

ABSTRACT

Reformulation, Production and Quality Evaluation of Soy and Worcestershire Sauces Using a Cold Process

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Reformulations of two common condiments, soy sauce and Worcestershire sauce, were developed for manufacture via a cold process. Physico-chemical, microbiological and sensorial analyses were conducted on Kikkoman® Soy Sauce and Lea & Perrins® Worcestershire Sauce. The information obtained was used to guide the reformulations. Potassium sorbate and sodium benzoate were used in combination as preservatives in soy sauce (0.10% each) and in Worcestershire sauce (0.06% each). These levels produced sauces that were microbially acceptable for a six-month shelf life. Xanthan gum was used to replace the previous thickening agents at a level of 0.1% in both the soy and Worcestershire sauce. Formulations were created within the limits of all applicable USA and EU food laws. Attempts to enhance the flavour profile were not successful. However, sensory panellists showed some partiality towards the cold process sauces. The physico-chemical analyses produced results that were similar to the proposed specifications for the hot process sauces.

Keywords: “Soy Sauce”, “Worcestershire Sauce”, condiments, preservatives