

The background of the image is composed of several overlapping geometric shapes in blue, red, yellow, and green. The word "AcroEdge" is centered in the lower half of the image. The letter "A" is a red triangle pointing down. The letters "cro" are in a sans-serif font, with "c" in yellow, "r" in green, and "o" in blue. The letters "Edge" are in a bold, black, sans-serif font.

AcroEdge

Who are we?



is a developer, manufacturer, and vendor of processing equipment, analytical instruments, and precision devices for materials research and engineering purposes.

Our leading products...

The Curea

-Curing Reaction Monitors-

Patented

JP4185939B2

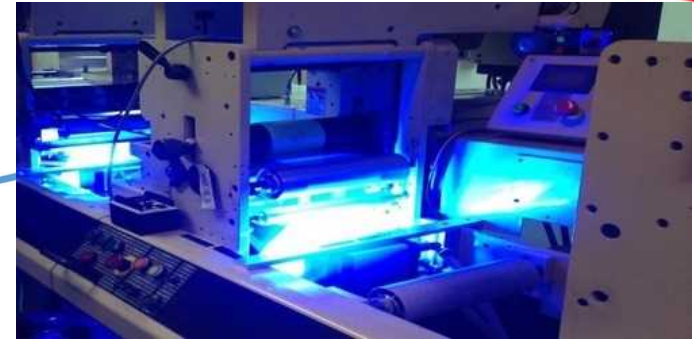
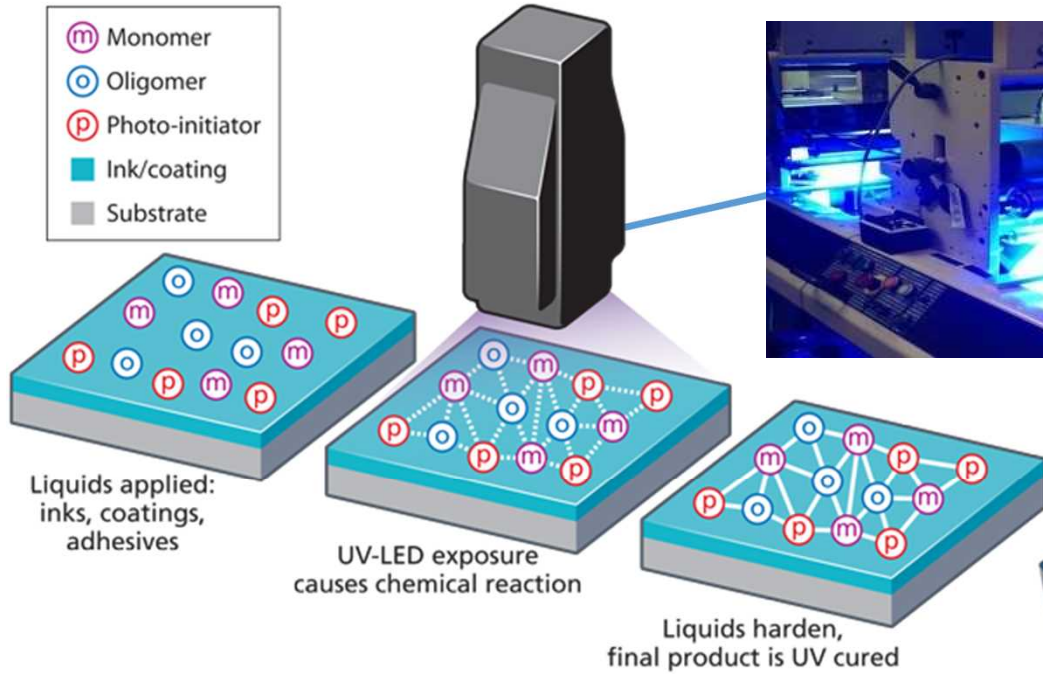


Resins & Curing

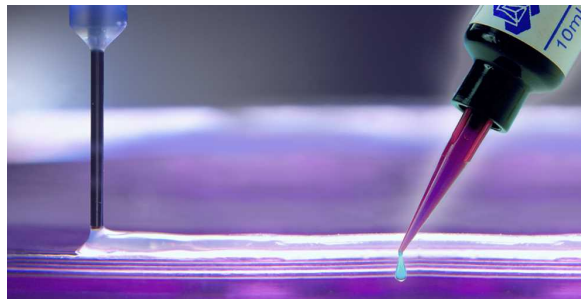


Resins/Adhesives/Coatings/Inks

- Ⓜ Monomer
- Ⓞ Oligomer
- Ⓟ Photo-initiator
- Ink/coating
- Substrate



LED Epoxy Lenses



Sealing/Bonding Layers

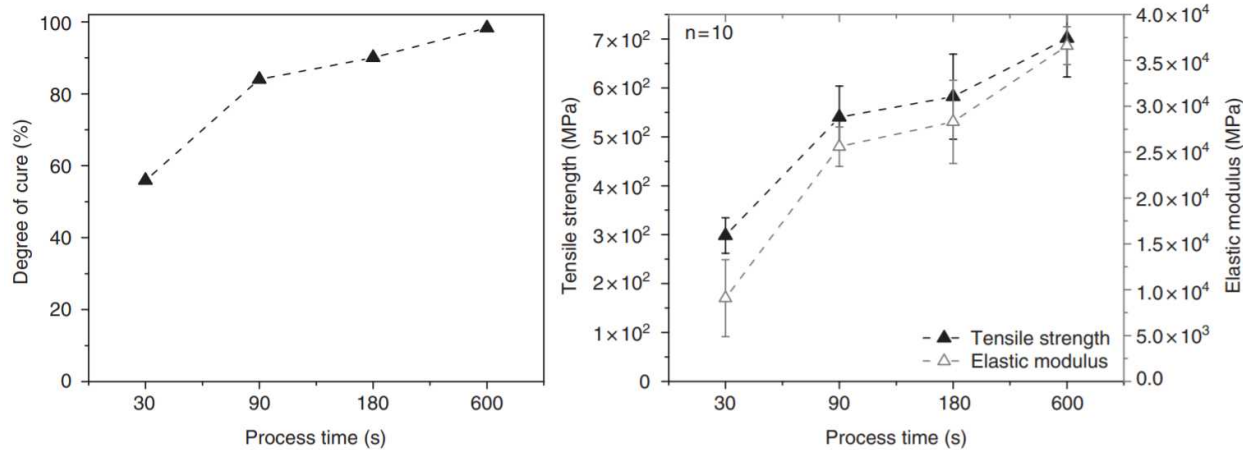


Resins & Curing

The Degree-of-Cure (DoC) is directly proportional to mechanical properties.

Taken from : Journal of Polymer Engineering (2017)

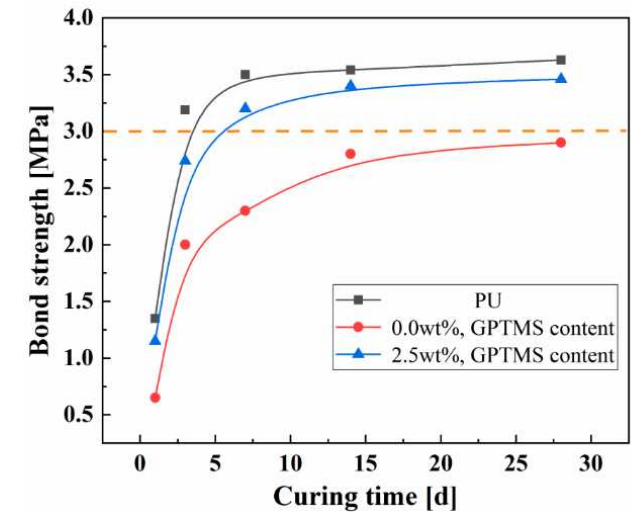
Influence of mold temperature and process time on the degree of cure of epoxy-based materials for thermoset injection molding and prepreg compression molding



Influence of curing time on degree of cure (left) and tensile properties (right) of the forming epoxy-based mold at 160°C.

Taken from : Polymers (2019)

Effect of Silane Treatment on Mechanical Properties of Polyurethane/Mesoscopic Fly Ash Composites



Bond strengths of PU specimens with varying silane content at different curing times.

Curea In-Line System

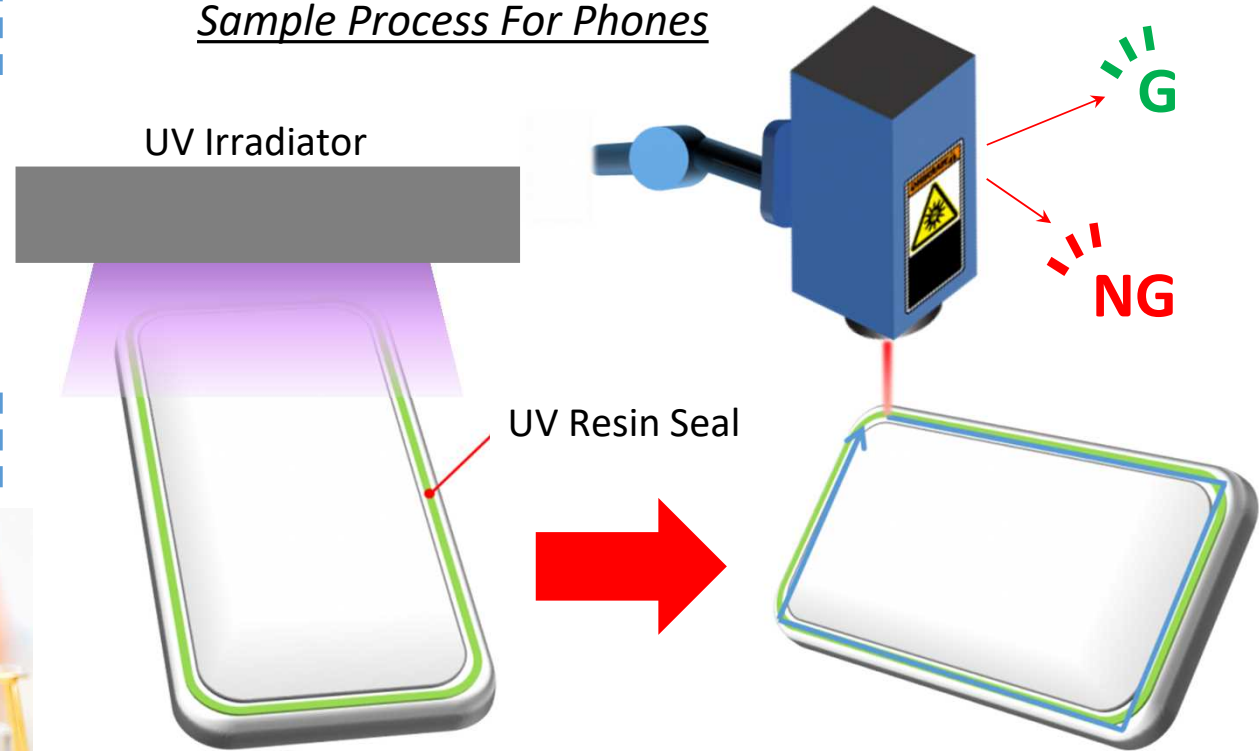
Without a real-time monitoring system, products can be overcured. This results in defects and low quality output.



The AcroEdge Curea curing monitoring system solves this problem via rapid and consistent in-line inspection.



Sample Process For Phones



Quality and process control, guaranteed!

AcroEdge

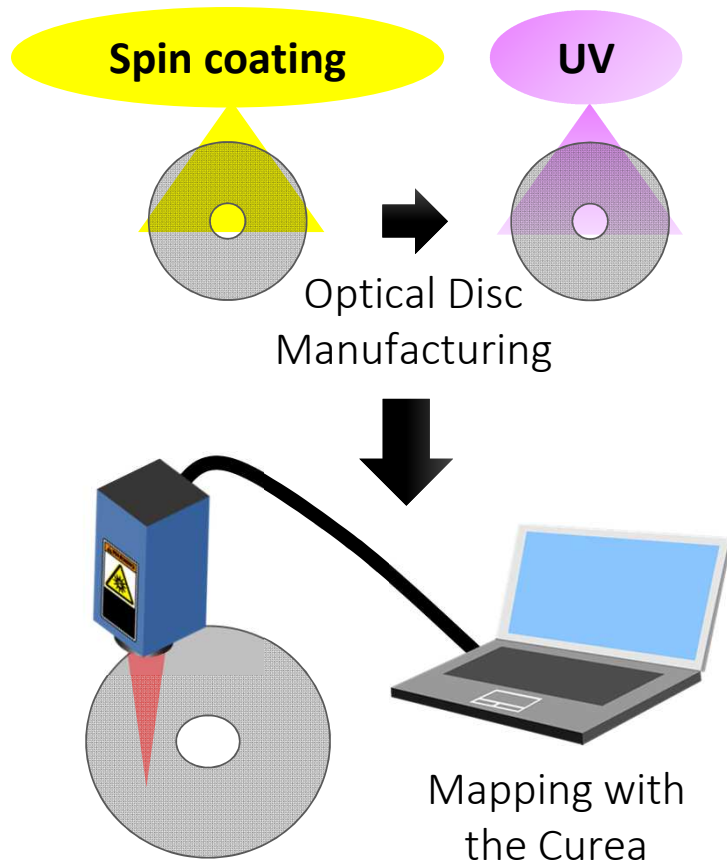
Why Use the Curea?

5 REASONS TO USE THE CUREA

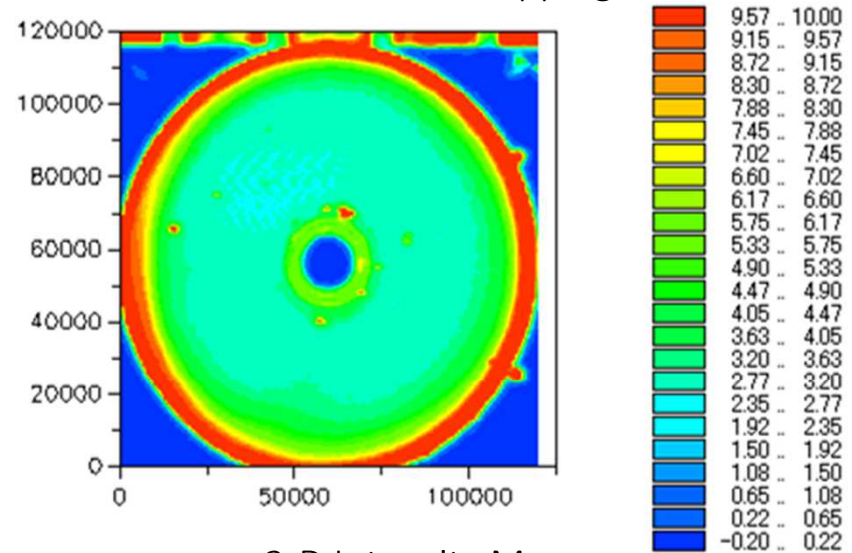
- ① Detailed, accurate, and consistent measurements.
- ② Non-invasive, non-destructive, & rapid inspection for production lines.
- ③ Modular and highly customizable design.
- ④ High compatibility and correlation with other lab tests.
- ⑤ Boosts production efficiency, capacity, and quality.

Why Use the Curea?

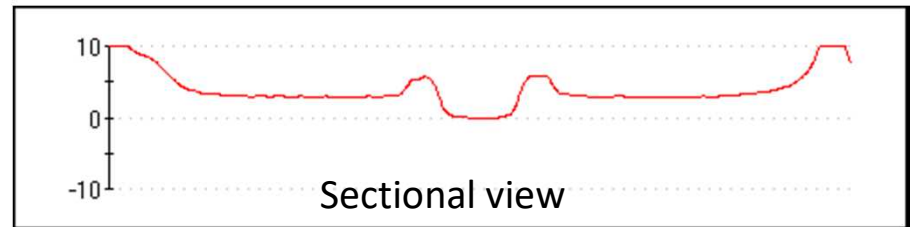
① Detailed, accurate, and consistent measurements.



Fluorescence Mapping



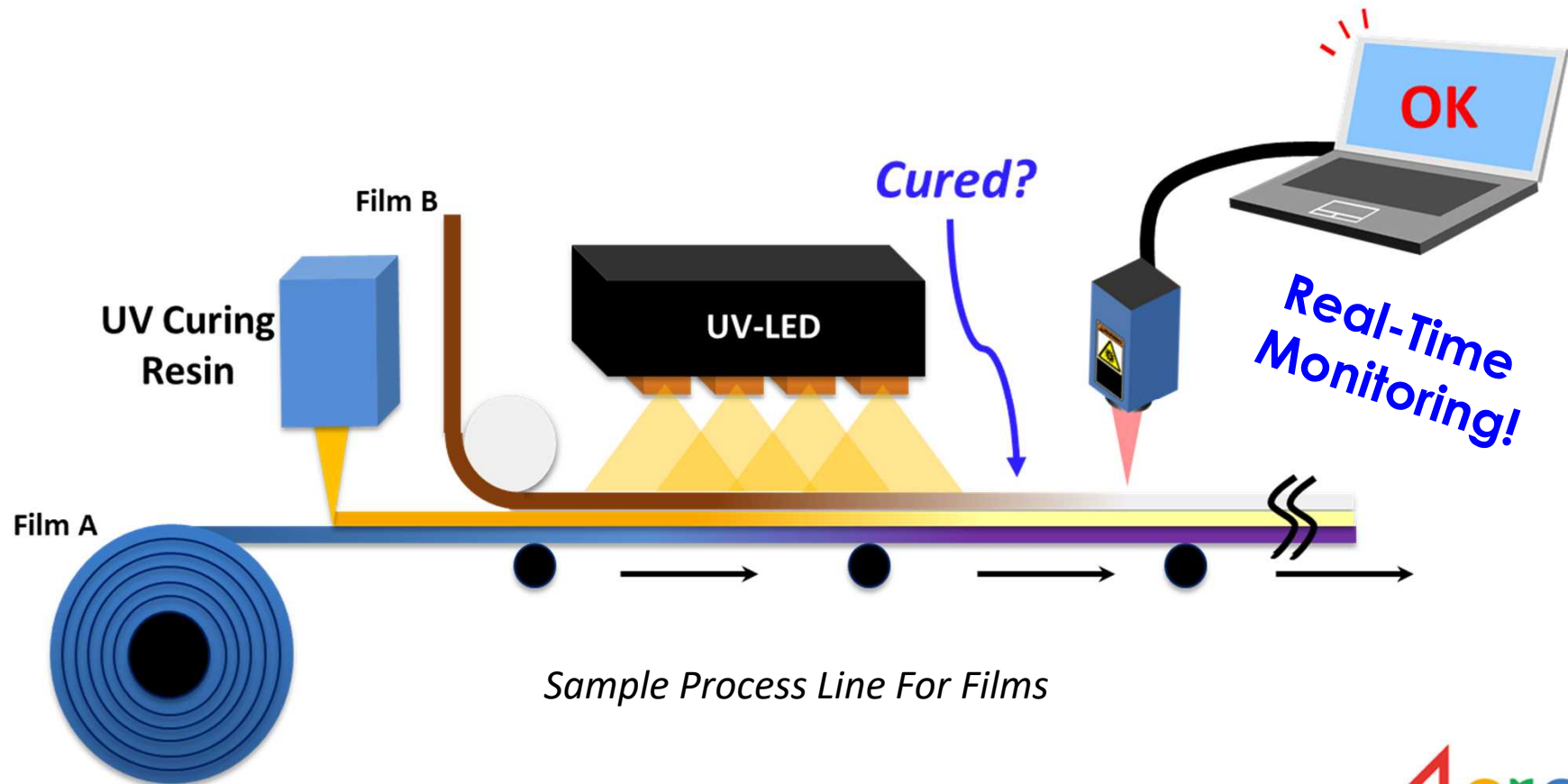
2-D Intensity Map



Sectional view

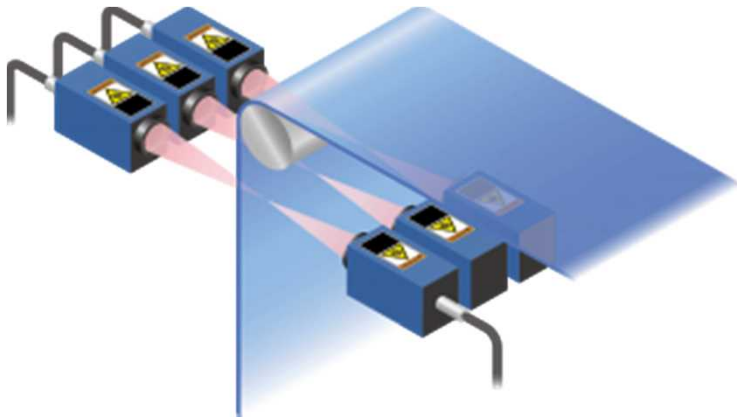
Why Use the Curea?

② It provides non-invasive, non-destructive, & rapid inspection for production lines.



Why Use the Curea?

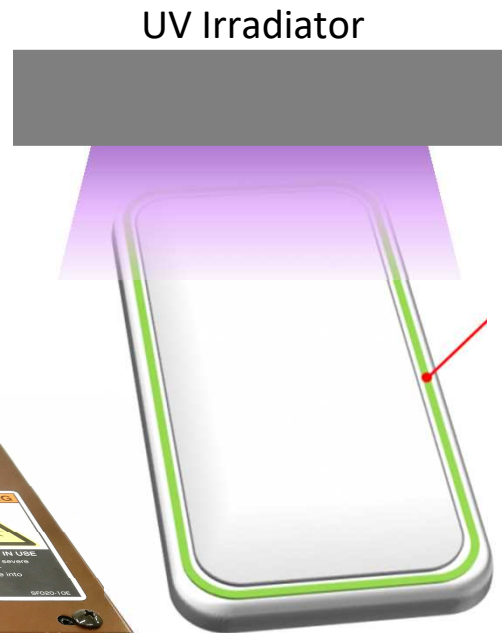
③ Its modular design makes it highly customizable.



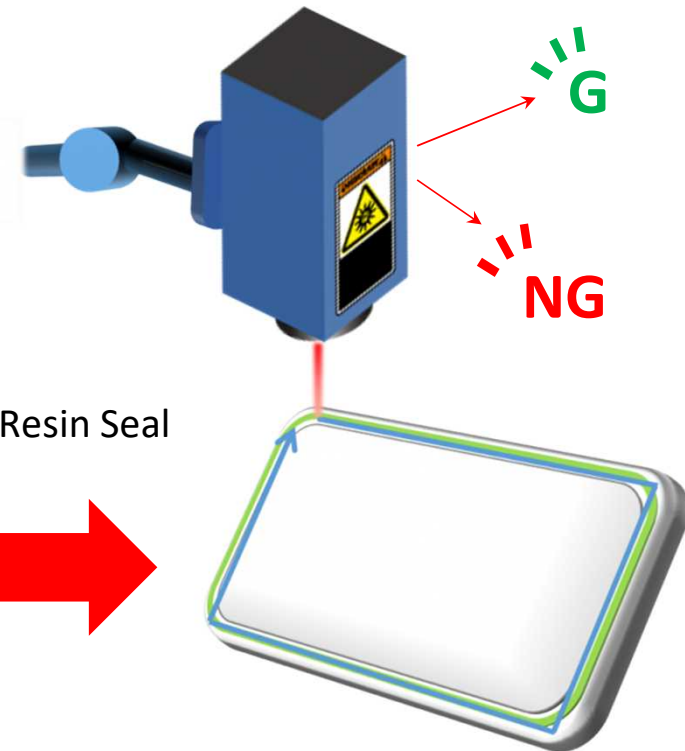
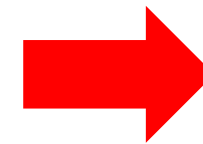
Curea Array for Wide Area Monitoring!

Specs are also customizable!

e.g. Beam diameter, excit. wavelength, etc.



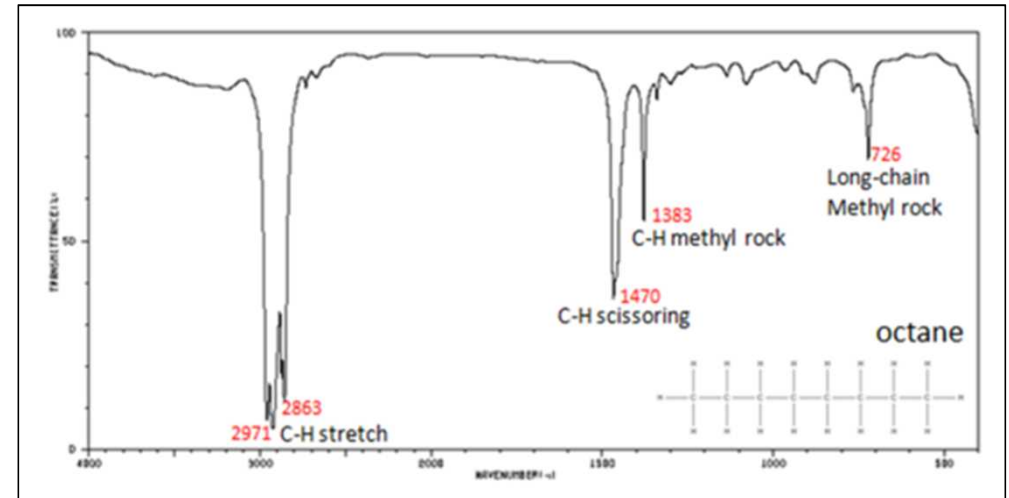
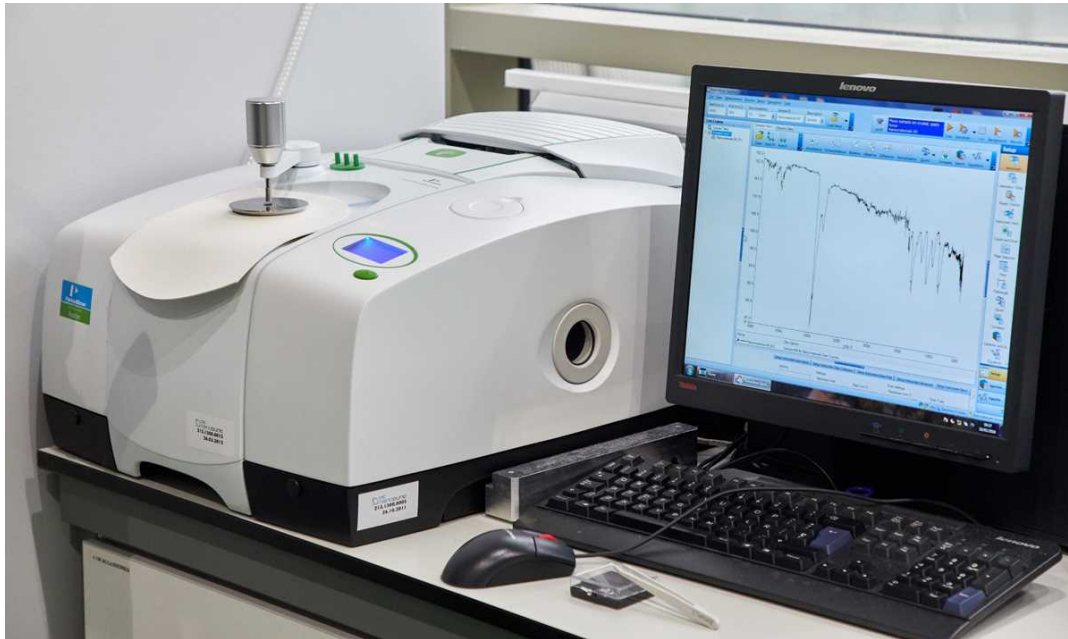
UV Resin Seal



Scanning measurements (via robotic arms)!

Why Use the Curea?

④ High compatibility & correlation with lab tests.

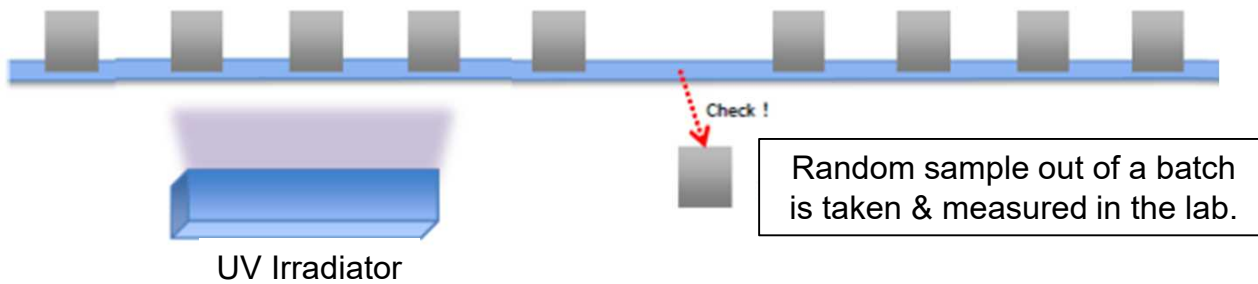


*Perkin Elmer FTIR Spectrometer:
FTIR Spectra & Functional Groups*

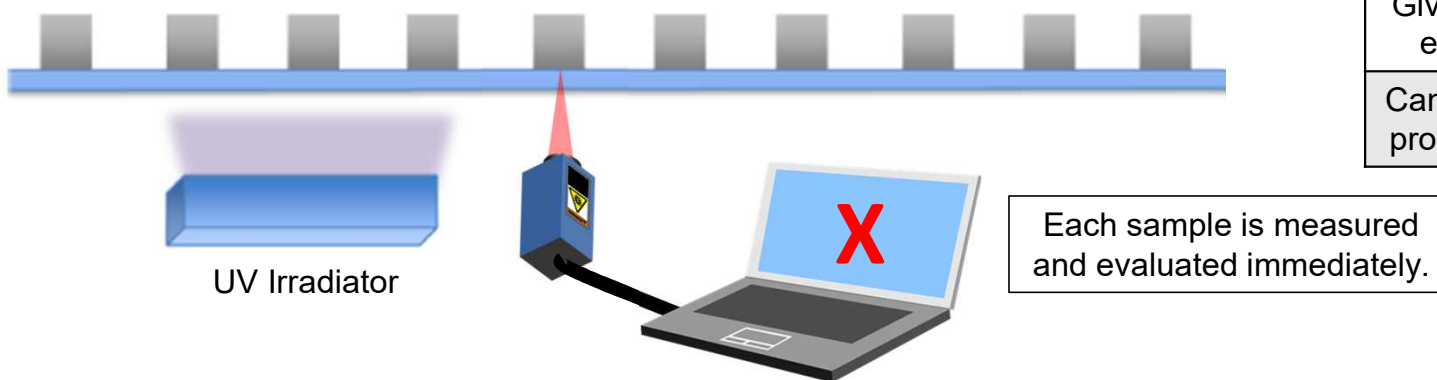
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⑤ Boosts production efficiency, capacity, & quality.

OTHER METHODS / WITHOUT CUREA



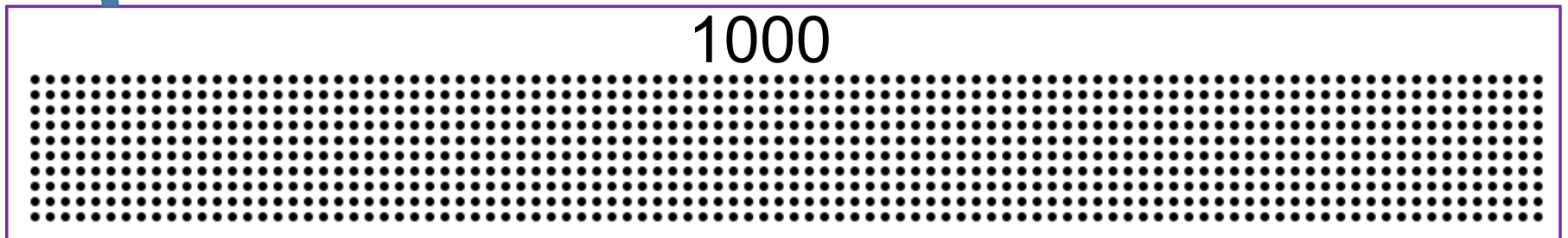
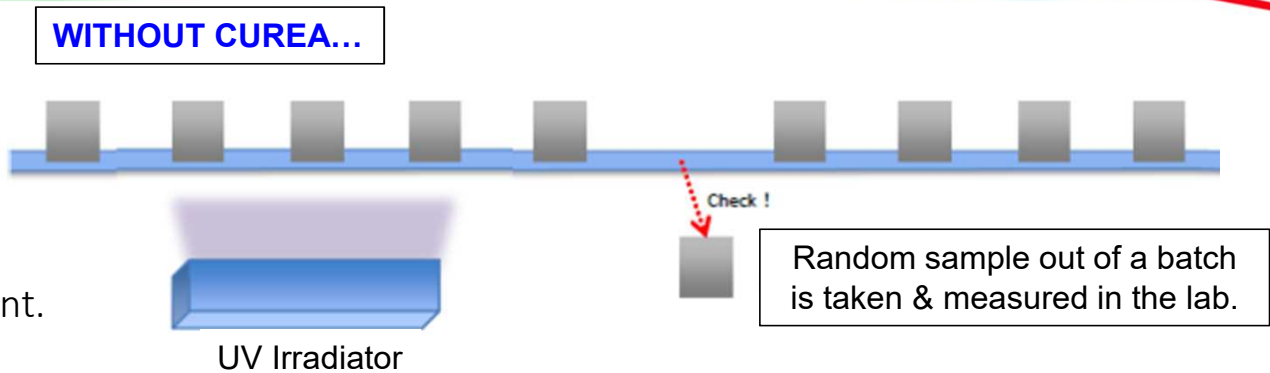
WITH CUREA



CUREA	OTHERS
Measures all samples	Measures 1 random sample at intervals
Does not modify/destroy sample to measure	Modifies/destroys sample to measure
Does not interrupt process line	Interrupts process line
Evaluation is immediate	Evaluation takes time and effort
Reduces scrap products to bad measurements only	Entire line's batch is scrapped if a random sample is bad
Gives information about equipment reliability	Limited as an external device
Can be enhanced w/ live process control systems	Limited as an external device

Sample Scenario

- In a typical production line, imagine 10000 samples are made per day.
- 1 out of every 1000 samples are randomly taken and measured.
- It takes one hour to make a measurement.



This means:

1. 10 products per day are destroyed for measurements.
2. The production line is possibly interrupted for a few minutes every time a sample is taken.
3. If the 1000th sample of a batch is evaluated as bad, then at least 2000 products may have to be discarded.
4. If there is one random bad sample per day, this could equate to around **20-25% loss of production capacity**.
5. In this method, there is actually no guarantee of production quality for all the remaining samples.
6. The max efficiency could be greater than 10000 without interruptions.

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Thank you very much!



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