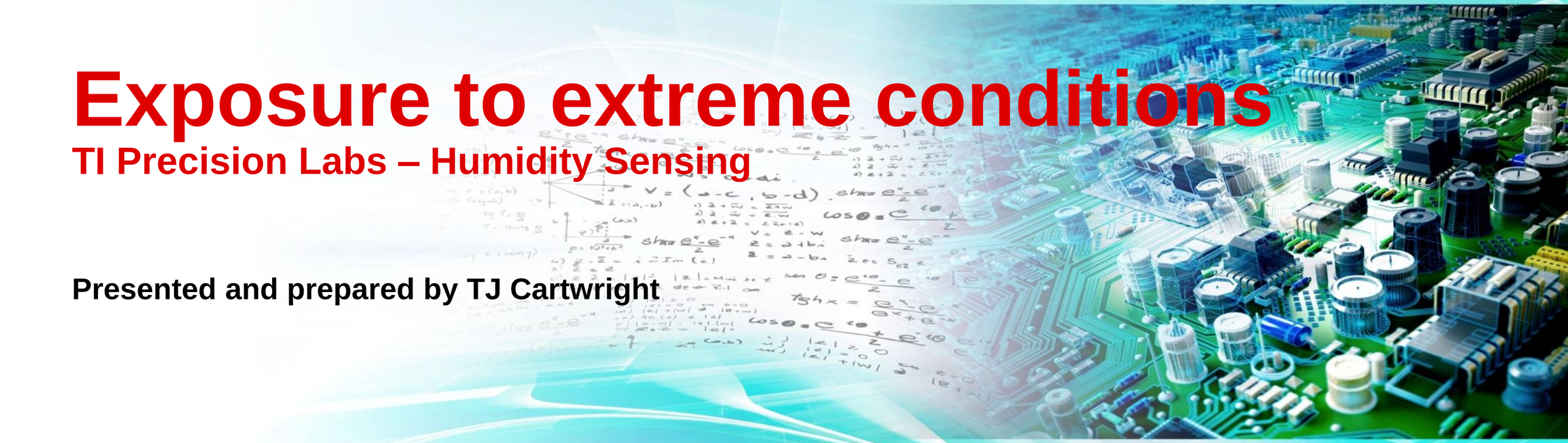
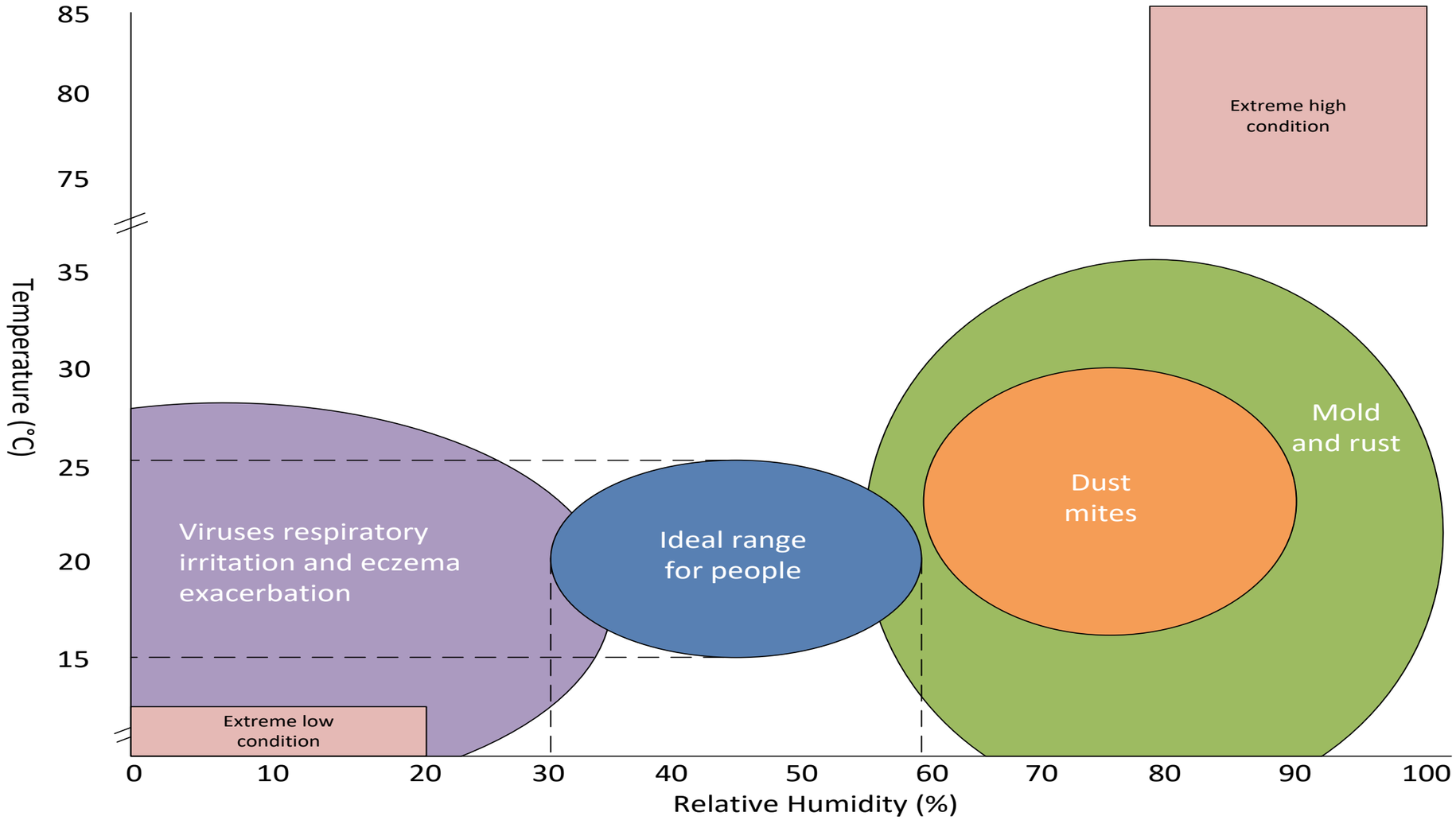
Exposure to extreme conditions

TI Precision Labs – Humidity Sensing



Presented and prepared by TJ Cartwright

What are extreme conditions?

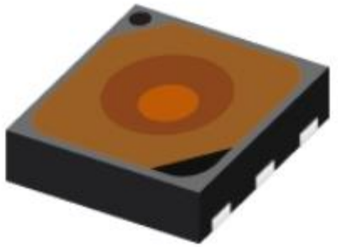


Debris buildup

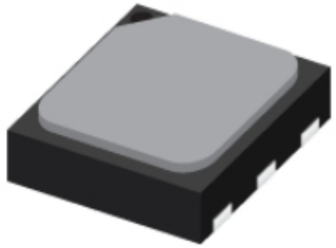
PM2.5 examples

Package Solutions

- Kapton Tape
- Protection during assembly
- Conformal Coating
- Removed after all devices are populated

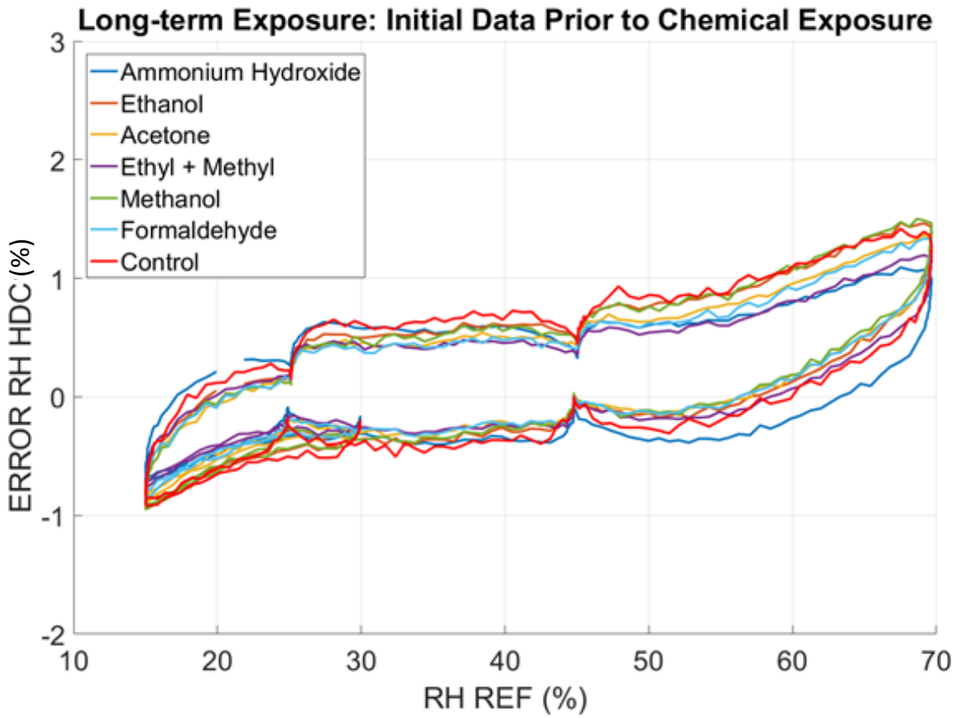


- Permeant Filter
- Dusty operational environment
- Remains on for the life of the device

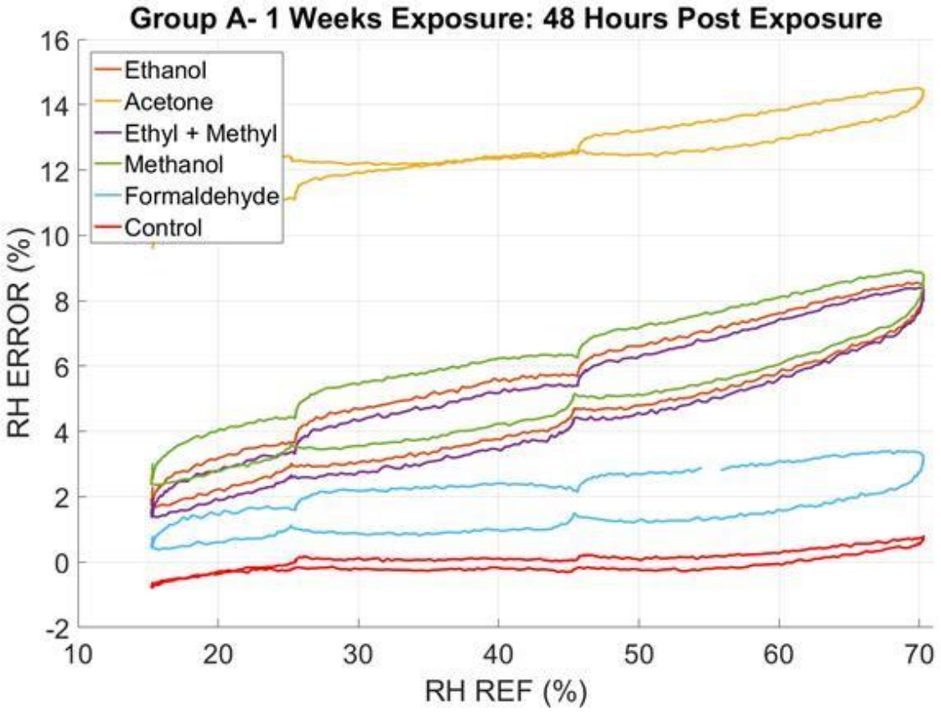


Chemical exposure

Pre Exposure

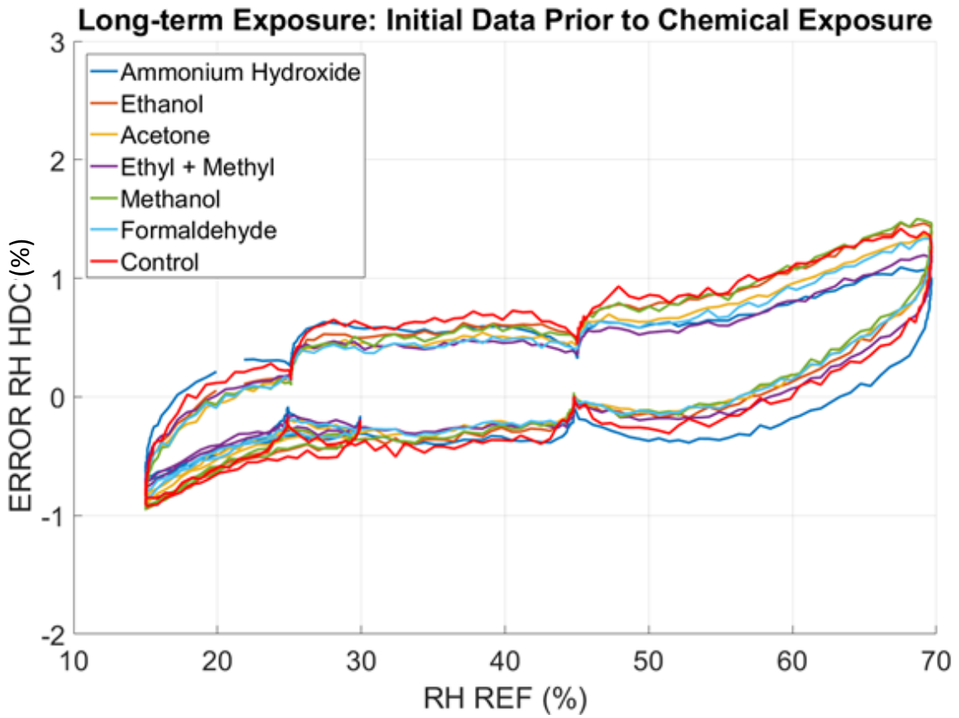


Post Exposure

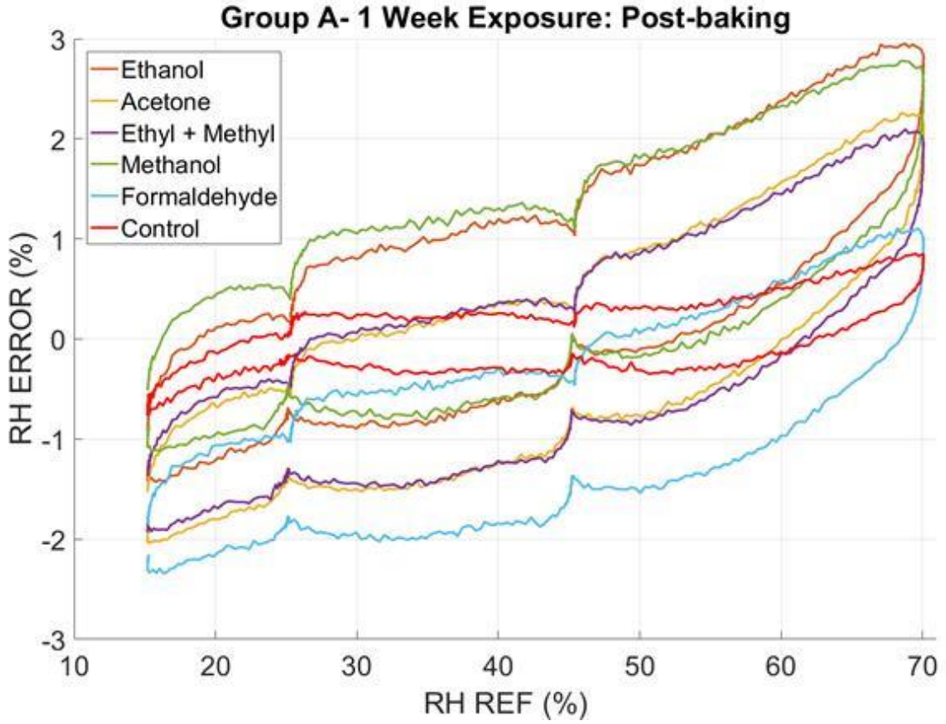


Chemical exposure

Pre Exposure



Post Baking



Additional Resources

Silicon User's Guide

Humidity FAQs

[FAQ] HDC2080/HDC2010 - What are the key specifications for TI humidity sensors?

✓ Resolved

What are the key specifications for TI **humidity** sensors?

[FAQ] HDC2080/HDC2010 - Are there any types of packing materials that must be avoided for humidity sensor storage?

✓ Resolved

Are there any types of packing materials that must be avoided for **humidity** sensor storage?

[FAQ] HDC2080/HDC2010 - What are the recommendations for layout and placement of humidity sensors on printed circuit boards (PCBs) or flex material?

✓ Resolved

What are the recommendations for layout and placement of **humidity** sensors on printed circuit boards

---

[FAQ] HDC2080/HDC2010 - What are the effects of “contaminants / Volatile Organic Compunds (VoCs) ” on a polymer based Humidity Sensor?

✓ Resolved

Humidity Sensor?

Thank you!

To find more humidity sensor resources and products visit ti.com/humidity