

PREPARATION OF THE SILVER NITRATE SOLUTION.

Solutions of the above strength may be procured from the dairy schools, or may be prepared by the buttermakers. The silver nitrate and potassium chromate may be procured from any good drug house. The moisture scales in use read to one-tenth of one per cent of moisture, using a ten-gram sample, which means that the scales are sensitive to one one-hundredth of one gram. Such scales are sufficiently sensitive for weighing the silver nitrate and potassium chromate in making the solutions used in the salt test. It will be best to provide a set of gram weights for use in connection with the moisture scale. If a set of gram weights are not available, ten and two-tenths (10.2) grams of silver nitrate may be weighed and dissolved in five hundred (500) cubic centimetres of water. To weigh ten and two-tenths grams using the Torsion moisture scale, place a small piece of parchment paper on the right pan of the scale and have the sliding weight on the ten per cent beam placed at the ten per cent mark. Next balance the scale by adjusting the sliding weight on the tare beam. After balancing the scale, place the ten-gram weight on the left pan and move the sliding weight on the ten per cent beam back to the eight per cent mark. Ten and two-tenths (10.2) grams of silver nitrate will be required to balance the scale and it is weighed on to the paper. When using a Funke moisture scale, hang the ten-gram weight on the scale as in balancing to weigh a sample of butter, and place one of the heavier weights used in reading the per cent of moisture on the two per cent notch of the beam. Now place the small piece of parchment paper on the pan and add shot or other heavy substance to the pan of the scale underneath the paper until the scale is almost balanced. Complete the balance by means of the poise on the end of the beam. Remove both weights and add silver nitrate to the paper until the scale balances exactly. The ten and two-tenths (10.2) grams of silver nitrate are transferred to a clean, brown glass bottle, fitted with a ground glass stopper. Five hundred (500) cubic centimetres of distilled water or clear rain water are now added to the bottle and as soon as the crystals are thoroughly dissolved and the bottle shaken, the solution is ready to use.

PROTECTING SILVER NITRATE SOLUTION FROM SUNLIGHT.

The silver nitrate solution, if exposed to sunlight gradually weakens, and the object of using a brown glass bottle as a container is to protect the solution from the sunlight. In addition to this the bottle should, when not in use, be wrapped in brown paper and kept in a dark cupboard. The same precautions should be taken to protect the silver nitrate crystals from light. Owing to the effect of light on the solution, it is advisable for the creamery man to provide a set of gram weights so that five and one-tenth (5.1) grams may be weighed, which will make two hundred and fifty (250) cubic centimetres of solution. The solution will then be made more frequently and there will be less liability of it becoming weak.

PREPARATION OF POTASSIUM CHROMATE SOLUTION.

The potassium chromate solution as pointed out above, is prepared by dissolving seven and one-quarter (7.25) grams of potassium chromate in twenty-five (25) cubic centimetres of water. If the gram weights are not to be had, ten (10) grams of the potassium chromate may be weighed on the moisture scale and dissolved in thirty-five (35) cubic centimetres of water. Since the 17.6 c.c. pipette delivers about 17.5 c.c. two measures of the pipette will give the required volume of water.