Small Molecule Detection by LIBS using Rapid Paper Based Detection

Track Code: 2022-ROBI-69589

Categories:
- Food and Nutrition
- Medical/Health

Keywords:
- Authentication
- Cytokine
- Cytokine Storm
- Food and Nutrition
- IL10
- IL6
- LIBS
- Rapid Detection

Purdue University researchers have developed a laser-induced breakdown spectroscopy (LIBS) method for characterizing both cytokines, molecules that are released in an immune response, and food contaminants. Food fraud has severe health-related consequences; in 2007-2008, a dairy contaminant added to raise nitrogen content had an estimated 300,000 human victims. Cytokine detection can be used as an indicator for COVID-19 infection. However, cytokine tests for COVID-19 require extensive processing time and are expensive. The Purdue technology showed an acceptable detection limit using a portable unit, and it showed high accuracy in food product fingerprinting. Finally, this technology is portable, avoiding the need for sending the food/biological samples to an established laboratory.

Technology Validation: The technology showed a higher detection limit than conventional cytokine detection tools, and it showed high accuracy in food product fingerprinting.

Advantages
-•`ersatile
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Applications
-”`ood purity
-”4ðVID-19 screening

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