

2.4: Direct Insertion Probe

Direct Insertion Probe. The Direct Insertion Probe (DIP) is widely used to introduce low vapor pressure liquids and solids into the mass spectrometer. The sample is loaded into a short capillary tube at the end of a heated sleeve. This sleeve is then inserted through a vacuum lock so the sample is inside the source region. After the probe is positioned, the temperature of the capillary tube is increased to vaporize the sample. This probe design allows higher temperatures than are possible with a direct vapor inlet. In addition, the sample is under vacuum and located close to the source so that lower temperatures are required for analysis. This is important for analyzing temperature sensitive compounds. Although the direct insertion probe is more cumbersome than the direct vapor inlet, it is useful for a wider range of samples.

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