Antioxidant activity of yoghurt peptides: Part 1-in vitro assays and evaluation in omega-3 enriched milk

The aim of the present study was to investigate important factors contributing to the high oxidative stability of fish-oil enriched yoghurt, with particular emphasis on the possible antioxidative effects of peptides released during yoghurt fermentation. Yoghurt samples were stripped from sugars and lactic acid and subsequently fractionated by ultrafiltration using membranes with cut off sizes of 30 kDa, 10 kDa and 3 kDa. The fractions were tested for antioxidant activity by investigating the inhibition of oxidation in liposome model system, 1,1-diphenyl-2-picrylhydrazyl radical-scavenging activity, iron-chelating activity, and reducing power. The lower molecular weight fractions were found to be more effective antioxidants than higher molecular weight fractions. The lower molecular fractions were further tested as antioxidants in fish-oil-enriched milk. On the basis of peroxide value, volatiles, tocopherol and sensory characteristics, the lower molecular weight fractions 3–10 kDa and

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