

## Afon DMP-100 Melting Point Apparatus-Measuring the Melting Point of a Solid



1. Crush the sample to a fine powder between two watch glasses, then fill ~2-3mm into a MP capillary by pressing the open end into the powdered sample, then inverting the capillary tube and tapping it on the benchtop or using the handle of a test tube brush to vibrate the tube. Repeat until ~2-3mm of sample is present in the closed end of the capillary.
2. Turn on the MP device via the rocker switch on the center back. The display should light up showing the room temp.
3. Setting the fast stage point: (Set this 15 deg. below the anticipated MP of the compound.) Range=RT to 300 C. Press the “fast stage set” button while using the two arrow keys to scroll up or down to the desired value and then release the “fast stage set” button.
4. Setting the slow speed: (A setting of 2 deg/min should give good results) Available range=1-10 deg/min. Press the “slow speed set” button while using the two arrow keys to scroll up or down to 2 deg/min and then release the “slow stage set” button.
5. Carefully insert a sample tube into the center hole in the sample chamber from the left side. Look through the viewer to see whether the tube is placed so that the sample is visible in the middle of the heating block.
6. Press the “start/stop” button to start the fast stage heating. The “heating” indicator light will come on and will be on even if the block temperature is above the fast stage set temperature. The temperature display will indicate the rising temperature. The “fast” indicator light will come on and blink when the fast stage set temperature is attained. At the same time the device will beep to remind the user that the fast stage temperature has been attained.  
Before proceeding further, be certain the “fast” light is on.
7. Press the “start/stop” button again to start the slow speed heating. At this time, the “fast” indicator light will go off and the “slow” indicator light will come on.
8. Continuously view the sample until the sample melts. Press the “read” button once to hold the reading; the “slow” indicator light will blink, indicating the temperature is held at that temperature point. Record the reading.  
  
To continue, press the “read” button again. The “slow” indicator light will stop blinking and remain on. The temperature will start ramping again at the slow speed setting.
9. After finishing the measurement, press the “start/stop” button. The unit starts to cool down to room temperature and all indicator lights go off. (Compressed air or lowering the hood snorkel can be used to speed up the cooling process.)
10. For the next measurement repeat/adjust procedures 3 – 10. Dispose of used capillaries in the glass waste.