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# The Basics of Food Forensics

### What do you expect from the plate of Food served?

Surely everyone wants to know what they are eating.

It is essential that the food consumed, and sell is authentic, safe, protected, and traceable.

## What is Authentic Food?

The Food consumed is from a trusted source and confidently consumed - they are pure and original.

## What do you mean by Safe and Protected food?

The food can be safe to eat by the targeted consumers with brand owners being confident that the brand reputation is protected and trusted.

#### What is Traceable Food?

Any food consumed must be traceable to back to farm or hatchery. The food consumed are what they claim to be. e.g. a Food sold as Organic claim integrity must be preserved from Farm to folk via traceability.

Food businesses must ensure the food they supply are consistently authentic, safe, legal and an appropriate quality standard to meet the customer requirement.

**Food forensic** is defence against the **food fraud** and ensure compliance to the above requirements.

Food Forensics is proving the scientific confirmation that the food sold are authentic, safe, and traceability through testing and risk profiling.

In other words, the identification of any potential food fraud in supply chain and proof of authenticity and safety of the food through testing shows that claims are intact and ensure robust due diligence.

#### **Food Forensics**

Food forensics is using scientific technologies (such as analytical techniques) and testing to prove the integrity of the food is authentic and traceable.

Food forensics is used in detection of any potential adulteration and authenticity determination that is aimed to achieve the financial gain, and any other legal issues related to the food product.

Some examples of the techniques used in food forensic.

**Spectroscopy**: Techniques (infrared spectroscopy and nuclear magnetic resonance spectroscopy) to analyse the molecular composition of food samples.

**Mass spectrometry** - to identify and quantify the chemical compounds present in food products.

### The Aim of Food Forensics

To analyse evidence from food fraud to develop objective findings that can assist in the investigation and prosecution of law breakers of food fraud, which is a crime, or release an innocent person from suspicion.