MicroTally® MicroCap™-6D
MicroTally® MicroCap™-8D

USER MANUAL

Continuous Sampling of Fresh Cut Produce Using a MicroTally® MicroCap™ Sampler

Introduction

The MicroTally® MicroCap™ Samplers (Catalog Numbers: MT-MC-6D and MT-MC-8D) are continuous sampling devices (CSDs) designed to collect representative samples of finished produce products directly from multi-pocket scales before bagging. The 6-inch (6D) and 8-inch (8D) openings are engineered to fit over the scale's distribution cone, allowing the sampler to contact a large surface area of product as it passes over. This design enables the collection of a highly aggregated sample that reflects product conditions immediately prior to packaging. Continuous, cloth-based sampling has been demonstrated to perform as well as—or better than—traditional composite tissue sampling for many fresh-cut fruit and vegetable products. However, accurate and reliable results depend on strict adherence to standardized sampling procedures. This user manual provides guidance on proper sampling techniques for a variety of fresh-cut produce items using the MicroTally® MicroCap™ Sampler. For additional applications, product specifications, or technical assistance, please contact FREMONTA Corporation or visit www.MicroTally.com. Training videos are also available on FREMONTA's YouTube channel.

Important Notices

1. The MicroTally® MicroCap™ Sampler is sterile and packaged in a 55-oz bag. After sampling, place the used sampler back into its original bag for safe transport to the laboratory and for testing.
2. Use one MicroCap™ Sampler per lot or per time code, as determined by the FSQA team.
3. The MicroCap™ Sampler is typically pre-moistened with 25 mL of sterile distilled or deionized water to enhance microbial transfer. For high-moisture or "wet" products, for example, dice tomato, adequate transfer may occur without pre-moistening.
4. Sampling is driven by gravity and product flow. As large volumes of product pass over the surface of the sampler, sufficient contact is created to generate a representative continuous sample.
5. Sampling duration depends on the product feed rate. Effective sampling can be achieved in as little as 10 minutes. Sampling periods longer than 2 hours are not recommended, as they may represent excessively large amounts.
6. Proper sampler size is important for secure placement on the distribution cone. Using the appropriately sized sampler ensures better restraint. If available, larger optional subs positioned above the distribution cone can provide additional stabilization.

Preparation

Prior to entering the production floor, prepare the MicroCap™ Sampler as follows:

	1. Put on disposable gloves and sanitize them using an alcohol-based hand sanitizer. 2. In a clean sample preparation area, remove the perforated top of the MicroTally® MicroCap™ sampler bag. Open the bag and add 25 mL of sterile distilled or deionized water, if pre-moistening is required for the product being sampled.
	3. Gently massage the sampler through the bag to evenly distribute the moisture across the cloth surface. 4. Fold the bag closed and secure it using the side tabs if the sampler is not used immediately. 5. This preparation step can be completed ahead of time for all samplers needed for the day. Prepared samplers may be stored under refrigeration until use.

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Sampling Procedure

1. Assemble all required sampling supplies.
2. Scan or record the sampler's barcode to ensure proper sample identification and tracking.
3. Record any relevant metadata, such as product type, line, time code, lot number, or other information required by your FSQA program.
4. Put on disposable gloves and sanitize them with an alcohol-based sanitizer. Ensure that no excess sanitizer remains that could transfer to the sampler.
5. Remove the MicroCap™ Sampler from its bag using sanitized gloves.
6. Place the sampler over the distribution cone, spreading it evenly so that it makes full contact with the product flow.
7. Allow product to pass over the sampler for the designated sampling period. This duration defines the lot or sub-lot being collected.
8. The sampler may naturally rotate or spin during sampling. This movement is expected and does not affect sampling performance.
9. After the sampling period, remove the sampler from the cone using sanitized gloves.
10. Fold the sampler into quarters and then fold once more in half to reduce size for packaging.
11. Insert the folded sampler back into its original bag, ensuring it reaches the bottom of the bag.
12. Seal the bag securely using the sealing strip at the top. If required, label the bag according to company procedures to ensure proper identification. Deliver the sample to the laboratory promptly.
13. Repeat the above steps for each additional lot or sub-lot that requires sampling.
14. Use a new MicroTally® MicroCap™ Sampler for every lot or sub-lot to prevent cross-contamination. Gloves must be changed and sanitized after each sampling event. If protective sleeves are worn, t he should be re-sanitized after each sampling event.
15. Send all collected samples to the laboratory according to standard company protocols.

Sample Testing

1. **Presence/Absence Pathogen Testing**: Add 200 mL of the appropriate enrichment broth directly into the MicroTally® MicroCap™ sampler bag. Stomach (homogenize) the sampler for at least 1 minute, ensuring the entire cloth sampler is fully submerged and making complete contact with the broth.
2. **Indicator Enumeration and Pathogen Testing**: After homogenization, remove aliquots as required for indicator organism enumeration. Then incubate the remaining enrichment according to the standard operating procedures for your pathogen detection platform, including the specified incubation time, temperature, and media requirements.
3. **Enumeration-Only Testing:** For microbial enumeration procedures that do not require full enrichment, microorganisms may be extracted using smaller volumes of sterile diluent (less than 200 mL), depending on the method and dilution scheme used.

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Technical Support

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