Title: Use of 50% potassium sorbate solution to inhibit bacterial growth in colostrum

1.0 Purpose:

This document describes the procedure for the use of 50 % Potassium Sorbate solution for addition to colostrum to inhibit bacterial growth.

2.0 Materials:

Potassium sorbate (food grade) 50 % solution (shelf life six months)
Colostrum
Clean storage container
Refrigerator / Freezer

3.0 Precautions:

3.1 Colostrum already inoculated by bacteria will remain contaminated regardless of the addition of potassium sorbate. This additive only inhibits growth by extending the generation period by 10 times; it does not destroy bacteria.

3.2 The potassium sorbate solution must be mixed well with the colostrum in order to be effective. Dumping the solution into the top of a container without mixing will reduce its ability to inhibit bacterial growth.

3.3 Current estimate of inhibition period at 40ºF is 7 days.

4.0 Procedure:

4.1 Estimate the quantity of colostrum to be treated.

4.2 Estimate the quantity of 50% potassium sorbate solution to be added at the rate of 20 ml per ½ gallon of colostrum.

Gallons of Colostrum	Potassium Sorbate to add	to Colostrum
	Fluid Ounces	Milliliters (ml or cc)
0.5 or two quarts	0.7	20
One gallon	1.4	40
Two gallons	2.7	80
Three gallons	4.0	120
Four gallons	5.4	160
Five gallons	6.8	200

4.3 Add 50% potassium sorbate solution to colostrum as prescribed above.

4.4 Add the potassium sorbate as soon as possible after the colostrum is milked from the cow. This will inhibit bacterial growth before the bacteria numbers get large enough to make calves sick.

4.5 Thoroughly mix the solution with the colostrum to maximize its effectiveness.

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