

ECONOMIC AND TECHNOLOGICAL EVALUATION OF THE PRODUCTION OF PROCESSED CHEESES WITHOUT ADDED FAT AND REDUCED SODIUM LEVEL

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Requeijão cremoso is a very popular Brazilian spreadable processed cheese. Considering the ever-increasing demand for healthier products, three formulations of *requeijão* were developed, one without addition of fat (SR) and two without addition of fat and with lowered levels of sodium (R1 and R2). The SR formulation was made with 1.8% NaCl and 1.8% traditional sodium phosphate-based emulsifying salt (JOHA-S9), and used as standard *requeijão*. The formulations R1 and R2 were developed and optimized to allow a reduction of at least 25% in the sodium content of the SR. This reduction was achieved by partially (40%) substituting sodium chloride with potassium chloride and by replacing part of the JOHA-S9 by other emulsifying salts containing less sodium. The blends of emulsifying salts were 1.2% JOHA-S9 and 0.8% JOHA-B9 (R1) and 1% JOHA-S9 and 1.2% JOHA-SK75 (R2). The economic indicators – Net Present Value (NPV) and Internal Rate of Return (IRR) – were applied to analyse the feasibility of three dairy plants projected to process 5,000 liters/day of milk and to produce around 850 kg of each formulation of *requeijão*. Considering the results obtained for IRR (33.28%) and for NPV (R\$2,293,368.20), the formulation R1 was evaluated the most profitable formula when compared to R2 and SR. Furthermore, all cheeses contained 73-75% moisture and 3.3-3.4% fat in dry matter. They also may be considered microbiologically stable and safe, mainly due to the absence of psychrotrophic anaerobic sporeforming bacteria and low counts of yeasts and moulds.