Course	**ENGR 13300**	**Semester**	*e.g. Fall 2024*
Assignment Name	*i.e. HW# ECE Team #0*	**Section**	*e.g. LC1*
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Problem Description

Add a description and delete this comment!

Input Section:

Table 1: Given measurement data

Sample time interval (unitless)	Viscocity (Pa·s)
1	0.53
=A16+1	0.526
=A17+1	0.532
=A18+1	0.483
=A19+1	0.485
=A20+1	0.527
=A21+1	0.529
=A22+1	0.533
=A23+1	0.476
=A24+1	0.482
=A25+1	0.529
=A26+1	0.526
=A27+1	0.534
=A28+1	0.479
=A29+1	0.477
=A30+1	0.526
=A31+1	0.529
=A32+1	0.532
=A33+1	0.478
=A34+1	0.484
=A35+1	0.526
=A36+1	0.533
=A37+1	0.525
=A38+1	0.48
=A39+1	0.481
=A40+1	0.535
=A41+1	0.531
=A42+1	0.527
=A43+1	0.474
=A44+1	0.477
=A45+1	0.527
=A46+1	0.529
=A47+1	0.529
=A48+1	0.484
=A49+1	0.48
=A50+1	0.532
=A51+1	0.529
=A52+1	0.532
=A53+1	0.478
=A54+1	0.485
=A55+1	0.535
=A56+1	0.532
=A57+1	0.529
=A58+1	0.484
=A59+1	0.476
=A60+1	0.526
=A61+1	0.532
=A62+1	0.529
=A63+1	0.483
=A64+1	0.483

Calculation Section:

Table 2: Compute number of data points within and outside the specifications

specification interval lower border (Pa*s)	0.475
specification interval upper border (Pa*s)	0.525
number of measurements below interval	=COUNTIF(B16:B65,"<"&B
number of measurements above interval	=COUNTIF(B$16:B$65,">"
number of total time intervals	=COUNT(B16:B65)
outside specification	=H18+H19
within specification	=H20-H21

Table 3: Computation of percentage of values within specification

within specification:	=H22/H20

Figure Section:

Figure 1: Measurement of viscosity in 50 evenly spaced time intervals

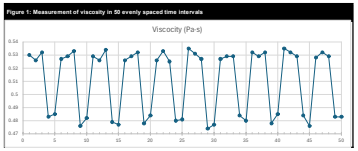
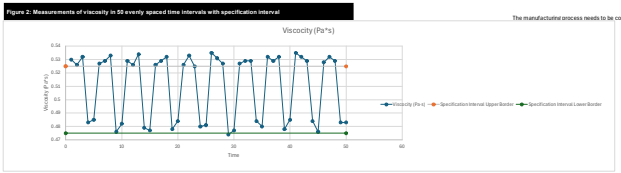


Figure 2: Measurements of viscosity in 50 evenly spaced time intervals with specification interval



Output Section:

#2: Type of plot

Scatter Plot

a) Does the data appear to have outliers or errors in measurement? Why or why not?

There may be an error in measurement because the viscosity is occasionally high, around .53. and low, around .48, with no measurements in between, it may be necessary to check what processes are occuring during the measurement period that may affect the viscosity.

b) What percentage of the measurements meets the specification of being within [.475,.525]Pa*s

58% of the measurements fall in the specification

c) Given your answer to the previous question, and your plot, summarize the engineer's main message to the engineering team about the process.

The manufacturing process needs to be considered as it is producing viscosities often above the tolerances specified