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Background

- Historical harsh solvent extractions
- Nuclear AC and bio-solvents
- NCAT ignition furnace/method
- Correction factor for AC, gradation
- Variability with specific aggregates
- Harsh solvent benefit without the risk?

InfraTest Modular Asphalt Analyzer “Cube”

- Binder Sampling
- Glassware Washer
- Rotovap Recovery
- Compatible with both TCE and DCM solvents
**Purchase Options**

- Washing Chamber
- Binder Sampling
- RTR Wash
- Rotovap Recovery Glassware
- Washer

- Compatible with both TCE and DCM solvents

**NCAT Experience**

- Loaner unit production testing (1 year)
- Positive assessment of comparison trials
- 10/day (AC and dried aggregates)
- Reduced fumes w/ closed system, but
- Walk-in hood needed for rotovap
- Reduced solvent demand with repetitive recycling
- Return on investment in NCAT’s nonprofit business.
NCAT Experience

Excessive Dust

IOWA DOT

$y = 0.9867x$

$R^2 = 0.9909$
Industry Feedback

• Unanimously positive feedback
• User interface for real time controls
• AC and dried aggregates in 1 hour
• Faster turnaround than an ignition furnace
• Dry shake of uncoated aggregates
• Decision via worker safety & bottom line
• 400V 8.5 kW, 3PH 50/60hz custom transformer (provided)
• 230V 5kW water cooling unit (~$10k).

Takeaways

• Technology works
• Contractors approve
• Startup costs are high
• Worker safety benefits
• Reduced testing time.

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