**Every Bite You
Take is Either
Fighting Disease
Or
Feeding it.
Eat Fresh, Stay Healthy...**

**Toxic Gloss on
Fruits/Veggie Plate**

**Eat Local, Eat Seasonal,
Eat Variety**

MorphGlaze: Point of Detection Device (POD) for the Estimation of Morpholine on Coated Fruits/Vegetables
Sensitive, Portable, Cost Effective Device

Say "YES" to "NO"

Pledge: If, it is not safe, it is not fruits/vegetables

Problem:

The saying "an apple a day keeps a doctor away" gives an impression that apple is exceptionally healthy fruit. But besides the fact that it rhymes, it was never stated that which apple do we like to eat, does it a bright red wax coated or ungloss fresh/natural one? Morpholine is a common solvent and emulsifier to give an "attractive look" to fruits/ vegetables to help them last longer and remain shiny and afresh even during prolonged transit. Morpholine alone does pose a health risk but when it combines with atmospheric and dietary nitrates, it forms the potent carcinogen **N-nitrosomorpholine (NMOR)**. Excessive formation of NMOR can cause multiple primary neoplasms in the respiratory, upper digestive tracts and liver.

Innovation:

A microscopic and sensitive assay was developed to estimate the presence of morpholine on coated fruits and vegetables. Based on this assay, we are under developing the POD device for the quantification of glazing agent (morpholine) on fruits and vegetables. The USP of the assay are:

Sample volume: 2μl

Reaction time: 20 minutes

Sensitivity: 2-10 ppm

Reaction volume: 300μl

Lab Cost: < 0.50 INR

0.3 mg/kg morpholine present in Cigarette Snuff, Orange Pulp and Capsicum Peel meaning that both Smokers and Non-smokers are at equivalent risk of developing carcinoma

Contact:
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