



Practical training - Meaning of the buffer capacity of milk and milkproducts

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Training design

Nr.	Steps	Description
1	Production of yogurt	Heat up milk (3 litres) and cool it to fermentation temperature Add fermentation culture and stir vigorously Fill milk in yogurt jars (6 jars of 500g)
2	Fermentation of yogurt	To held the incubation temperature all jars are placed in a water bath (42 °C)
3	Measuring pH of yogurt	Measure pH every 30 minutes. Start with sample 1, then sample 2, etc. up to sample 6
4	Measuring acidity of yogurt (°SH/°D/°Th)	Measure acidity (°SH/°D/°Th) every 30 minutes. Start with sample 1, then sample 2, etc. up to sample 6
5	Cooling of yogurt	After measuring stop incubation and put yogurt in the refrigerator
6	Adjust the pH in the water sample	Between measuring reduce the pH of a water sample with lactic acid at the level of the yogurt sample.
7	Measuring acidity of water sample (°SH/°D/°Th)	Measure acidity (°SH/°D/°Th) of the water sample.
8	Report the measurement results (yogurt & water)	Report all measurement results
9	Sensory evaluation of yogurt	Finish the training with a sensory evaluation of all yogurt samples. Report all sensory anomalies.



Training material

Nr.	Material	Description
1	Milk	3 litres
2	Yogurt fermentation culture	
3	Water bath	
4	Beakers	6 beakers for milk samples 6 beakers for water samples 1 beaker for measuring
5	pH meter	
6	Burette (°SH/°D/°Th)	
7	Erlenmeyer flask (conical flask)	
8	Sodium hydroxide	
9	Phenolphthalein	
10	Syringe or pipette	



Training report

Sample N°.	Yogurt			Water	
	pH	°SH/°D/°Th	Sensory evaluation	pH	°SH/°D/°Th
1					
2					
3					
4					
5					
6					