

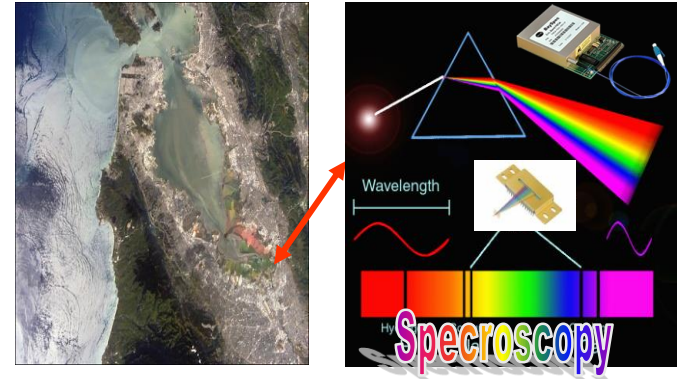
Checking and Analyzing Food and Beverage Using Palm-Held Ultra-Miniature Spectrometers in the Short-Wave Infrared Range (SWIR)

William Yang
BaySpec, Inc.

December 16, 2020
(Online Event)

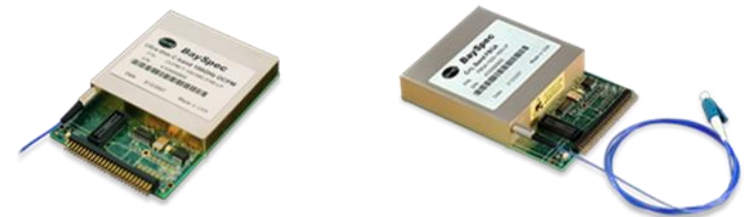
Who is BaySpec, Inc

- BaySpec Inc, a Company specializes in Spectrometry in S.F. Bay Area
- Started by Laser Spectroscopists
- 100% of its operations in San Jose, California, U.S.A
- 20 Years of inventing, producing and applying analytical as well as sensing technologies based on Photonics



We had invented a novel shortwave IR (SWIR) spectrometer(1999), as one of the key photonics devices for enabling Multi-wavelength (>200 today) of data transmissions, by spectrally monitoring the performance(wavelength, power, S/N ratio) of all the wavelengths in the optical networks in real-time

Without this device there would not be today's internet!



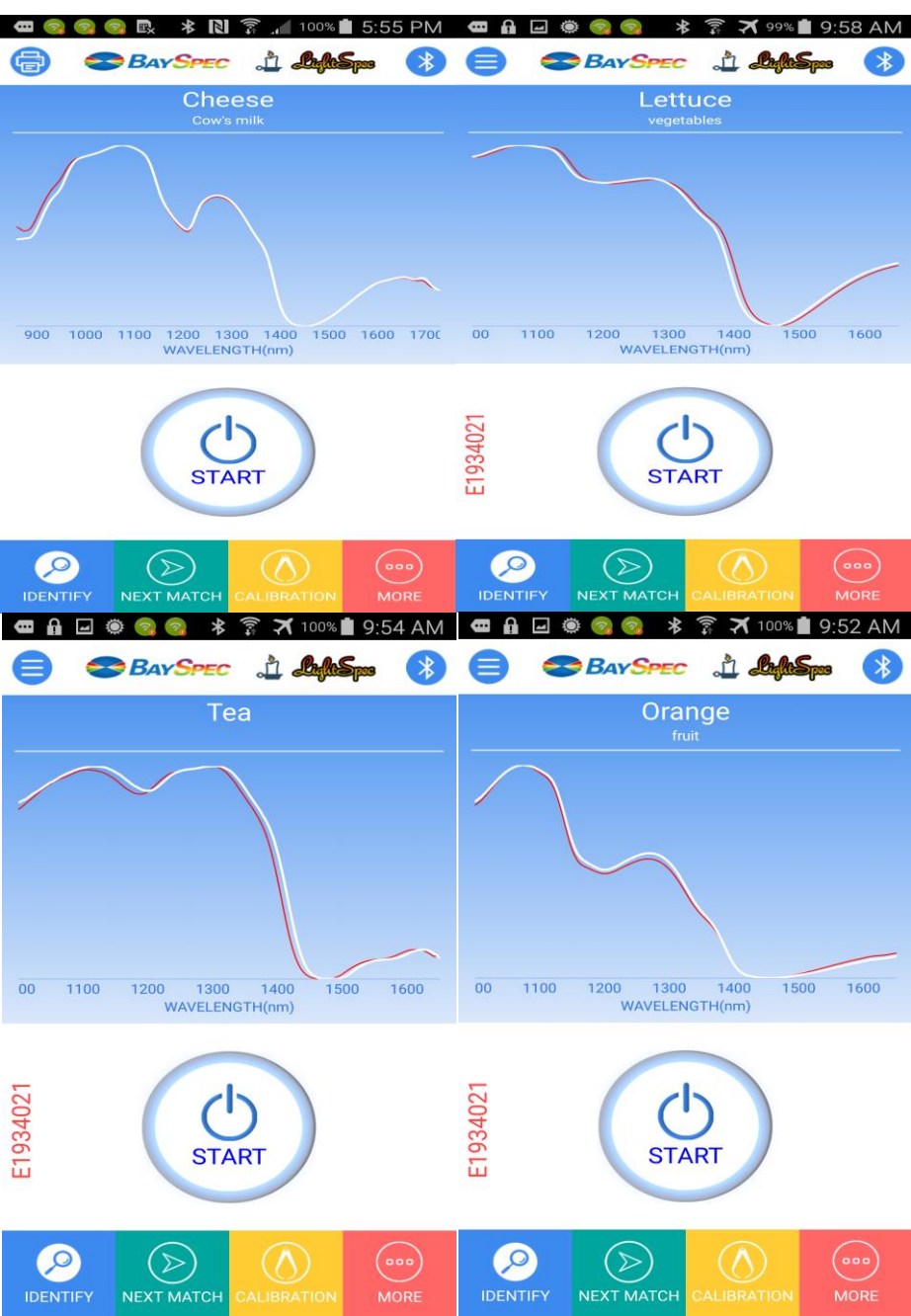
Photonics based Devices for Spectroscopic and Spectral Sensing/Analysis



The Breeze: Ultra Miniature, Palm-Held VIS+NIR+SWIR Spectral Analyzers



- **No moving parts, spectral engine hermetically sealed**
- **Designed for volume production**
- **Transmission Volume Phase Grating Based Nanosized Spectrograph; F# 2 Optics; Wavelength covers to 2500 nm**
- **Bluetooth + Smart Phone APP. Data acquisition**
- **Easy to use**



Make Spectroscopy a Breeze™

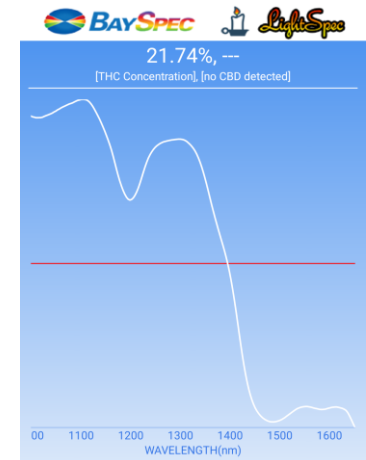
With BaySpec's New Palm Spectrometer (VIS/NIR/SWIR)

Applications: Food safety, Drug Detection, Counterfeit, Explosives, Antioxidant, Personal health, Skin care.

BaySpec introduces the world's smartest palm spectrometer (400-1700nm). Featuring proprietary miniaturized optics and a simple one-button operation, Breeze™ brings laboratory performance to a handheld form. This smart device allows for wireless communication to any smartphone via Bluetooth interface. The phone app allows users to setup their own databases for sample analysis at anywhere and anytime.

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The Breeze: Palm-held Ultra Miniature Spectral Analyzers

[THC, CBD]:
(1) THC Concentration(%) = 21.74
(2) CBD Concentration(%) = (not detected)

Inspector (signature) _____
Timestamp: 2020-03-09 09:31:25
Sample Provider:
Contact Info:
Detection site:
Street:
City:
State:
ZIP/Postal Code:

Applications-Food and Beverage

- Sugar, alcohol, salt, protein, fat
- Degrees of fermentation
- Water, tea, wine, viscosity
- Minerals, antioxidant
- Purity, nutrition, pollutants, pesticides, poisons
- Anti-fraud/adulteration
- P.O.S, Online, In-situ

