Creating a common lexicon

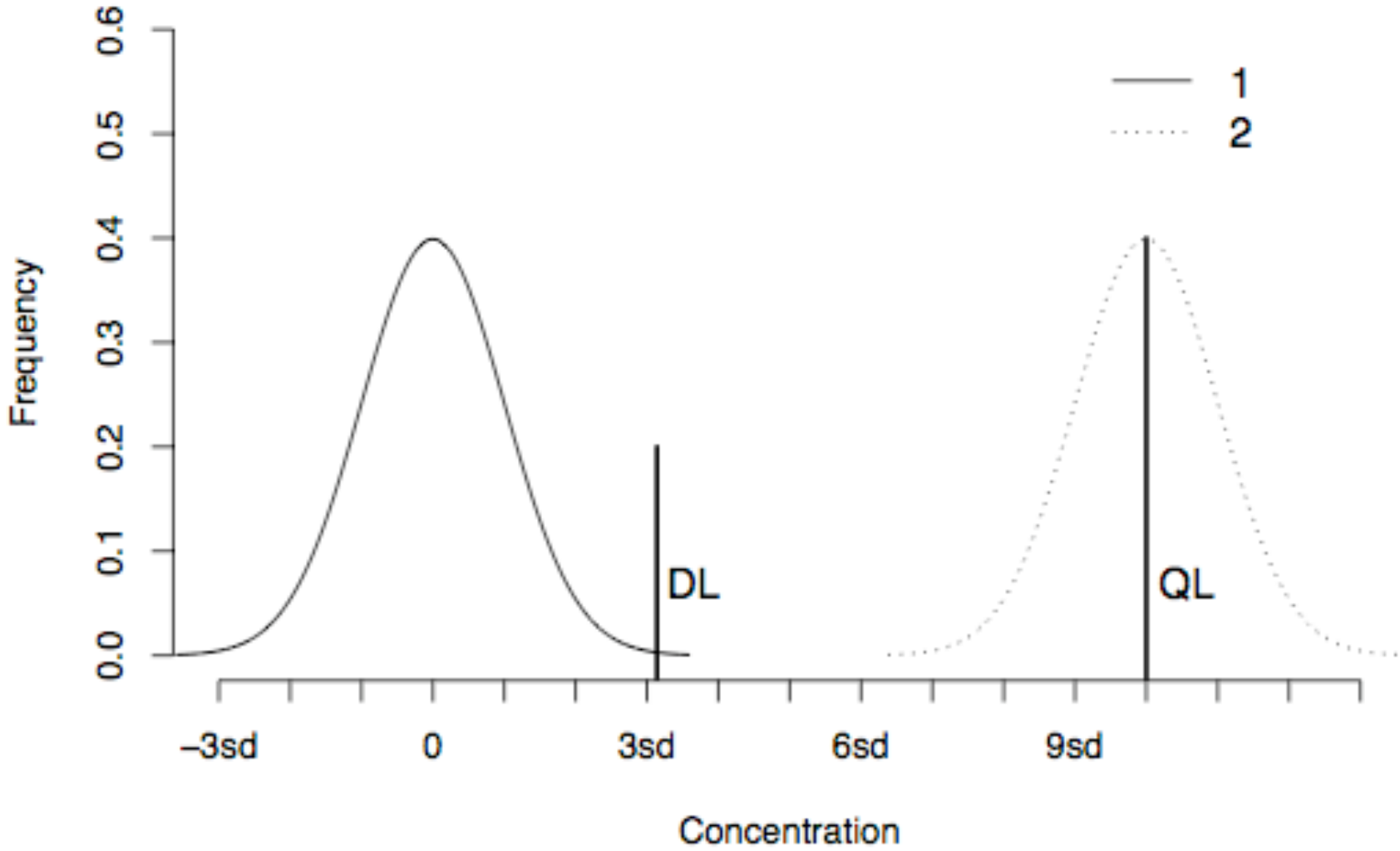
What is a Method Detection Limit (MDL)?

- **Detection Limit (DL)**
  A limit of solute concentration at which we can samples are chemically distinguishable from blanks. Values near the detection limit are perceived to be highly variable.

- **Quantitation Limit (QL)**
  The point at which solute concentration values can begin to be reported with a high degree of confidence.

```
0 --------- DL ---------------- QL ----------
```

Determination of Limits



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Notice that water quality data is not the only type of data where we cannot 'see' past certain non-detect values. Non-detects are very common in other parts of science as well. One of these other areas is in health care research, where patients cannot be observed past the length of a study period, or might drop out of a study. No information is known about these patients past a certain point in time. Similar data sets can also arise in product quality testing.

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To facilitate communication, statisticians describe this kind of data in a common way regardless of the field of application. In statistics, when we cannot 'see' data past certain values we call it *censor data*. The point which we cannot see past is called the *Censor Limit* (CL). Whether the quantitation or detection limit is chosen as the method detection limit, in statistics the either choice is referred to as a censor limit (CL).

There are three types of censoring depending on where the censor limit(s) occur

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