

# Medical Device Characterization

## With the Covalent Platform

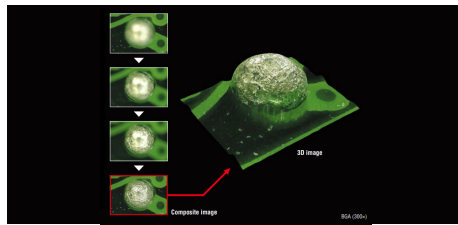
### The Solutions We Offer

Engineers put extra care into designing medical devices and their packaging: using the best design, material choice and fabrication methods to ensure the highest quality. Covalent Metrology can support your project with imaging, measurements and characterization solutions that meet your exacting standards throughout the research and development process.



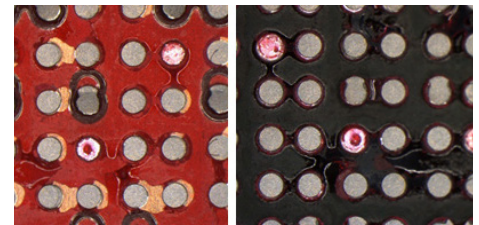
#### Critical dimensions inspection

- Includes wall thickness, draft, radii, warpage, sink marks, and more
- Get a 3D CAD file (stp, stl) for direct comparison of measured part against reference model



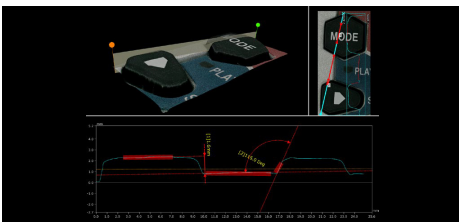
#### Detailed Imaging of Assemblies

- Glue lines, sonic welds
- Multimaterial injection molding
- Identify delamination, voids, and other assembly defects



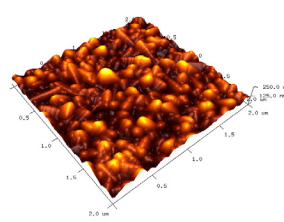
#### Failure analysis

- Compare good and bad parts, before and after failure to determine cause
- High resolution imaging
- Physical, chemical, and mechanical characterization of defects



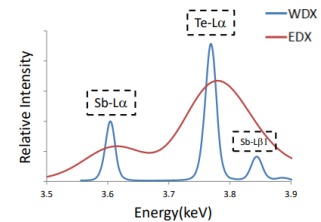
#### Quantitative inspection of fine details

- Sharpness (edge angle, radius)
- Microfluidics channels and reservoirs volumes and width
- Coating thickness



#### Surface finish inspection

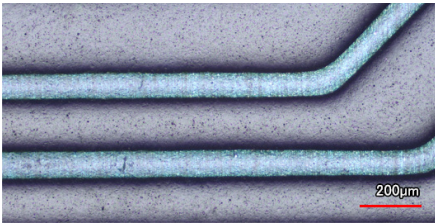
- Quantitative roughness and topography measurements
- Works on all materials, including polished, transparent, and translucent surfaces



#### Chemical analysis of materials and contaminants

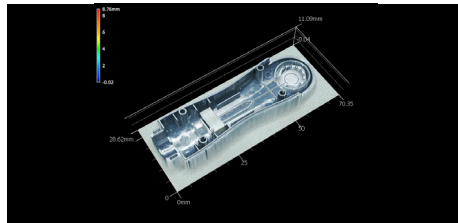
- Identification of alloys, polymers, ceramics, contaminants, and residues
- Quantitative composition determination for elements / functional groups

# Cutting-Edge Instruments and World-Class Experts



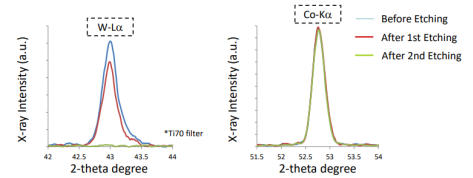
## Laser Confocal Microscopy for surface finish and fine details

- Fast non-contact technique with quantitative results and sub micron resolution
- Produces a full 3D map



## Wide-Area 3D Patterned Light Microscopy for Critical dimensions inspection

- Includes wall thickness, draft, radii, and more
- Get a 3D CAD file (stp, stl) for direct comparison of measured part against reference model



## SEM-EDS, WD-XRF for elemental composition

- Sub micron-scale spots
- FTIR for polymers identification

## About Covalent Metrology

Covalent Metrology is an advanced materials science and analytical services platform headquartered in the heart of Silicon Valley.

We have a proven track record of helping scientists and engineers from many of the most influential companies in the world better understand the optical, chemical, physical, and electrical properties of their new products and technologies. Covalent Metrology succeeds through a unique combination of cutting-edge analytical instruments and a world-class team of scientists: enabling us to provide our clients actionable, accurate and affordable data and insights to accelerate the development of product and technology innovations.

Fast Turnarounds  
and Real-time Outputs

Data Formatted  
for Engineers

Reliable and Repeatable

No Expedite Fees

Non-destructive Analysis

Savings for High Volume

Get a quote at [covalentmetrology.com](http://covalentmetrology.com)