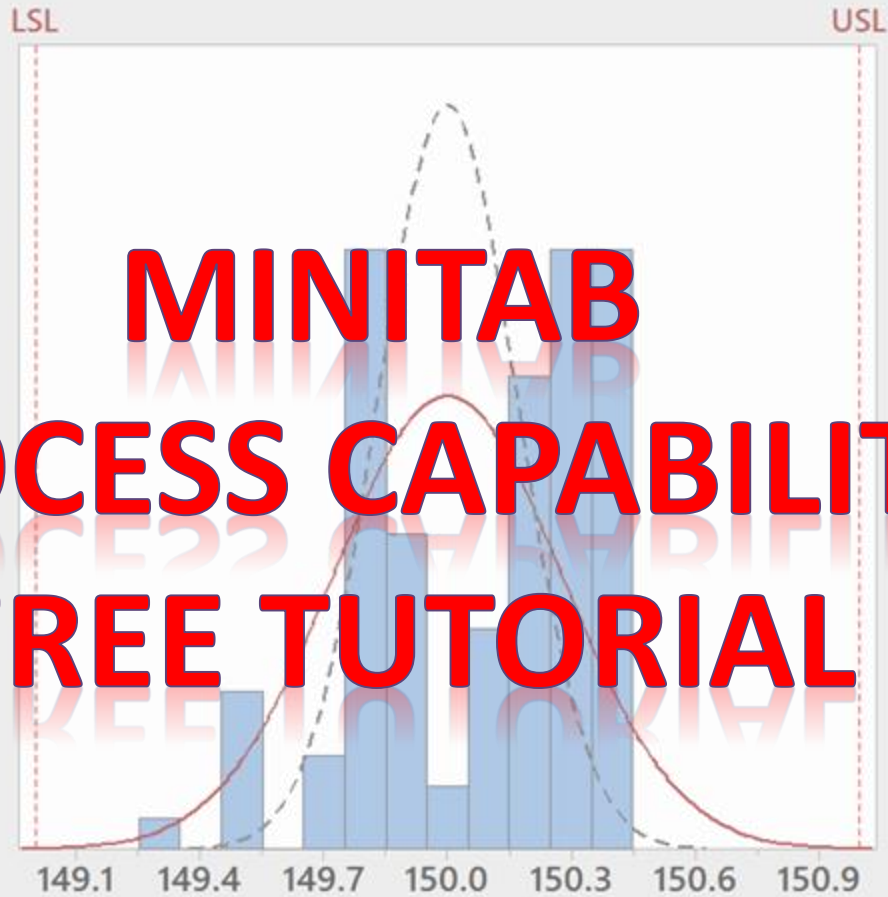


Process Capability Report for Observations

Process Data	
LSL	149
Target	*
USL	151
Sample Mean #	150
Sample N	100
StDev(Overall)	0.277687
StDev(Within)	0.169348



—	Overall
- - - -	Within

Overall Capability	
Pp	1.20
PPL	1.20
PPU	1.20
Ppk	1.20
Cpm	*
Potential (Within) Capability	
Cp	1.97
CPL	1.97
CPU	1.97
Cpk	1.97

**MINITAB
PROCESS CAPABILITY
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	Performance		
	Observed	Expected Overall	Expected Within
PPM < LSL	0.00	158.39	0.00
PPM > USL	0.00	158.39	0.00
PPM Total	0.00	316.78	0.00

This estimated historical parameter is used in the calculations.

Process Capability Report for Observations

For Example

Date	Observations	Subgroup Size=5	Brake pad Length=150±1mm		
12.03.2019	149.9		LSL=149	$\mu=150$	USL=151
12.03.2019	149.3		Sample frequency=5 sample per hour		
12.03.2019	149.5				
12.03.2019	149.8				
12.03.2019	149.9				
12.03.2019	149.8				
12.03.2019	149.8				
12.03.2019	149.8				
12.03.2019	149.7				
12.03.2019	150				
12.03.2019	150.1				
12.03.2019	150.2				



— Overall
- - - Within

Overall Capability	
Pp	1.20
PPL	1.20
PPU	1.20
Ppk	1.20
Cpm	*
Potential (Within) Capability	
Cp	1.97
CPL	1.97
CPU	1.97
Cpk	1.97

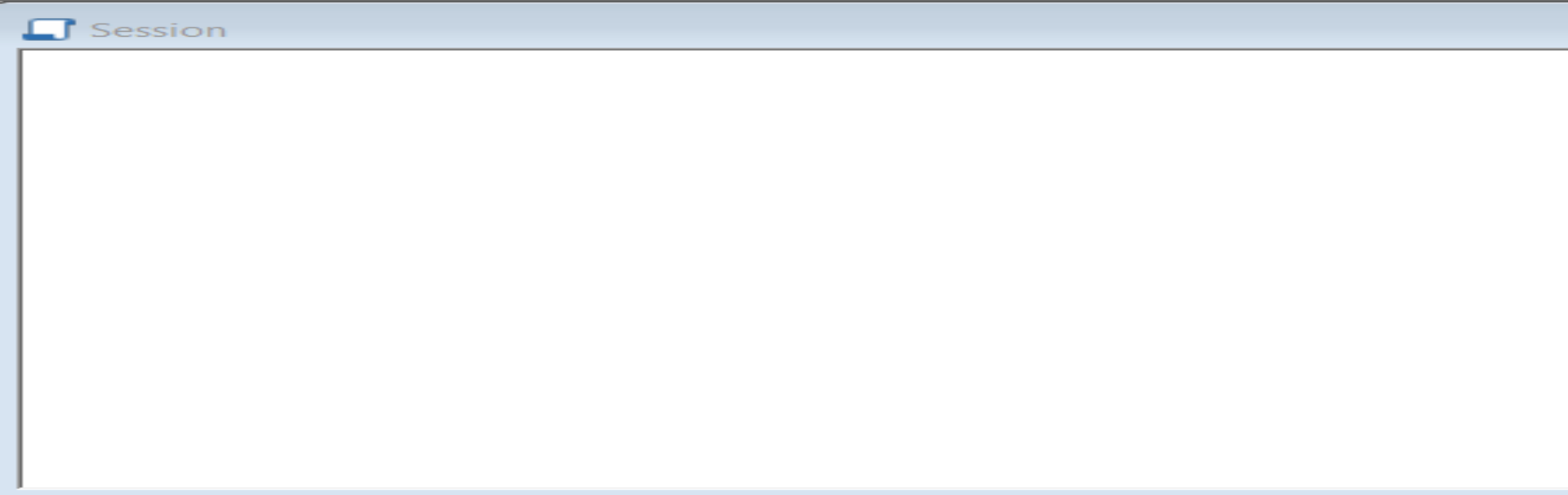
....

....

12.03.2019	149.9
12.03.2019	149.8
13.03.2019	149.5
13.03.2019	149.5
13.03.2019	149.8
13.03.2019	150.4
13.03.2019	150.4
13.03.2019	150.3
13.03.2019	150.4
13.03.2019	150.3
13.03.2019	150.3
13.03.2019	150.3
13.03.2019	150.2

Performance	Observed	Expected Overall	Expected Within
158.39	0.00	158.39	0.00
158.39	0.00	158.39	0.00
316.78	0.00	316.78	0.00

This estimated historical parameter is used in the calculations.



+	C1-T	C2	C3	C4	C5	C6
1	12.03.2019	149.9				
2	12.03.2019	149.3				
3	12.03.2019	149.5				
4	12.03.2019	149.8				
5	12.03.2019	149.9				
6	12.03.2019	149.8				
7	12.03.2019	149.8				
8	12.03.2019	149.8				
9	12.03.2019	149.7				
10	12.03.2019	150.0				
11	12.03.2019	150.1				

1

Then

Capability Analysis (Normal Distribution) [X]

C2 Observations

Data are arranged as

Single column: [] Transform...

Subgroup size: [] Estimate...

(use a constant or an ID column)

Subgroups across rows of: [] Options...

[] Storage...

Lower spec: [] Boundary

Upper spec: [] Boundary

Historical mean: [] (optional)

Historical standard deviation: [] (optional)

Select

Help

OK

Cancel

Now

Capability Analysis (Normal Distribution) [X]

C2 Data Readings

Data are arranged as

Single column: 'Data Readings' Transform...

Subgroup size: 5 Estimate...

(use a constant or an ID column)

Subgroups across rows of: [] Options...

[] Storage...

Lower spec: 149 Boundary

Upper spec: 151 Boundary

Historical mean: 150 (optional)

Historical standard deviation: [] (optional)

Select

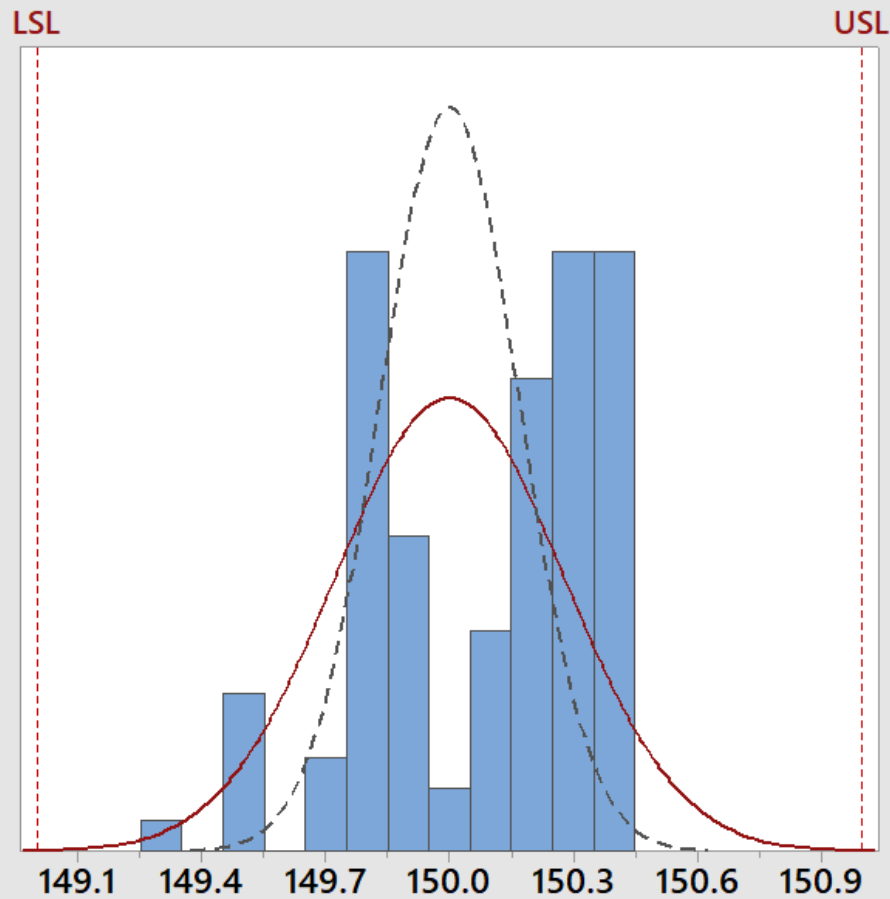
Help

OK

Cancel

Process Capability Report for Observations

Process Data	
LSL	149
Target	*
USL	151
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	Performance		
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PPM > USL	0.00	158.39	0.00
PPM Total	0.00	316.78	0.00

This estimated historical parameter is used in the calculations.