# Summary of useful tools for gathering and analyzing rheological data.

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The purpose of this presentation is to summarize in a convenient package some unusual methods for gathering and handling typical rheological data. Included will be such topics as time-temperature superposition, finding the zero-shear-rate viscosity, and locating kink points in steady-flow data.

As an example for this abstract, consider the oft-used frequency sweep. Below are two sweeps using the same material. One is gathered from high frequencies to low, while the other is done using a randomized order of frequencies to eliminate the time-dependence of the measurements.[1]

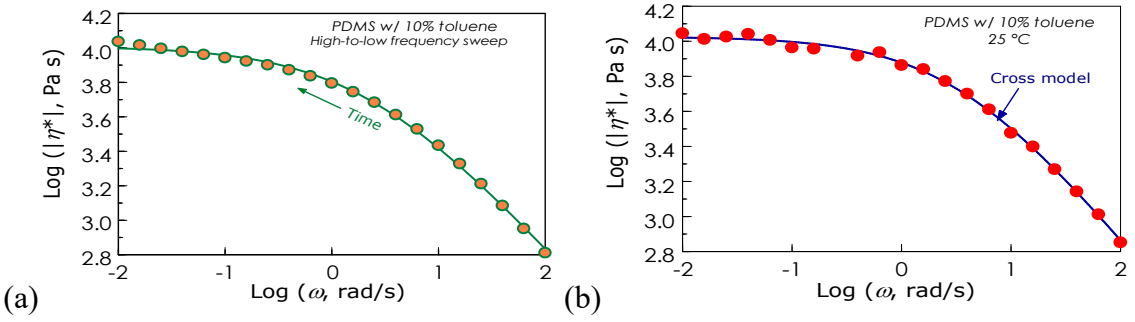


Figure 1: (a) Ordered frequency sweep. (b) Random sequence measurement.

While the latter looks "rougher," it is more realistic in that it has removed the time dependence and converted it to random error, which the model can handle.

[1] M. T. Shaw, *Polym. Engr. Sci.*, **62**(2) 309 (2022)