FIRST READ THROUGH: I haven't done this experiment, so it was interesting to get to know some more about it, but I think there could be a bit more in the intro for someone who doesn't have a lot of background (specifically more applications of how these processes can be used to understand gels and plastics). A picture or sketch of the setup itself would also be nice in section 2.1. Good methods section with what settings you used, and description of the overall process. For fitting to gaussian distribution, the data was never going to be gaussian in this situation since you have a lower bound and no upper bound, so its kind of a weird thing to almost "force onto" your data, so I would try a few other fits as well. It seems like the requirements to enforce onto your data are n=0 events at t=0 and t=infinity, with a discrete counting distribution in between, so you can try a couple of different statistical models for that and then report which one works best ie: 4 parameter beta distribution. Or you can impose an effective boundary on the top end of the data and report whether that improves the fit. It would also be good if you could elaborate more on the survival probability, and what all the different curves on figure 5 mean.

SECOND READ-THROUGH: During your second read-through you need to keep in mind the logical flow of the paper and clarity of the language.

a. Title and Abstract:

i. Good title, but it needs proper capitalization.

ii. Abstract is an appropriate summary, but could provide more details about the specifics of the experiment, as well as numerical results

b. Introduction:

i. Yea, you outline the topic quite nicely.

ii. The literature that is cited seems to be relevant to the topic.

iii. there is relatively little background given. The foundation and motivation for the report could be better explained in your introduction.

c. Methods and Materials

i. Yes, all the information on the procedure and the materials used was thorough, but an image of the setup would definitely make it easier to replicate the results.

ii. Yes, the scientific foundation of this experiment seems very well done, you isolated the information you were looking for quite nicely.

iii. yes.

d. Results and discussion

i. would've been nice if coefficients of the fits to equations were referenced, and some additional context would be very welcome

ii. There is reference to fit, but I think survival probability could be fit with chi^2 values for each of the separate curves shown to strengthen the numerical argument that t/Tavg is the only parameter.

iii. yes, but more investigation into the distribution in figure 3 would strengthen your argument

e. Conclusions

i. There could be more reflection on the motivation of the experiment

ii. yes, the conclusion is consistent with the data and analysis

f. References

references are appropriate and nicely formatted

g. General Commentary

I think the writing style itself was quite nice, the report was easy to read and I learned something even though I wasn't familiar with the topic.

The primary improvement to this report will come from greater depth of your numerical argument, and motivation in the background of the experiment (why do we care about how long it takes things to unknot, and with what certainty do we know that your results hold?)