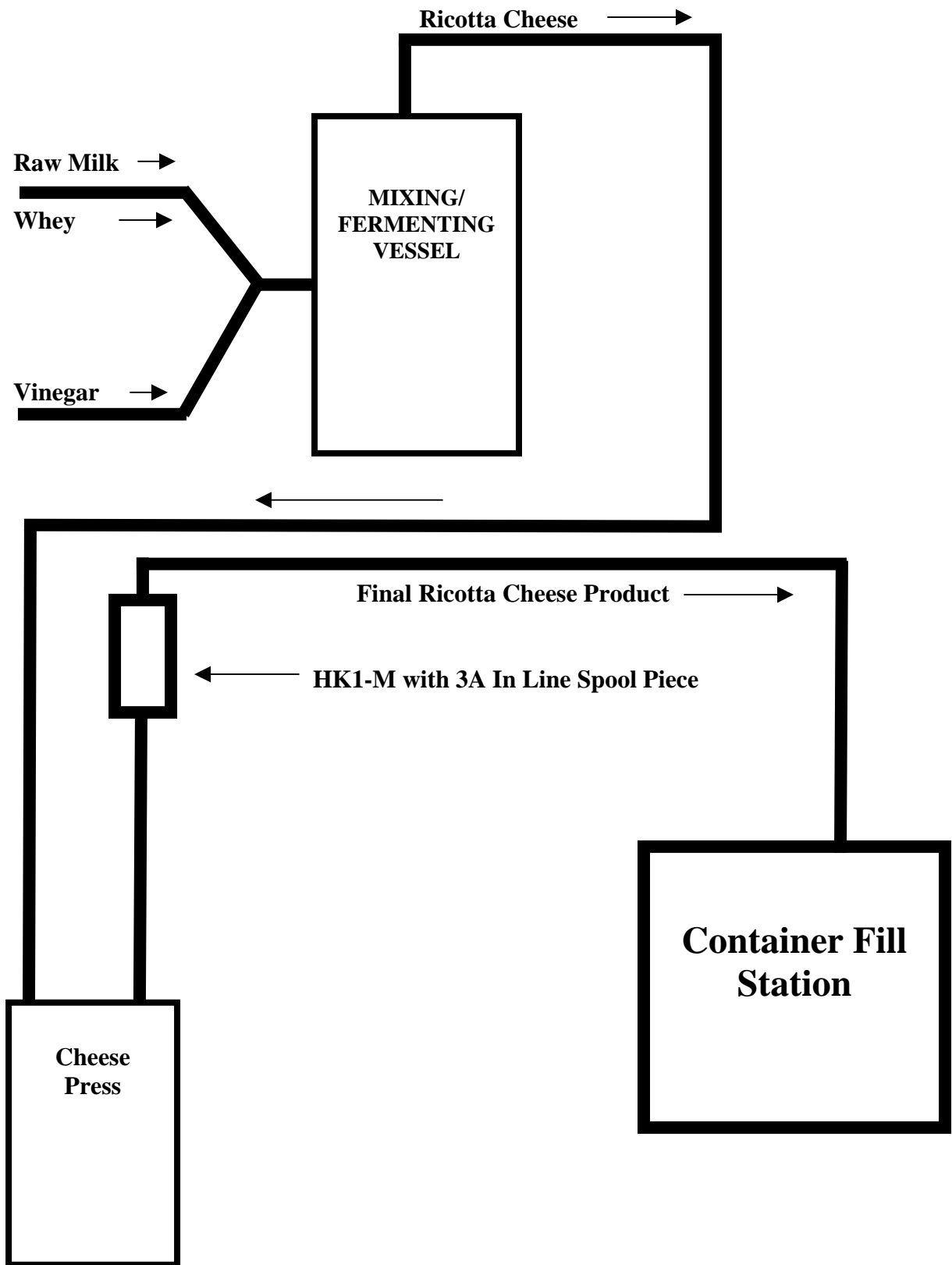


INDUSTRY:	DAIRY - RICOTTA CHEESE PRODUCTION
PRODUCT:	FINAL RICOTTA CHEESE PRODUCT
APPLICATION:	<p>Measure the % Moisture Content of the Final Ricotta Cheese Product leaving the Press.</p> <p>This is a Continuous Process with our system being used for Closed Loop Control and Visual Monitoring.</p>
DESCRIPTION:	<p>In the Final Step of the Ricotta Cheese Making Process, the Ricotta Cheese is moved from Mixing/Fermenting Vessels to a Cheese Press. The Press removes excess water from the Ricotta Cheese Product before it is put into containers for shipment and sale.</p>
BENEFITS:	<p>The customer would like to measure and control the Moisture Content of this Final Ricotta Cheese Product.</p>
COST SAVINGS	<p>By controlling the Moisture Content of the Final Ricotta Cheese Product, the Customer can save Money by producing a product, which has more moisture, but is still in Spec. Another way of selling more water.</p> <p>The Customer produces several products with different Moisture Contents. These products vary in Cost and Quality. The Customer wants to have the kind of control, which allows for very tight control of the Moisture Content for the different products.</p>
QUALITY	<p>The Final Product which is produced using an HK System for Control, has a much lower variability than if it was produced without Closed Loop Control. This lower variability allows for better control of the Final Press and an improvement in Production Efficiencies.</p> <p>By using the HK Microwave System to Control the Final Ricotta Cheese Product, the Consistency of the Final Product is improved. This reduces the Variability of the Final Product and increases the Quality.</p>
REPEATABILITY	<p>+/- 0.2 % is possible with a very good Calibration Curve.</p>
MEASURING RANGE	<p>45% to 70% Moisture Content or the Equivalent 30% to 55% Total Solids Content is Typical. The Measuring Range will vary as the type of Product varies. Special Low and High Fat Products have different Moisture Ranges.</p> <p>For best results, different calibration Curves will be required for products with different Fat Content.</p>
HK EQUIPMENT:	HK1-M IN LINE WITH 3A SPOOL PIECE



RICOTTA CHEESE PRODUCTION 2-02-07

HK INSTRUMENT SYSTEMS

Pittsburgh, PA

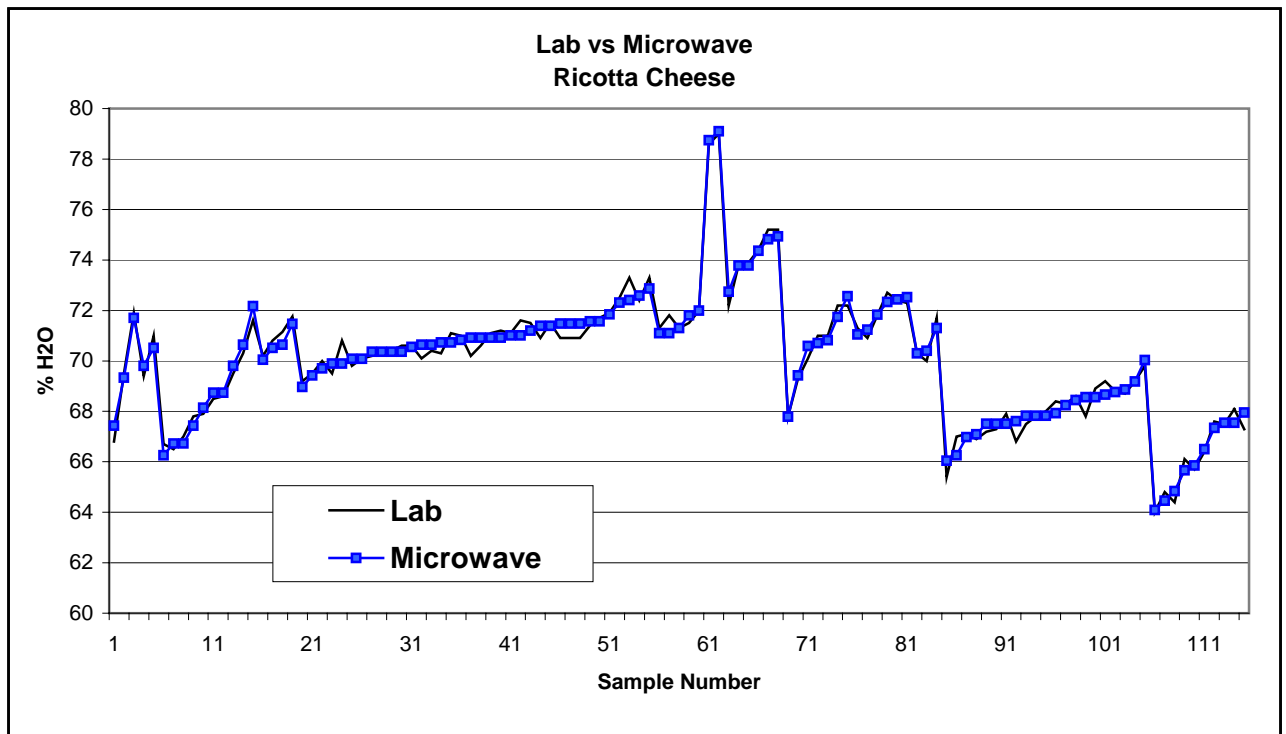
RICOTTA CHEESE

APPLICATION: TO MEASURE THE % H₂O OF A RICOTTA CHEESE PRODUCT DURING PRODUCTION. THE HK-1 CAN MEASURE NO FAT, LOW FAT, REGULAR FAT, AND HIGH FAT PRODUCTS.

INSTALLATION: THE MICROWAVE SENSORS ARE ALWAYS INSTALLED WITH A **PROPRITARY 3A SANITARY SPOOL PIECE** WHICH WILL BE MOUNTED VERTICALLY. TEMPERATURE COMPENSATION WILL ALWAYS BE INSTALLED.

TESTING: SAMPLES WERE COLLECTED AND DRIED IN A LAB OVEN TO DETERMINE % H₂O BY LOSS OF WEIGHT. READINGS OF THE HK-1 MICROWAVE INSTRUMENT SYSTEM WERE RECORDED EACH TIME A SAMPLE WAS COLLECTED.

RESULTS: CORRELATION BETWEEN LAB SAMPLES AND MICROWAVE READINGS IS EXCELLENT FOR THE ENTIRE MEASUREMENT RANGE.



SAMPLE NUMBER

CONCLUSIONS: THE HK-1 MICROWAVE INSTRUMENT SYSTEM IS AN EXCELLENT TOOL THAT CAN BE USED TO MONITOR AND CONTROL THE % H₂O OF ANY TYPE OF RICOTTA CHEESE PRODUCT.