

Flavour Perception of White Coffee Beverages – Influence of Milk Processing

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SUMMARY

The popularity of coffee beverages is based on its energising effect and the special flavour. This flavour is undoubtedly affected by the addition of milk products. The influence of milk processing and ingredients on sensory properties of white coffee beverages has not yet been thoroughly investigated. In order to gain further insights into these interactions, analysed milk products processed in a defined manner were added to a standardised fresh coffee beverage. The resulting odour, taste and retronasal odour perception were measured by sensory evaluations (intensity tests), and selected volatiles were analysed by static headspace (SHS) GC/MS. The effects of varying fat contents (3.5 and 1.5%) and fat dispersion were studied. The milk with the lower fat content and with smaller fat globules, resulting from double homogenisation (250/50 bar each), induced a more intense coffee-related retronasal odour perception whereas the milk-related impression was similar to the whole milk. An addition of casein increased the creamy and milky odour perception and reduced the coffee-related taste and retronasal odour, respectively. Using instrumental analysis, it could be observed that the effect of an addition of twice homogenised, twice pasteurised low-fat milk and an addition of whole milk were similar.