Report on HVI 1000 AutoMic

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USDA

HVI 1000 AutoMic

- First Instruments acquired by USDA in 2012
  - 2012: 20 2013: 10 2014: 20
- Significant Step Forward in HVI Automation
- Completely automates the micronaire measurement

HVI 1000

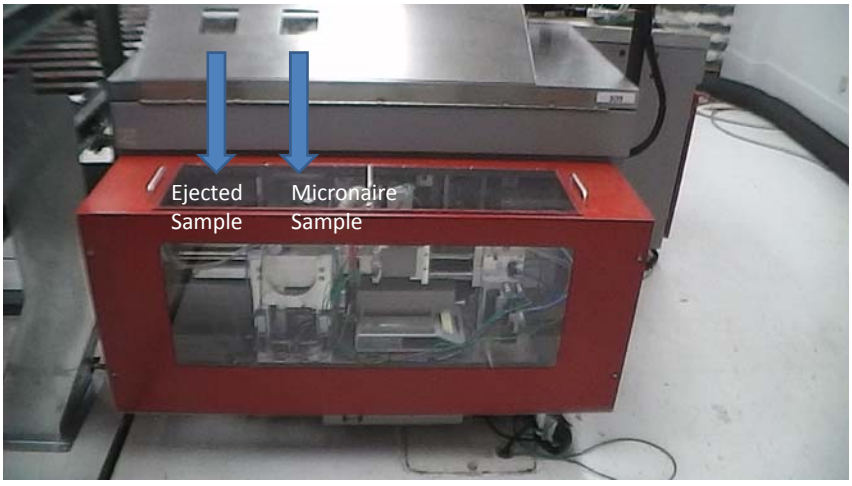
HVI 1000 AutoMic

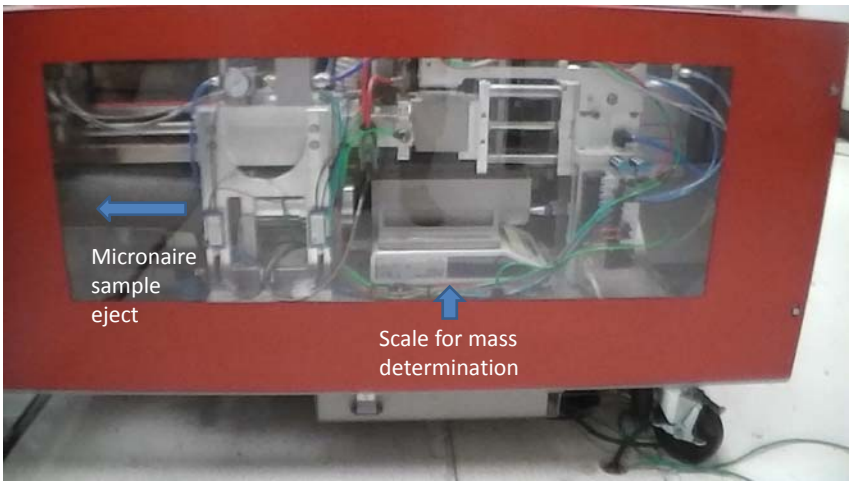
Relocation of Micronaire Module

HVI 1000 AutoMic

- Left side Length/Strength specimen also serves as specimen for micronaire
- Requires specimen mass between 8-15g

HVI 1000 AutoMic





HVI 1000 AutoMic

- Larger mass range micronaire specimen (8-15g) requires a more complex two compression volume chamber
- Chamber volume controlled by stepper motor

HVI 1000 AutoMic

Challenges

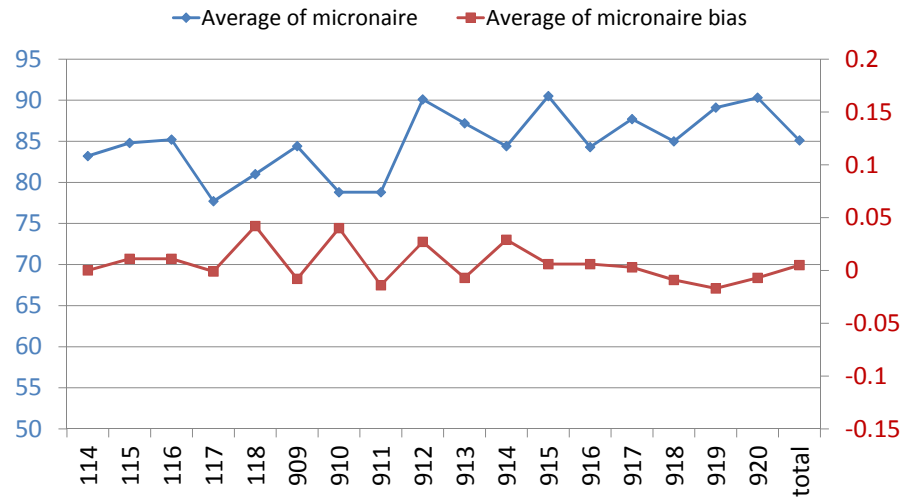
- Chamber leakage
- Clogging
- Variability
- Calibration bias

HVI 1000 AutoMic

Potential

- Increased testing volume
- Increased accuracy given minimal operator influence

HVI 1000
Micronaire Reproducibility and Bias Data



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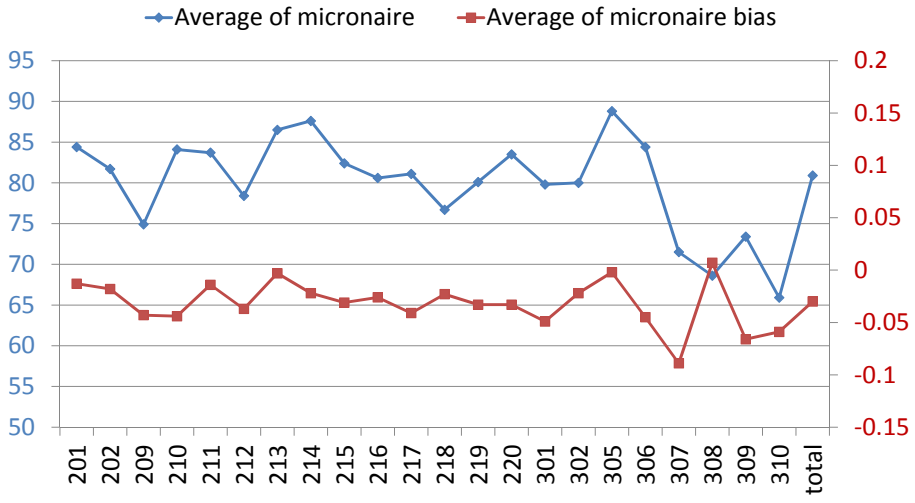
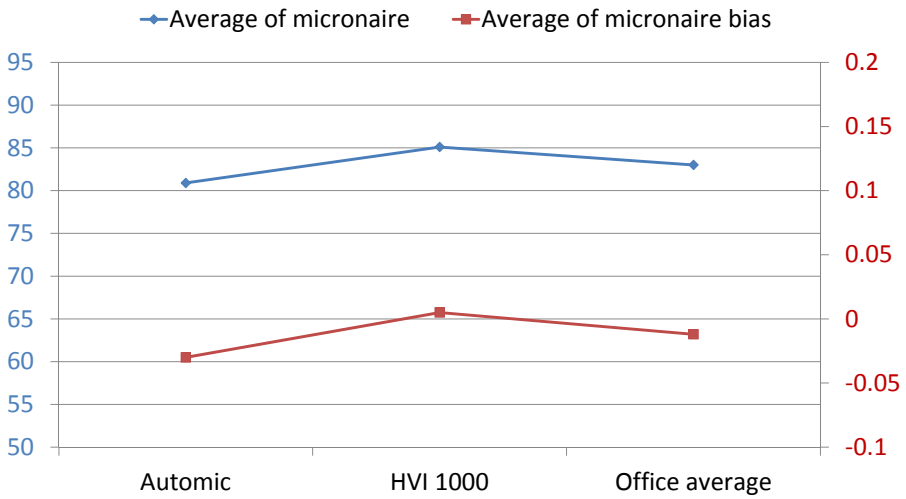


Micronaire
Reproducibility and Bias by Model



HVI 1000 AutoMic

- Refinements are continuing
- Problems are being resolved
- Plans for continued implementation