Oleocellosis Prediction Equipment

by Steven Falivene NSW Agriculture, Dareton June, 2004 : V1.1

Oleocellosis Kit Pictures

Below are pictures the showing the oleocellosis kit equipment and use of the equipment. The 'Oleocellosis Prediction Tools' document provides information regarding purchase of components and usage.

Figure 1: Rind Temperature : A digital thermometer inserted a few millimetres into the rind of a Washington Navel. Notice that the thermometer is inserted on an angle into the rind to prevent the thermometer penetrating into the pulp of the fruit.

Figure 2: A whirling hygrometer. There are a number of different models and manufactures of whirling hygrometers with one of the basic models shown above. The Whirling hygrometer measures wet bulb temperature. The wet bulb temperature taken on the morning that the fruit rind temperature was taken (figure 1) was 6oC (9:40am). Since the fruit rind temperature was 3.9oC, this equates to a (6 - 3.9) 2.1oC difference. The recommended minimum difference requirement for harvesting is 3oC and therefore in these conditions harvesting should not commence.

Figure 3: Rind Oil Release Pressure (RORP) Test : A penetrometer being used to check the rind oil release pressure for a Washington Navel. Note that the wet bulb test must first pass before this test is taken.

Figure 4: As soon as oil is released from the rind the tissue paper stains from the oil and no further pressure should be applied to the fruit. A reading of the penetrometer gauge is taken and the gauge reset (pressing the reset button on the gauge). The stain shown in the photo is considered as a large amount of oil release. In most instances the stain will initially appear as a much smaller dark patch directly adjacent to the metal penetrometer head and then will further spread along the tissue to appear as displayed in the photo. You must stop applying pressure as soon as the first signs of oil release are visible, not after it has had time to spread.