The aim of the study was to test the use of by-products after extraction of valuable constituents from chicken egg yolk in further processed poultry meat products. Post extraction residues were used as a soybean proteins isolate (SPI) replacer in poultry pâté manufactured from deboned chicken meat and liver and pork fat. SPI was substituted at 50% and 100% by the by-products remaining after extraction of egg yolk with organic solvents (CE) or supercritical fluid (CO₂) (SFE). Chemical composition, pH, color (L*a*b*), sensory acceptance, TBARS and instrumental TPA just after pate preparation and after 5, 10 and 15 days of storage at 2-4°C were analyzed. Any significant impact on chemical composition of the product was observed. Lower susceptibility to lipid oxidation was noted at both replacement levels by CE (50 and 100%). Pâtés with CE exhibited also the highest overall sensory acceptance, especially after storage. Replacement of SPI by SFE at 100% level led to a lesser acceptance of taste and flavor of the pâté. No differences in sensory acceptance of texture were detected, however lower hardness, springiness, gumminess and chewiness were found by instrumental TPA. Yolk preparations, especially SFE, decreased lightness and increase yellowness on the cross-section of the pâté. In conclusion, CE can be used instead of SPI in poultry pate, but the use of SFE should be limited at 50% replacement rate due to deteriorative effects on the sensory quality of the products.

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