

Powder against vision

The company Newtricious has developed a drink called MacuView, which can slow down a form of vision loss. Wageningen UR has developed a long-lasting powdered form of the drink and has optimized its production, flavour and quality.

TEXT AND PHOTOGRAPHY HANS WOLKERS

The main cause of vision loss among the over 55 age group is the deterioration of the retina in the central yellow spot called the macula. This age-related macular degeneration (AMD) reduces vision in the central area of the field of vision. It has become clear that diet plays a key role in preventing AMD. So Newtricious R&D in Oirlo developed a drink based on eggs, enriched with carotenoids (lutein and zeaxanthin) and omega 3 fatty acids, which slows the development of AMD. Wageningen UR Food & Biobased Research was asked to develop a soluble powder based on this drink. Powder has advantages for both the producer and the consumer: it keeps longer, is easy to use and the dosage can easily be standardized.

AVAILABLE WORLDWIDE

‘We first experimented with different drying technologies,’ says Miriam Quataert, expertise leader in Food Design and Structuring at Food & Biobased Research. The company added the requirement that the technology chosen should be available worldwide, making production overseas feasible. The spray-drying technique proved the most suitable. This entails forcing the liquid under pressure through small apertures into a heated drying chamber where it forms a mist. The moisture then evaporates, leaving powder behind.

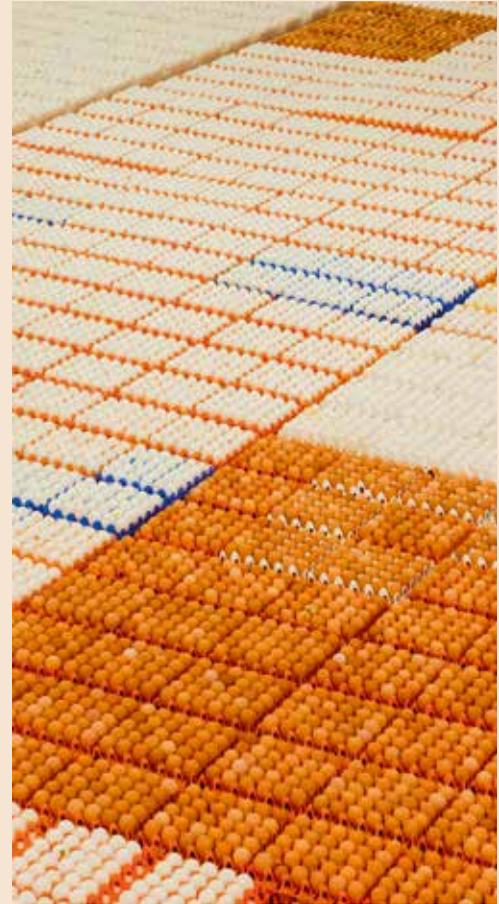
Quataert: ‘Tests carried out by Human Nutrition at Wageningen University showed that the absorption of useful nutrients from the spray-dried powder was just as good as that from the original drink.’

In the next phase of product development, the Wageningen researchers optimized the production of the powder in the factory of Adriaan Goede BV. They also worked with AromaUden on improving the recipe for the drink with added flavours. The end product was a new patented powder product, MacuView, which was on the shelves at opticians and pharmacies within four years. ‘That is extremely fast,’ says Quataert.

SHIPPING

Paul Jonker, director of strategic research at Newtricious, is enthusiastic too. ‘The powder has all the good characteristics of the original drink,’ he says. ‘Its long shelf life is a big advantage: one year instead of two weeks.’ This enables the company to produce it on a larger scale, which cuts costs. The powder is also easier to ship, making it possible to reach foreign markets effectively. ‘We would never have managed that so quickly with a liquid product,’ says Jonker. ‘In the long run this will mean millions of euros in turnover and cost-saving.’

www.wageningenur.nl/en/macuvie



loss



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