



## CASE STUDY

Fortune 50 Food & Beverage Company

### Non-Thermal Pasteurization



**Explore:** While there is a robust market demand for cold pressed, fresh juices, shelf life limitations are a major challenge for the industry. Unfortunately, thermal pasteurization can effect organoleptic and nutritional properties of the juice, and existing non-thermal pasteurization technologies have significant limitations.



**Invent:** While UV is a viable approach for reducing microbial load, however to penetrate into opaque solution, the dose is prohibitively high. Through a combination of physics and nanotechnology approaches, we invented a UV-based system that requires much lower dose of light to deliver significant kill effect in an opaque solution such as juice.



**Build:** We iterated several rounds of bench scale prototypes to demonstrate proof of concept and generate convincing benchmarking data to inform scale up to pilot plant.