OMNIprint - Rapid Identification of Bacteria through Spectral Pattern Recognition

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Current FDA methods for investigation of bacterial contamination are resource intensive (time and money). A new technique employing direct impact ionization (DII) at atmospheric pressure may serve as a more cost/time efficient method with almost no sample preparation. Bacteria can be thought of as "pockets" of chemical information, each species having a unique composition. Taking the mass spectra of bacteria by DII-Mass Spectrometry coupled with computer algorithms for mass drift compensations shows potential for fast characterization of bacteria on the genus level. Spectral adjustments for biomarkers in the 400-800 mass range show promise for future studies being able to characterize based on bacterial strain.