

FOOD FRAUD - OLD PROBLEMS NEW SOLUTIONS

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The integrity of our food supply is under intense scrutiny. Mislabelled meat, questions about the true origin of wines and spirits, concerns over the composition of herbs and spices, are some of the current issues that affect the food investigator and analyst today. They are not, however, new issues. The Romans often questioned the authenticity of the wine they drank; Victorian England was rife with highly adulterated and hazardous food, and horsemeat contamination of beef products was rife over 40 years ago. There has always been food fraud where ever there are two similar products with a significant price differential that the food analyst cannot distinguish between.

What has changed is the technology that is now available to food scientists and analysts to verify the authenticity of the food we eat. Analytical methods and systems have a key role in food authentication as well as in identifying food fraud. The challenge to the scientific community is how latest developments in analytical chemistry and molecular biology can be used to help solve the problem. The latest strategies and technologies for food authentication will be presented including examples of the latest research priorities identified through the FoodIntegrity project (www.foodintegrity.eu). The potential of omic solutions will be discussed together with real examples of how the metabolome and microbiome can be exploited to help authenticate our food and identify fraud. Finally a brief summary of best practice in other sectors will be presented to inform the food sector on how best to assure the food supply.

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