

DNA Structure and Replication: I had a quick question about one of our lecture slides. When it shows the melting temperature, on the Y-axis it says UV absorption. What is that?

DNA will absorb UV light of a particular wavelength, and that absorbance can be measured in a special machine called a spectrophotometer. The readings from the machine are the numbers on the Y axis of that T_m graph -- ds DNA has a different measurement than ss DNA, and partially ds DNA will fall somewhere in between depending on the extent of its denaturation. Since we can't "see" the DNA in a tube or cuvette, we'd have no obvious way to determine what is double-stranded and what is single-stranded. The spectrophotometer makes this easy and quantitative.

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Author:

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