Drop Size & Polydispersity

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The attenuation function is sensitive to differences in polydispersity even when the mean drop size is the same. Figure 1 shows simulated attenuation functions for two water in oil emulsions with an average size 50 µm and polydispersity and standard deviations of 5 and 20 µm based on a normal distribution. Figure 2 shows the size distribution of the two formulations. The signals from the bulk phase are not shown. The NMR parameters are PFG separation 0.1 s PFG width 0.001s and maximum gradient of 1 T/m:

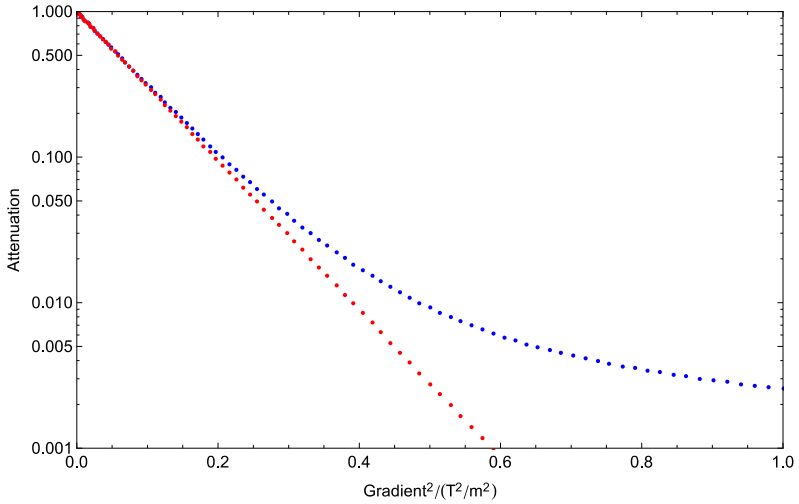

Figure 1: Attenuation Function

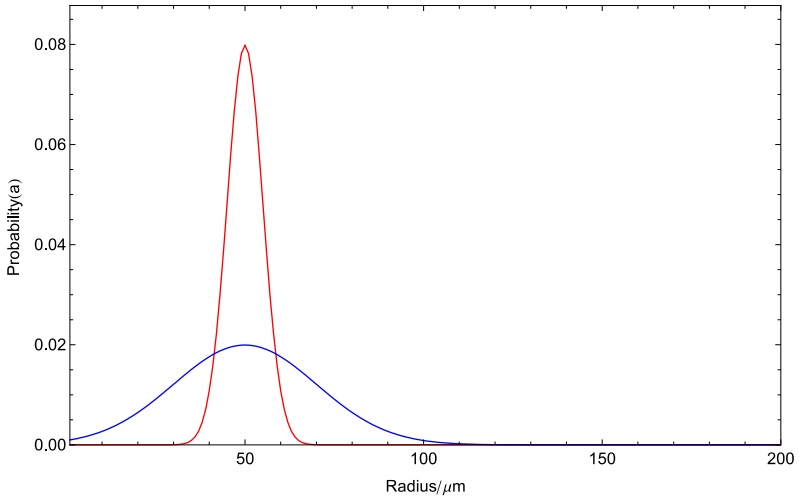

Figure 2: Drop Size Distribution

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