A Unique Kit for Detection and Removal of Pesticides from Fruits and Vegetables

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Fruits and vegetables provide us nutrition including vitamins and minerals to stay healthy – both mentally and physically. In pursuit of a pest-free produce, farmers use pesticides, far above the permissible limit. However, this doesn't mean that we should stop the intake of some essential nutrients provided by the fruits and vegetables. So, it's the need of the hour to discover eco-friendly and economical methods for detection and removal of these pesticides from our food. After studying adsorption property of the carbon, we decided to study its efficacy for removal of the pesticides. We conducted experiments with different samples of carbon obtained from various sources to carry out a comparative analysis. The analysis was conducted with the help of Gas Chromatography –Mass Spectrometry. According to the analysis, 90% of pesticide content was removed from the vegetable after treatment with carbon. For detection of pesticides we have prepared test strips which show colour variation upon contact with pesticide on the surface of the fruits and vegetables. After combining the above two results, we have prepared a unique test kit for on-the-spot detection and removal of surface pesticides from fruits and vegetables. The test kit is user-friendly and affordable; hence it can be useful for all.

Awards Won:

Fourth Award of $500