

Preparation of 50% potassium sorbate solution

Purpose:

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

Materials for bulk mixing: (for small batches, see below)

Potassium sorbate (food grade) (will need 10 Kg or 22 lbs. per batch)

Water (will need 10 L per batch) (distilled water is preferred if tap water might contain impurities)

20 L storage container with the wide mouth

Scales and measuring equipment

Stainless steel whisk long enough to reach well down into storage container

Precautions:

Observe procedures to reduce the amount of potassium sorbate powder inhaled.

To avoid over diluting final solution, add distilled water slowly and allow the Potassium sorbate to fully dissolve.

Procedure:

1. Determine batch size: Make 20 L in a 20 L storage container. Usually large plastic carboys can be ordered from a scientific supply company.
2. Determine quantity of potassium sorbate required: 10 Kg (finding a small container that will hold 1 Kg for weighing speeds up mixing.
3. Determine quantity of distilled water required: 10 L – have jugs of distilled water on hand.
4. To a clean 20 L container add 2/3rds of distilled water.
5. Gradually add potassium sorbate, usually 1kg at a time. With each addition of potassium sorbate, stir until it is mostly dissolved. Use the stainless steel whisk to stir.
6. In order to keep track of the amount added use the scale, 1-10, below to check off each amount as it is added. Someone will always interrupt you part way through the job.
7. Note that the potassium sorbate will go into solution much easier if it is added in 1 kg amounts rather than all at once.
8. Put a label on the carboy showing mixing date.

Check off each kilogram of dry ingredient as added: 1 2 3 4 5 6 7 8 9 10

Person Mixing Solution _____ Date _____

Mixing small batches (4 litres or less container)

1. Start with a clean container
2. Fill container with dry potassium sorbate; mark or note fill level.
3. Alternate between adding distilled water to container and slowly blending the water and dry potassium sorbate. Swirl contents slowly rather than shake to avoid incorporating excessive amounts of air.
4. When full, let sit overnight to allow dry potassium sorbate to dissolve and air to disperse.

5. Mix again, fill with water to same level as container was originally filled with dry ingredient. You now have a 50% solution.

Mixing dry pellets directly with colostrum

A few persons have tried this method with different levels of success of inhibiting bacteria growth. By trying various mixing times I discovered that one has to actively blend the dry pellets in colostrum for about five minutes before one can no longer identify intact pellets in the solution. Thus, I am guessing that the reason preservation results with this mixing method may have varied widely was the thoroughness with which the potassium sorbate pellets were dissolved in the colostrum.

If time is limited at the time the colostrum is collected I recommend using the 50% solution rather than pellets.