

FOOD & BEVERAGE LABORATORY ESSENTIALS



Guardian Hotplate Stirrers

• **Sample Heating and Mixing:** Used to ensure uniform heat distribution during simultaneous heating and stirring

 Emulsion Preparation: Create stable emulsions by maintaining appropriate temperatures during mixing

 Emulsion Stability Testing: Heat and stir emulsions to evaluate stability and monitor phase separation over time

 Extraction: Improves extraction efficiency of flavors, colors, and nutrients from food matrices

• **Fat Extraction:** Heating and stirring the sample in a specific solvent to separate fat from the matrix

• **Dissolution:** Effective in dissolving solids (sugars, flavor compounds) into liquids for analysis or formulation

• **Dissolution of Culture Media:** Heating and stirring to obtain consistent microbial cultures in food testing labs

• **Dilution of Juice Samples in Buffers**: For even distribution of potential yeasts and molds in quality and safety assessments

Shakers

• **Dissolution of Solids:** Aiding in dissolving solid ingredients in liquids and facilitating uniform distribution in formulations

• **Suspension of Solids:** Shakers keep solid particles suspended in liquids

• **Sample Mixing**: Ensure uniform mixing of samples, such as enrichment broths, to enhance microbial growth

• **Extraction Processes:** Utilized in the extraction of flavors, colors, and compounds from food matrices

• Stability Testing: Beverages and sauces

• **Fermentation:** Yeast starter cultures growth for beer, wine or dairy production

• **Pesticide Residue Tests:** Extraction step to mix food samples (grains, vegetables) with solvents

• **Microbial Growth:** E. Coli, Listeria or Salmonella for pathogen tests in raw meats and processed food











• Sample Homogenization: Rapidly mix small volume samples to ensure uniformity

• Suspension of Solids: Effectively suspend solid particles in a liquid, which is crucial for accurate analysis

• Emulsion Preparation: Facilitate the initial mixing of emulsions, such as dressings and sauces, before further processing

> • Reagent Mixing: Aids in mixing reagents with samples in preparation for various analytical tests to ensure a complete reaction

Mixing Samples with Enrichment Broths: For optimal growth of potential pathogens

• **Sensory Analysis:** Ensuring sample homogeneity for sensory evaluation, where consistency is vital for accurate taste testing

 Nutritional content, pesticide residues or contaminants **analysis:** After fruit sample homogenization with solvents or buffers

Frontier Centrifuges

• **Separation of Components:** Used to separate solid particles from liquids, such as sediment in juice or other beverages

• Microbial Analysis: Concentrate microbial samples for further analysis, such as identifying spoilage organisms in food

• **Extraction:** Enhance extraction of bioactive compounds to facilitate the development of functional foods and supplements

• Clarification: Clarify liquids by removing suspended solids and impurities, resulting in clearer, more visually appealing products

• Protein Isolation: Isolate proteins from food matrices, helping in nutritional analysis and product development

FRONTIER™5000

Series Multi Pro,

FC5714

• Concentration of Volatile Flavor Compounds: In sauces or flavorings for sensory analysis and flavor development

• Milk Fat Separation: Separate cream from milk for analyzing the fat content and developing low-fat dairy products

• **Sediment Removal:** Clarifying sauces or dressings using centrifugation for a smoother texture





VORTEX MIXER Analog **VXMNAL**



VORTEX MIXER Analog VXMTAL





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Dry Block Heaters

• **Sample Incubation:** Used to incubate microbial cultures at specific temperatures to promote growth in food microbiology studies

• **Enzyme Activity Testing:** Facilitates enzyme assays by providing a stable temperature for reactions to occur

- Temperature Control for Chemical Reactions: Maintains precise temperatures for various chemical reactions in food analysis
 - Quality Control Tests: Utilized in routine quality control to maintain specific sample temperatures for consistency in testing
- Shelf-Life Studies: Simulate temperature variations during storage to evaluate stability and shelf life of food products under different conditions
- Melting Point Determination: Use in QC to determine the melting point of fats and oils, which is essential for product consistency
- **Food Safety Testing:** Heat samples to specific temperatures to test the effectiveness of cooking methods in eliminating pathogens
- **Texture Analysis:** Heat food samples to specific temperatures before conducting texture analysis



• **Homogenization:** Used to achieve uniform consistency in mixtures like sauces, dressings, and beverages

• **Dissolution of Ingredients:** Facilitates effective dissolution of powdered ingredients (stabilizers or flavor enhancers) in liquids

- **Emulsion Formation:** Create and stabilize emulsions, a crucial step in production of mayonnaise and salad dressings
- **Suspension Mixing:** Effective for suspending solids in liquids, ensuring even distribution in formulations
- **Mixing samples for Rheological Testing:** To evaluate how products flow and deform under stress, critical for texture analysis
- **Fermentation Process:** Aids in maintaining even mixing during fermentation processes (yogurt or beer production), to ensure uniform conditions for microbial activity
- **Syrup Preparation:** Efficient dissolution of sugars and flavoring agents in water to obtain a clear and uniform syrup







1 Block, Digital HB1DG





2 Block, Digital, Heat Lid HB2DGHL



Moisture Balances

Quality Control: Ensures products meet specific moisture content standards, which is crucial for maintaining quality and consistency

• Product Consistency: Consistent moisture levels are essential for maintaining the texture, flavor, and overall quality of food products

> **Spoilage Prevention:** Testing moisture content helps control microbial growth and spoilage, ensuring safety and extending longevity

• **Regulatory Compliance:** Many food and beverage products must comply with specific moisture content regulations

Laboratory Balances

for recipe formulation and ingredient proportions

• Cost Efficiency: Precise measurements from analytical balances

• Quality Assurance: Accurate measurements ensure product quality and compliance with safety standards in the food and beverage industry

WHY CHOOSE OHAUS?

To support the growing demands within the food and beverage industry, OHAUS offers innovative products for your laboratories that address common challenges and enhance productivity, ensuring every product you produce meets the highest safety standards.

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reduce ingredient waste and lower production costs

Analytical balance PX124



Precision balance PX3202



MOISTURE BALANCE **MB62**



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