SAMPLE PREPARATION GUIDE

Achieve Reliable, Fast & Reproducible Water Activity Results

Proper sample handling is essential – especially in regulated environments.
Follow these best practices to ensure representative results every time.

Sample Preparation Best Practices

1. **Always use clean tools** – especially clean lab gloves and fresh sample cups to make sure the entire setup is clean before each reading
2. **Be consistent** – use the same sampling standard procedure for a sample each time you test it to prevent variability
3. **Ensure an equilibrium measurement** – by choosing the appropriate stability setting for your product
4. **Use homogeneous samples** – especially when aiming to measure interior or average aw
   - Break or crush coated or solid products
   - For multi-component samples, include a representative portion of each component equivalent to its mass ratio
5. **Fill the cup correctly** – use enough sample to cover the bottom of the sample cup, but do not overfill above the middle ring of the sample cup. This helps avoid contaminating the testing chamber when placing the cup inside
   - Some samples may not fully cover the bottom of the cup due to shape or format, but this is fine and won't affect testing results

Further Recommendations

- Avoid moisture exchange – Measure immediately or seal properly if testing later
- Larger sample surface area speeds up measurement time
- High-sugar, fat-coated or multi-component samples may take longer to equilibrate

Watch our youtube video: Mastering Sample Preparation for Water Activity Testing | Essential Tips and Techniques

Use Fresh Sample Cups

Here is a list of reasons why we recommend using new sample cups, especially when working in a highly regulated environment or aiming for maximum accuracy and regulatory compliance:

- ✅ **Avoid Cross-Contamination**
  Previous residues can alter results
- ✅ **Moisture Control**
- Water residues or detergent traces distort readings
- ✅ **Hygiene & Compliance**
  Clean, sterile conditions = reliable data
- ✅ **Measurement Accuracy**
  Critical for validation, QC, and audits

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