and surface sanitisation system, **HyGenikx** is proven to extend the life and quality of fresh perishable food, which can significantly reduce food waste and cost. Reducing food waste has significant benefits, for the environment, by saving on CO, CO2 and NOx emissions and the creation of methane, as well as for reducing operational costs. Reducing food waste also removes the need for 'over-supply' of product, which in turn benefits the food chain and reduces the pressure on production and benefits a more sustainable environment.

**HyGenikx** has also been proven to eradicate bacteria and viruses throughout the food service and hospitality environment—providing 24/7 hygiene and safety protection. The compact, wall-mounted unit utilises a combination of the most effective and refined air and surface germicidal technology available to help prevent the spread of harmful viruses and bacteria to customers and staff, as well as neutralising all odours.

**"Food waste is a significant cost to most businesses, and by helping to prevent it HyGenikx provides a real opportunity for food service operators to take control and save money."**

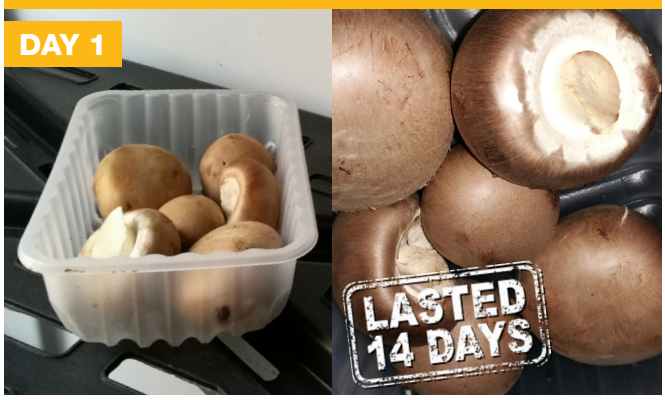
Kristian Roberts at Mechline Developments

## Independent Validation

In an independent validation project, **HyGenikx** was assessed on its ability to prolong the shelf-life of produce stored in a cold room, as well as its ability to improve environmental conditions. This study was carried out by ALS Laboratories, the UK's leading provider of food and drink testing services. The project was structured in two phases, identical in all aspects except for the introduction of the **HyGenikx** unit at the beginning of the second phase.

11 food items were trialled, all selected on the basis that they were considered "high risk". These were: Asparagus Spears, Broccoli, Cherries, Cherry Tomatoes, Chestnut Mushrooms, Cucumber, Grapes, Green Beans, Peach, Raspberries and Strawberries. Care was taken to ensure that comparable products were selected for both phases, with variables such as shelf-life, weight, transport method and handling all as similar as possible.

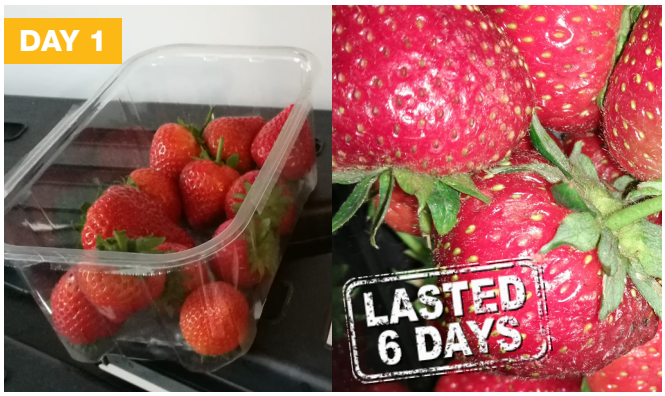
## Phase 1: Standard cold store **without HyGenikx.**



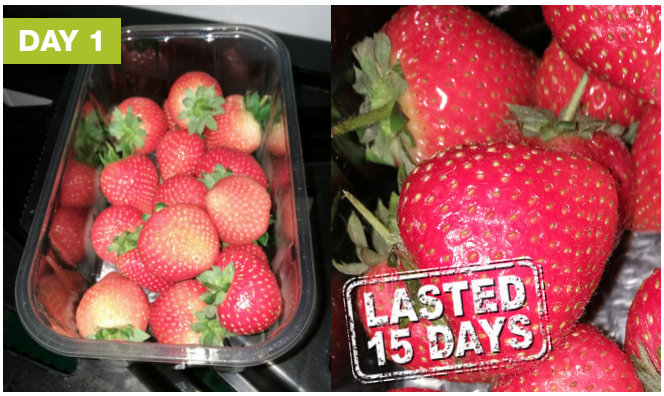

Stored in a standard cold store at 5±1°C, **without a HyGenikx unit present,** Chestnut Mushrooms reached **spoilage on day 14.**

## Phase 2: Standard cold store **with HyGenikx.**


Chestnut Mushrooms **stored in a cold store with HyGenik present** did not have signs of **spoilage until day 29.** The shelf-life gain was **+15 days!**




Stored in a standard cold store, **without a HyGenikx unit present,** Strawberries had signs of **spoilage and were deemed "failed" on day 6.**




**With HyGenikx present,** strawberries did not reach **"failure" until day 15**. The **shelf-life gain was +9 days, or +150%!**

In both phases, the food samples were stored in a cold store at 5±1°C, for 31 days and assessed on when they were deemed to have passed their saleable shelf-life. This was established using visual testing based on objective criteria, which included visible mould/growth, detectable spoilage (appearance or smell) and whether the item would be considered acceptable to buy or not. Swabs and air plates were also used to monitor the environment of the cold store.

## The Results

The overall results showed a consistent increase in the shelf-life of the produce during the second phase of the trial with **HyGenikx** (compared to the first phase, without), with an average increase of the shelf-life of 58.1% (approximately 7.5 days). The assessment showed an increase in the shelf-life of all 11 products trialled, with this increase ranging from 14% to 150%. The highest three increases recorded were Strawberries, with +150% (+9 days), Chestnut Mushrooms, with +107.1% (+15 days) and Grapes with a twofold increase (+12 days). These results were matched by a decrease in the recorded surface and air contamination of the cold store. With **HyGenikx**, the surface contamination decreased by approximately 45% and the air contamination by approximately 76% overall.

**HyGenikx** was proven effective at achieving a longer shelf-life for the chosen fruit and vegetables and improving environmental conditions of the cold room during the trial. Principally, fruit and vegetable life and quality can be significantly extended with the installation of **HyGenikx**. For the foodservice environment this can mean significantly less food waste, which in turn reduces the amount going to landfill and the associated costs!

The **HyGenikx** range has models to suit every application, from food preparation areas, cold rooms and front of house, to washrooms, refuse areas and beyond. **HyGenikx** has also been proven to eradicate harmful bacteria and improve the cleanliness of working food service environments. To find out more and read other case studies, please visit:

**www.mechline.com/hgx**