



Infrared Disinfection can Increase Bread Shelf Life by Days

The use of Carbon Infrared (CIR[®]) heating systems from Heraeus Noblelight has been shown to reduce the formation of mould on baked bread, prior to packing, significantly extending bread shelf life. Typically, when subjected to carbon medium wave infrared (IR) radiation for four seconds, shelf life has been increased by three to four days.

One of the major problems in large-scale bakeries is mould contamination of the bread surface between baking and packing. Mould spores are naturally present within a bakery environment and contamination can take place as the bread cools before it is wrapped.

Heraeus have now carried out successful tests, both in their Neston Applications Centre and on-site, at various bakeries, to demonstrate the effectiveness of Infrared as a mould-prevention technology. It has been shown that mould contamination is prevented if the bread is heated for a few seconds before final packing. Because of the short exposure time, there is no detrimental effect on the taste or texture of the bread. Heraeus now offers its test facilities to bakeries to prove the effectiveness of the technique for themselves.

Infrared is already widely used within the food sector, providing targeted, controllable heat. Typical applications range from browning ready meals to improving and maintaining chocolate quality and reducing the fat content of many fried products by surface sealing.

In the bakery sector, Heraeus Carbon infrared is already allowing simple, quick and safe disinfection of baking trays, conveyors and other bakery equipment, killing germs and spores to eliminate mildew and fungal growth. Infrared is much more practical than ultra-violet disinfection, which is effective mainly on smooth surfaces and requires a high UV dose to destroy mould and fungi. Carbon infrared emitters from Heraeus are also eminently controllable, with a response time of 1-2 seconds, so that there is no danger of overheating baked items in the event of unplanned conveyor stoppage. They are also extremely compact, allowing easy retro-fitting into existing machinery and emitter fields can be adjusted to match the width of baking trays.



Features

- bread surface disinfection
- mould-prevention in a few seconds
- increase of shelf life
- no detrimental effects on the taste
- easy retro-fitting

Technical Data

- carbon infrared heater
- medium wave infrared
- response time of 1-2 seconds

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