SONICC Key Features

http://www.formulatrix.com/demosite/protein-crystallization/products/sonicc/index.html#tabbed-nav=tab2

**Finds Crystals That Other Technologies Cannot**

The unique imaging properties of SONICC allows crystal detection in almost any optical environment including opaque and turbid environments. Only chiral crystals, such as proteins, produce a signal using second harmonic generation. This allows the user to identify very thin protein crystals, as seen to the left, or those buried under precipitant.

**Quickly Identifies Obscured Crystals**

The stark black and white images produced by SONICC make viewing an entire plate fast and easy. The grids to the left show the thumbnail view of a 96-well plate imaged by SONICC in SHG and in visible light. Each well containing crystals is instantly apparent using SHG. Toggle between the SHG and Visible buttons to the left to see how easily SONICC locates the white crystal hits.

**Easily Distinguishes Salt Crystals from Protein Crystals**

The UV-TPEF (UltraViolet-Two Photon Excited Fluorescence) mode is analogous to traditional UV fluorescence and creates images based on the fluorescence of UV excited amino acids such as tryptophan. UV-TPEF is a multiphoton imaging technique that uses longer wavelengths of excitation versus traditional linear imaging. This provides significant advantages including compatibility with more plate formats, less damage to your protein and confocal imaging.

**Dual Imager Setup with Rock Imager 1000**

[Rock Imager 1000](http://www.formulatrix.com/demosite/protein-crystallization/products/rock-imager-1000/index.html) can be expanded to include SONICC in the base of the RI1000 chassis. The dual imager setup has the combined functionality of a SONICC benchtop SHG imager and UV-TPEF imager. The Rock Imager adds 1,000 plate handling capacity , and can also include optional UV and visible imagers.

**Detects Sub-Micron Crystals**

With the use of high N.A. objectives, SONICC can detect nano-crystals. Small crystals that may be indistinguishable from precipitant can be differentiated clearly as shown in the image to the left. This positive hit reveals a condition for further optimization that may have been missed without SONICC technology. SONICC also provides superior imaging in LCP, and other conditions where small crystals are commonly found.

**Complete LCP Support**

SONICC provides LCP support for applications including drop location, high efficiency cross polarized imaging, thin glass plates and SBS size plates.

**Precision Mechanics for Extremely Low Vibration**

Innovative structural design, advanced vibration damping materials, and special motor tuning work together to ensure extremely low vibration disturbance to protein-containing drops. All robotic microplate handling has been verified to cause fewer vibrations than a person carefully handling a plate.

**Regulated Temperature Controlled Environment**

The SONICC benchtop system is designed to precisely monitor and regulate temperature throughout the enclosure. A network of sensors measures and records temperatures with 0.1°C resolution. An air recirculation system maintains an even temperature distribution. SONICC benchtop uses a Peltier heat exchanger to regulate temperature in the range from 5°C below ambient to 7°C above ambient +/-0.5°C.