

OPTIMIZATION OF PROTEIN PREPARATION FROM PAPAYA (CARICA PAPAYA) FRUIT PULP INTENDED FOR PROTEOMIC ANALYSIS.

NOGUEIRA, S. N.¹; LAJOLO, F. M. ¹; NASCIMENTO J. R. O¹. Universidade de São Paulo, Faculdade de Ciências Farmacêuticas, Departamento de Alimentos e Nutrição Experimental. São Paulo, Brazil.

Sample preparation is a critical step in the two-dimensional gel electrophoresis used for proteome analysis. Preparation of high-quality protein extracts from papaya (*Carica papaya*) fruit tissue is challenging due to the high levels of polysaccharides, polyphenols, and other interfering compounds. Additionally, fruit composition changes a lot during ripening, making some protocols unsuitable for a specific ripening stage. In this way, a phenol-based method was adapted for the efficient extraction of protein from unripe and full ripe papaya pulp. Selective carbohydrate precipitation resulted in high protein yield and good resolution and spot intensity for the extracts from both ripening stages. Since the optimized protocol resulted in improved protein samples for 2D electrophoresis, it is expected to establish protein maps for the proteome analysis of this recalcitrant tissue.

Key words: papaya, electrophoresis, proteomic. Supported by CAPES.