

Natural Branding: Blue laser in the fight against plastic

Offers retailers and the food industry a safe and sustainable labelling alternative with a positive CO2 footprint

Supermarket chains have famously declared war on plastic bags, but when it comes to food packaging, retailers are taking their time. Why is that? As with anything, there are pros and cons: for one, single households in particular want smaller portions, which leads to more packaging. On the other hand, many retailers stick to plastic because of the known advantages in shelf life and food preservation. But consumer pressure is growing as people place increasing value on loose foods in an effort to end the packaging madness and protect the earth from further pollution.

Consumers often ask themselves why organic products like cucumbers or all things are shrink-wrapped in plastic. What an anachronism! Does that sound like common sense? Back in 2018, Ocean Care in Switzerland managed to wring a promise from major food retailers to change this by starting a petition against plastic for organic goods. According to the organisation, "it was great to see a drop in the proportion of plastic packaging from four of the Swiss food suppliers under review. Coop Switzerland reduced its plastic packaging by 7.7%, Aldi managed a decrease of 8% and Lidl achieved 8.7%". The 2019 statistics provided by the organisation - committed to protecting marine wildlife - confirm this trend. Among other things, this progress can be attributed to innovative "natural branding" technology which acts in a way like a laser tattoo. The new process offers an effective, ecological, fast, flexible, versatile, and safe alternative to food labelling, especially for organic fruit and vegetables, and meets EU standards.

In the natural branding process, a laser controlled by a deflection unit removes the top pigment layer of the natural skin of the food. Natural branding with laser does not require any additional colour and impregnates the desired lettering or company logo directly onto the food by means of a focused light beam. Achieved using a blue laser light system in a cold marking process, it generates negligible heat on the goods. It also exhibits high absorption, good processing efficiency and low energy output. The method is currently used on foods like garlic, onions, nuts, eggs, lemons, mangoes, or sweet potatoes. Already tried and tested abroad, the technology has been in use in Australia since 2009. "Natural branding is risk-free. Marking with a blue laser system that includes an opto-mechanical deflection unit offers many advantages including high reliability, long service life, minimal space requirements and a safe process. It also offers completely new possibilities for sustainable and resource-efficient marking", affirms Wolfgang Lehmann, product manager at RAYLASE GmbH.

With precise positioning and an accurate focus, the laser beam can be adapted exactly to the shape of the food. This prevents damage, premature spoilage and contamination of fruit and vegetables. There is also no loss of freshness, fragrance, taste, aroma, or shelf life. And best of all: the energy required to mark the food is less than 1% of the energy needed to produce a conventional sticker, while CO2 emissions for laser marking are less than 0.2% of those needed for a comparably sized sticker." With natural branding, retailers can save literally tons of plastic used for organic food alone in Germany and significantly improve their CO2 emissions", says RAYLASE CEO Dr. Philipp Schön, commending the benefits of the state-of-the-art process.

Unfortunately, the list of cons cited by many supermarket chains is still long. For example, the need for packaging that ensures there is no confusion between organic products and conventional goods, and prevents pesticide residues from conventional products transferring onto organic goods. From the retailer's point of view, some form of protective packaging for food simply seems better. However, with the movement towards regionalism in food retail and growing consumer pressure, things are now

changing. For example, in Bavaria eggs and nuts are already often laser branded. "But so much more is possible", says Dr. Schön, who is convinced "because the limits of this process are set only by the product. Provided the shell is not too thin or delicate, natural branding can be applied anywhere with easy readability and clear contrast definition. And food labelled this way is completely safe to consume."

Slowly but surely, a shift is happening. "Laser labelling" is increasingly being discovered by well-known food producers, packaging manufacturers and supermarkets like Edeka in Germany, ICA in Sweden and M&S in the UK. Through natural branding, Edeka plans to save 50 tons* in packaging material for fruit and vegetables, and Rewe and Aldi also aim to test suitability on further products.

Buying certified organic foods is no guarantee for environmentally friendly packaging. "But it makes sense that organic food production – if not to be considered "green washing" – should be followed as much as possible by resource-saving ecological packaging. In this respect, natural branding gives maximum credibility", stresses Harnesh Singh, responsible for Sales & Marketing at RAYLASE. Avoiding excessive plastic, paper, cellophane, or trays is also good news for consumers who want to reduce their own carbon footprint and therefore consciously seek out the unpackaged goods.

So, the way ahead is clear for the new energy-saving star of the laser industry! The blue 450nm laser with 6-11W scan systems is ready to make its mark on the food industry for organic products and more. "The blue laser light in combination with our deflection units offers a safe, eco-friendly solution for all types of marking applications. The market for "natural branding" is bursting with opportunities", CEO Philipp Schön is in no doubt about that.



About RAYLASE

RAYLASE GmbH is a highly innovative, international laser company based in Wessling near Munich. Founded in 1999, the Bavarian company offers high-precision opto-mechanical components, control cards and software for the rapid deflection and modulation of laser beams for laser material processing in industrial manufacturing. With over 130 employees worldwide, the RAYLASE Group stands for innovative technology of the highest quality. Since 2007, the company has a subsidiary and its own production facility in Shenzhen, China, as well as several international representatives in the US, Italy, Japan, Korea, and Taiwan.

The laser deflection units comprise opto-mechanical scanners and digital control electronics with an intuitive software interface. These form the core of industrial laser systems and enable more flexible, economical, and precise processing of a wide variety of materials such as metal, plastic, paper, textiles and many more. Opto-mechanical deflection units also offer excellent image processing for better calibration, simple automation, and exact monitoring of a range of laser processes.

Customers come from the electronic, automotive, photovoltaic, textile and packaging industries. RAYLASE's current focus markets are electromobility, for example, in battery production, solar wafer production for photovoltaics in the solar industry and additive manufacturing. RAYLASE supports its customers primarily in four core applications: laser cutting, laser welding, laser surface processing and selective laser sintering or welding for additive manufacturing. In each of these areas, the company drives digital innovations by combining these with established technologies.

RAYLASE THE POWER OF WE

www.raylase.de

Kontakt

Marketing: Harnesh Singh, h.singh@raylase.de, +49 8153 9999-699

Presse: Angelika Beiersdorf, communications@angelika-beiersdorf.de, +49 8193 2069266