

A Comparative Analytical Study for the Antioxidant Content of Different Fruits Cultivars

Introduction / Background: Studies conducted have proven the presence of polyphenols, specifically phenols and flavonoids, in abundant fruits. A study conducted on female mice indicated that these polyphenols act as antioxidants and help aid with oxidative stress combat to prevent metabolic diseases.

Objective: Find out what fruits and fruit strands, of which most consumed in society, have most combat of oxidative stress and are most abundant in polyphenol contents

Methods: Total Phenolic content, total flavonoid content and oxidative stress combat in the selected fruit strands were evaluated through spectrophotometric techniques. Content measured for the total phenolic content and total flavonoid content were obtained through the graphs of Gallic Acid and Catechin standards respectively. Whereas the oxidative stress combat is obtained through the standard value (0.321 μg) obtained through the BioVision glutathione measurement assay kits

Results: No relation between total phenolic and flavonoid contents of the fruits to the spared glutathione content was found. Fruits in the citrus group all had of the highest phenolic content compared to the other fruit groups. Total flavonoid content was the highest in the grapes group then shortly followed by the apples group, where the values/results were very similar to each other. Finally, the apple group had proved to have the highest spared glutathione content.

Conclusion: Fruits from the apple, grape and orange group which had been grown in the USA consistently provided the highest polyphenol content and spared glutathione content out of all other country grown cultivars, proving it to be the most beneficial in terms of providing sufficient phytochemical compounds to the human body on a daily routine basis.