

**Abstract:**

Two-dimensional (2D; native/SDS) polyacrylamide gel electrophoresis (PAGE) was used to identify the N-termini of two salt extractable proteins whose translation is up-regulated in mature strawberry (Elsanta) fruits. The N-termini had a high sequence similarity to enzymes of the tricarboxylic acid cycle, mitochondrial citrate synthase and malate dehydrogenase. In correlation with the 2D-PAGE data, levels of citrate and malate and associated enzyme activities increased as fruit ripened. However, northern analysis has revealed that the RNA levels for both enzymes were highest in flowers and immature green fruits. A post-translational block may be operating in flowers and immature fruits.