

Sprayer Device

The ultimate goal of the sprayer is the same as that of the immersion device; to vitrify the sample. Cooling of the secondary cryogen by the primary cryogen and the attachment of the sample work in exactly the same manner as the previous device. However, there is one significant difference. After the secondary cryogen is liquefied, it is sprayed out of a small nozzle onto the sample. The mounting device remains in a fixed position at all times, in contrast to the immersion device. It may also be necessary to angle the nozzle because of gravity. This would allow the distance between sample and nozzle to remain close, while decreasing the initial velocity of the spray. A remote valve could control the spraying duration.

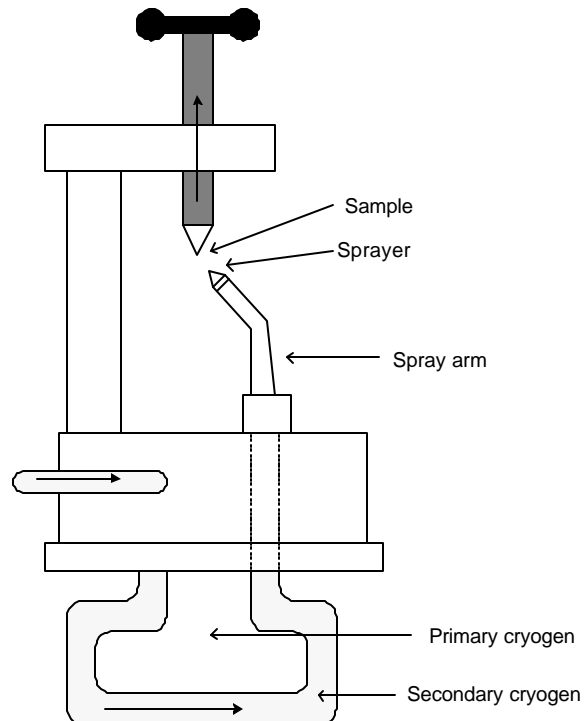


Figure 1: The Sprayer Device.

The sprayer device will be more advantageous for whole-body samples of *Drosophila*, but it will be less effective for smaller preparations.