Milk Quality and Products Team Activity

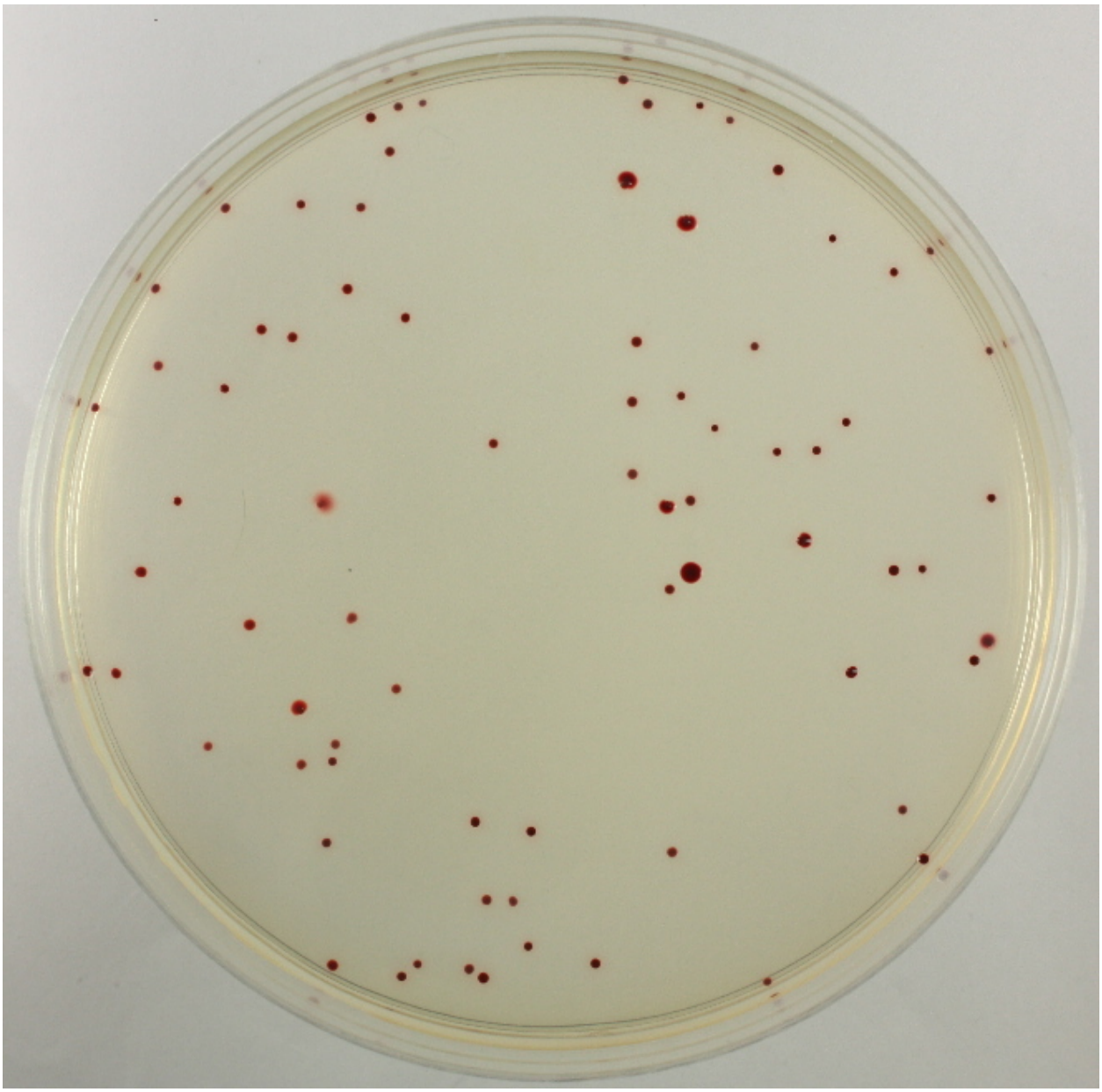
Below is a table showing results of monthly tests from dairy farm #24123. Please fill in the missing values to complete the table and prepare an oral report for presentation to the team of judges regarding milk quality on dairy farm #24123.

Test Results for Dairy Farm #24123

	Test	May	June	July	August	September
1	**SPC x 10^3**	55	180	250	49	
2	**PIC x 10^3**	25	120	165	9	
3	**SCC x 10^3**	212	800	250	500	
4	**Temperature**	38	36	45	37	39
5	**Beta-lactam antibiotic test**	Negative	Positive	Negative	Negative	
6	**Freezing Point**	-0.499	-0.535	-0.552	-0.515	-0.522
7	**Titratable Acidity (% TA)**	0.17	0.15	0.60	0.21	
8	**Sanitation Swab**	Pass	Fail	Pass	Pass	Pass

Standard Plate Count

Below is a picture of a SPC that was conducted with a dilution rate of 1:1,000. Calculate the standard plate count for September.



Preliminary Incubation Count

Below is a picture of a PIC with a dilution rate of 1:100. Calculate the PIC for this milk sample for September.

Somatic Cell Counts

You are counting somatic cells under a microscope and in your average cell counts per microscopic field is 25. The microscopic factor is 500 per cm^2 and you added 0.01 ml of milk to the slide. Calculate the number of somatic cells per ml of milk for September.

Beta-lactam antibiotic test

SNAP and Charm tests were conducted on your milk, determine if they are positive or negative for beta-lactam antibiotics by interpreting the results from the SNAP and Charm tests for September.

Titratable acidity – using the equation to determine titratable acidity

% acidity = [(mL NaOH) x 0.1 N x 9)/18]

You have performed a tritratable acidity test of the milk and had to add 3.5 ml of 1M NaOH to the milk sample before it turned a faint pink color. Using the equation above, determine the titratable acidity for September.