Effect Dimension For every comparison, Cohen's d was computed in order to determine the extent of the group differences. An indicator of impact size called Cohen's d can be used to assess how practically significant the results are (Cohen, 1988).

Sodium (Na): d = 0.4 (small to moderate effect)

Calcium (Ca): d = 0.6 (moderate effect)

Magnesium (Mg): d = 0.5 (moderate effect)

Antioxidant Activity: d = 0.55 (moderate effect)

The results indicate that although the differences are statistically significant, the impact sizes are moderate. This suggests that the findings have some practical consequences, although they are not very substantial.

Correlation Study The association between the mineral content and antioxidant activity of the organic and non-organic banana samples was examined using a Pearson correlation analysis.

Relationship: A moderately positive connection (r = 0.65) was found between magnesium and antioxidant activity in organic bananas (Halliwell & Gutteridge, 2015).

In non-organic bananas, the link between antioxidant activity and calcium was less strong, with r = 0.40 (Buchanan et al., 2021).

These correlations indicate that increased magnesium concentrations might boost organic bananas' antioxidant capacity.

An overview of the statistical results in comparison to non-organic bananas, organic bananas had much greater concentrations of salt, calcium, and magnesium as well as stronger antioxidant activity, according to the statistical analysis. The effect sizes were moderate, but the differences were statistically significant.