Investigation of colour properties and rheological behaviour of an apple juice flavoured egg white-based milk substitute

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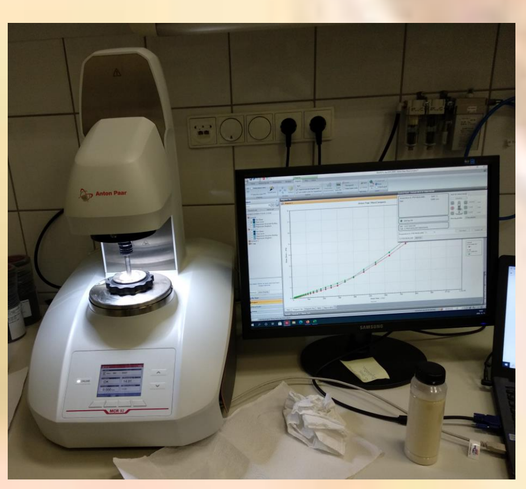
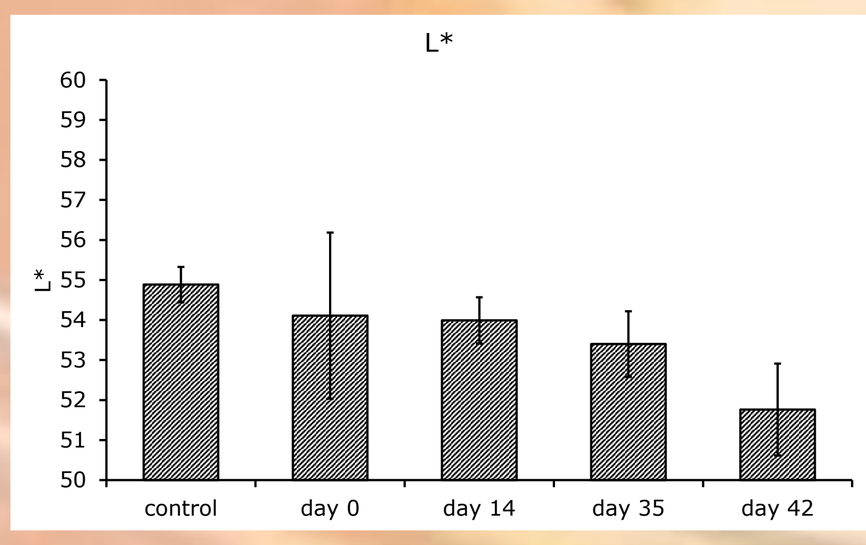
The replacement of dairy products with plant-based products are today well-known, but these products have worse sensorial and nutritional quality than dairy products. An appropriate solution may the development of egg white based dairy replacement products. Egg white has a high nutritional value, as long sensorial attributes can easily modify. In our study the goal was to develop an egg white based milk replacement product with added functional properties. A cowmilk substitutes was developed from egg white using enzymatic reactions. After flavouring (with freshly squeezed apple juice) the product was treated by HHP at 500 MPa, for 3 min.

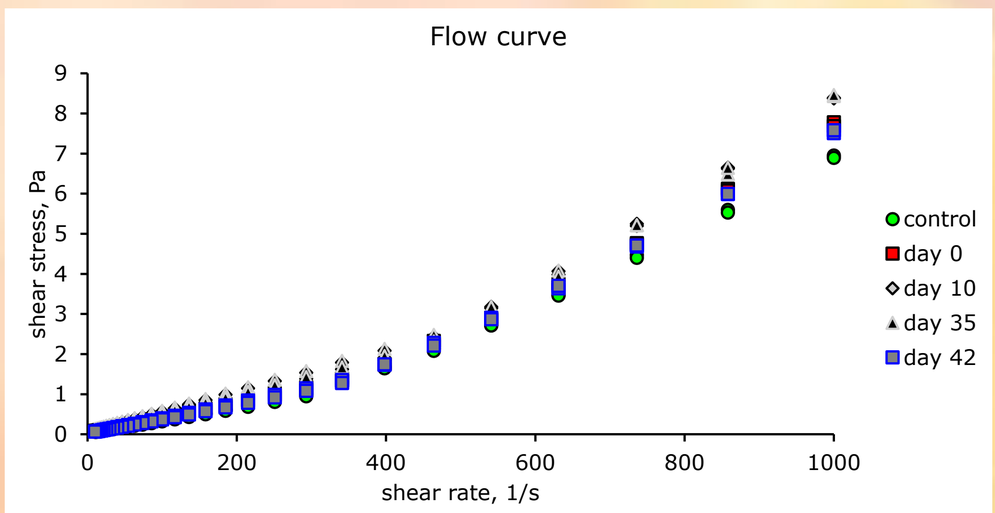
The rheological properties of this flavored substitute are investigated. The measurements were carried out with an Anton Paar MCR 92 rheometers investigating the shear stress of samples, using a CC27 system between 10 and 1000 1/s shear rate..

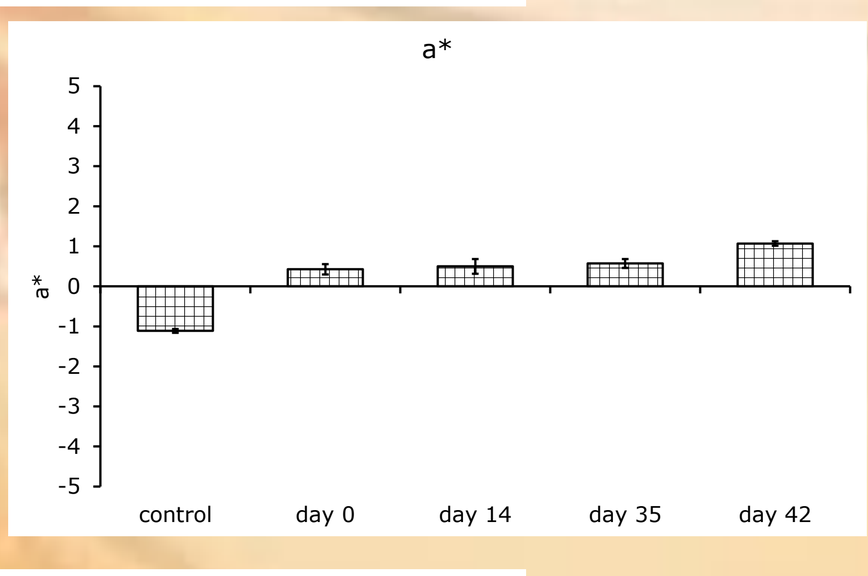
Our results show that apple juice flavored cowmilk can replaced with an egg white based drink, as long the functional properties are enhanced. This development may allow a healthier opportunity to replace dairy products.

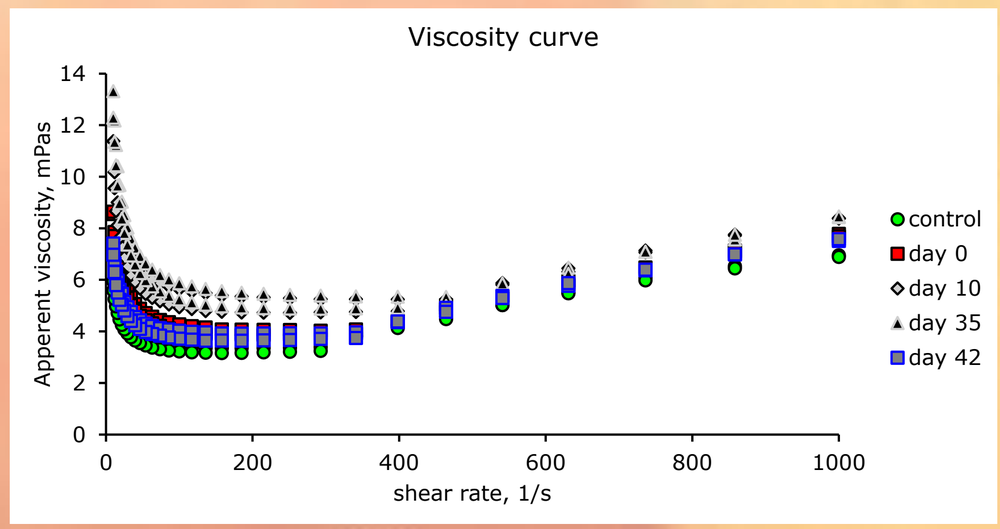
Our results show that fruit juice addition led to a thiner texture, so a significant apparent viscosity decrease was observed compared to control, unflavored sample. Herschel-Bulkly model was well fitted to the flow curves of control and flavored samples (R2=0,99).

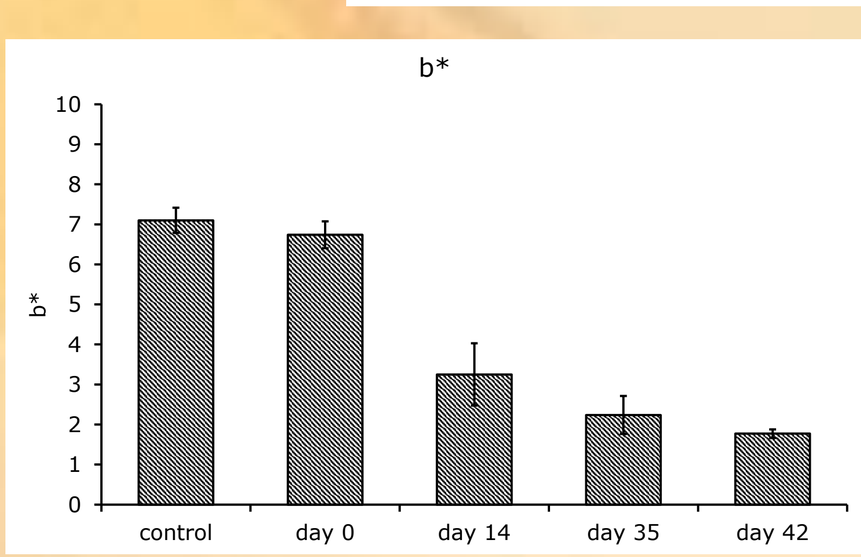












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