

Example, how the prepared protocol should look like:

Finding optimum settings for the setup and the planned experiments

Parameter: CFD – lower limit

Fixed Parameters:

Sample: Ludox, detector voltage: 800 V, $10^4 < \text{Counts} < 10^6$

detection polarizer: magic angle, detection path filter: neutral filter

CFD lower limit	Signal Cumulated counts C_S of channels:	Noise Cumulated counts C_N of channels:	$(C_S - C_N)/C_N$
5 mV			
10 mV			
15 mV			
20 mV			
30 mV			
40 mV			
50 mV			

How to analyze the data?

The best setting will have the lowest SNR (column 4), if different settings have a very similar SNR then the one with highest counts is preferred.