Red Raspberries vs. Gold Raspberries

Cox, Mariah

Raspberries are a composite fruit that are red and gold in color and boast a distinctive sweet and tart flavor and contain phenols and anthocyanins. This project was conducted to determine if anthocyanin levels differ between heritage and golden Rubus idaeus cultivars and if the total phenolic concentration would be similar for both varieties. The project berries were grown in the same field, during the same time period to eliminate typical variables. The hypothesis stated that Rubus idaeus Heritage cultivar would have a higher anthocyanin level than the gold cultivar, since the red color as anthocyanins are found in red fruits. The golden Rubus idaeus would have a similar total phenolic concentration because they are raspberries. The method included anthocyanin sample preparation, purification, measuring total phenolics and anthocyanins concentration, and HPLC testing. The anthocyanin level was significantly different between the Heritage and Golden Rubus idaeus cultivars. The Heritage cultivar (red in color) depicted 4 major anthocyanins peaks from 520 nm and the Golden cultivar depicted no anthocyanins from 520nm detection chromatogram. The total phenolic concentration was not the same between the Heritage and Golden Rubus idaeus cultivars. The phenolic compound peaks are different between each cultivar. Further study should be done to determine the differences between phenolic compound content.

Awards Won: