LAMPIRAN

Lampiran Data Waktu Produksi

No	A1	A2	A3	A4	A5
1	103	28	8	13928	119
2	107	28	6	13928	124
3	105	26	7	13931	122
4	107	27	8	13930	121
5	106	23	7	13929	122

No	B1	B2	B3	B4	B5
1	593	122	601	70	8
2	596	124	603	70	9
3	600	127	602	74	8
4	596	125	600	68	10
5	592	125	601	71	9

No	C1	C2	C3
1	5	8	16
2	6	9	17
3	7	9	15
4	6	7	16
5	6	8	17

No	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
1	1839	5	6	54	4	6	6	135	6	21
2	1838	4	7	56	5	7	5	135	5	20
3	1839	5	6	56	5	8	6	133	6	21
4	1841	4	7	53	4	7	6	134	6	22
5	1840	5	6	57	5	6	5	136	7	21

No	E1	E2	E3
1	8	9	155
2	7	10	157
3	8	8	153
4	9	9	156
5	7	10	155

No	F1	F2	F3	F4
1	5	5	359	65
2	5	4	360	61
3	6	4	361	65

4	6	5	359	64
5	5	4	360	65

No	G1
1	25
2	27
3	27
4	25
5	30

No	H1	H2	H3	H4	H5	H6	H7	H8	H9
1	114	4	89	56	54	26	115	22	29
2	110	4	89	54	54	28	113	25	25
3	113	5	86	56	55	24	115	23	29
4	114	5	85	54	55	26	114	26	28
5	110	4	88	53	53	25	114	25	27

No	I1	I2	No	J1	J2	No	K1	K2	K3
1	46	55	1	4	11	1	1791	6	5
2	43	56	2	4	11	2	1791	7	5
3	43	56	3	5	10	3	1792	6	4
4	46	52	4	4	12	4	1793	7	5
5	42	56	5	4	12	5	1794	7	4

No	L1	L2	No	M1	M2	No	N1	N2	N3
1	6	5	1	8	13	1	25	12	384
2	5	6	2	10	10	2	24	13	383
3	6	5	3	11	12	3	25	11	385
4	6	6	4	9	11	4	27	13	383
5	5	5	5	10	13	5	26	10	384

Lampiran Pengujian Sample

a. Uji Normalitas

b. **Tests of Normality**

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
A1	.201	5	.200*	.881	5	.314
A2	.224	5	.200*	.842	5	.171
A3	.231	5	.200*	.881	5	.314

A4	.221	5	.200*	.902	5	.421
A5	.213	5	.200*	.963	5	.826

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
B1	.224	5	.200*	.931	5	.603
B2	.213	5	.200*	.963	5	.826
B3	.237	5	.200*	.961	5	.814
B4	.228	5	.200*	.932	5	.607
B5	.231	5	.200*	.881	5	.314

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
C1	.300	5	.161	.883	5	.325
C2	.231	5	.200*	.881	5	.314
C3	.231	5	.200*	.881	5	.314

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
D1	.237	5	.200*	.961	5	.814
D2	.300	5	.161	.883	5	.325
D3	.300	5	.161	.883	5	.325
D4	.287	5	.200*	.914	5	.490
D5	.231	5	.200*	.881	5	.314
D6	.231	5	.200*	.881	5	.314
D7	.231	5	.200*	.881	5	.314
D8	.237	5	.200*	.961	5	.814
D9	.300	5	.161	.883	5	.325
D10	.300	5	.161	.883	5	.325

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
E1	.231	5	.200*	.881	5	.314
E2	.231	5	.200*	.881	5	.314
E3	.246	5	.200*	.956	5	.777

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
F1	.300	5	.161	.883	5	.325
F2	.231	5	.200*	.881	5	.314
F3	.231	5	.200*	.881	5	.314
F4	.318	5	.109	.701	5	.010

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
G1	.261	5	.200*	.862	5	.236

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
H1	.258	5	.200*	.782	5	.057
H2	.231	5	.200*	.881	5	.314
H3	.229	5	.200*	.867	5	.254
H4	.273	5	.200*	.852	5	.201
H5	.231	5	.200*	.881	5	.314
H6	.246	5	.200*	.956	5	.777
H7	.231	5	.200*	.881	5	.314

H8	.287	5	.200*	.914	5	.490
H9	.201	5	.200*	.881	5	.314

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
I1	.304	5	.149	.817	5	.111
I2	.318	5	.109	.701	5	.010

a. Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
J1	.237	5	.200*	.961	5	.814
J2	.231	5	.200*	.881	5	.314

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
K1	.221	5	.200*	.902	5	.421
K2	.231	5	.200*	.881	5	.314
K3	.300	5	.161	.883	5	.325

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
L1	.231	5	.200*	.881	5	.314
L2	.300	5	.161	.883	5	.325

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
M1	.237	5	.200*	.961	5	.814
M2	.221	5	.200*	.902	5	.421

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

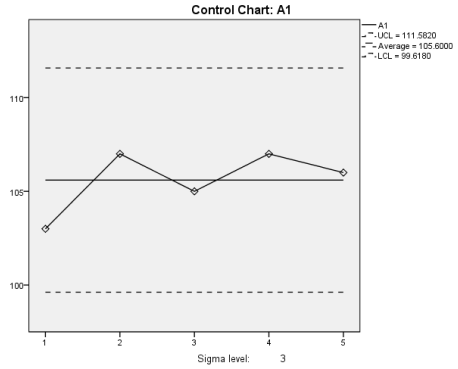
Tests of Normality

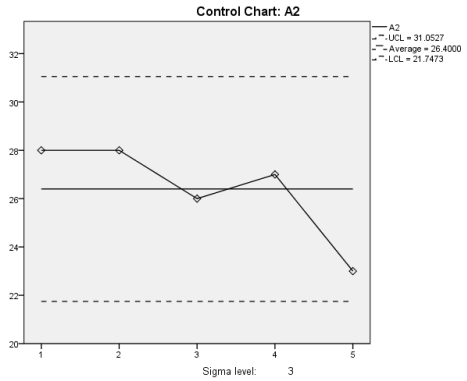
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
N1	.237	5	.200*	.961	5	.814
N2	.221	5	.200*	.902	5	.421
N3	.231	5	.200*	.881	5	.314

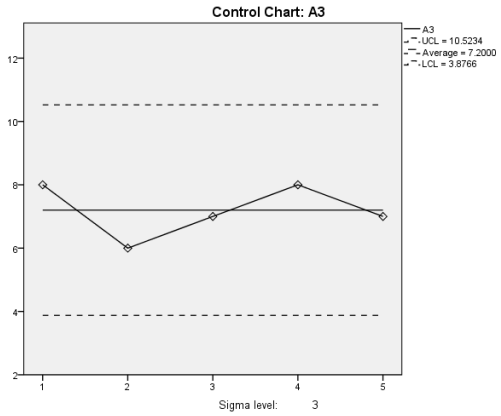
*. This is a lower bound of the true significance.

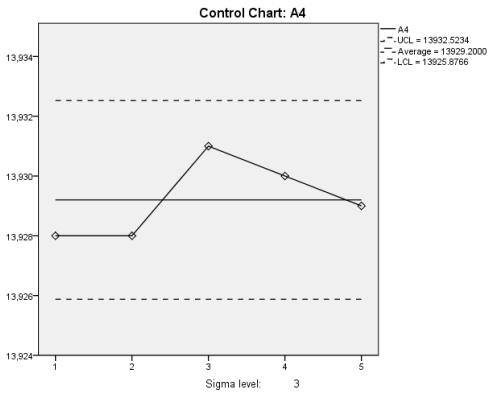
a. Lilliefors Significance Correction

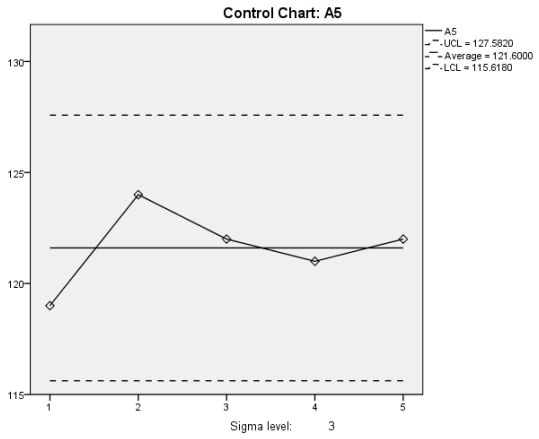
c. Uji Keseragaman Data

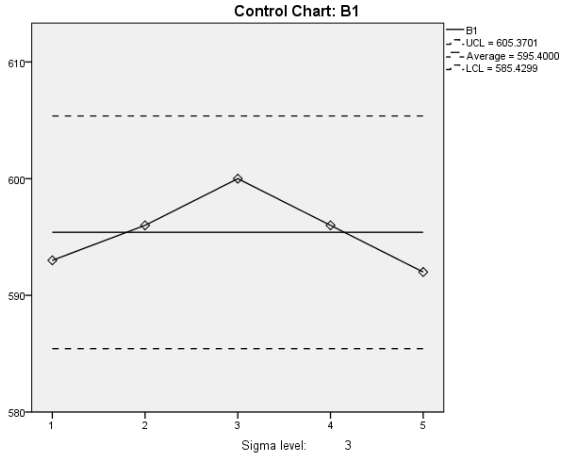

Control Chart: A1
A1
UCL = 111.5820
Average = 105.6000
LCL = 99.6180
110
105
100
1
2
3
4
5
Sigma level: 3

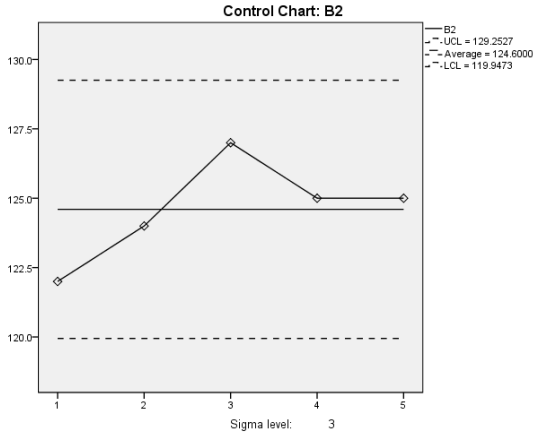

Control Chart: A2
A2
UCL = 31.0527
Average = 26.4000
LCL = 21.7473
32
30
28
26
24
22
20
1
2
3
4
5
Sigma level: 3

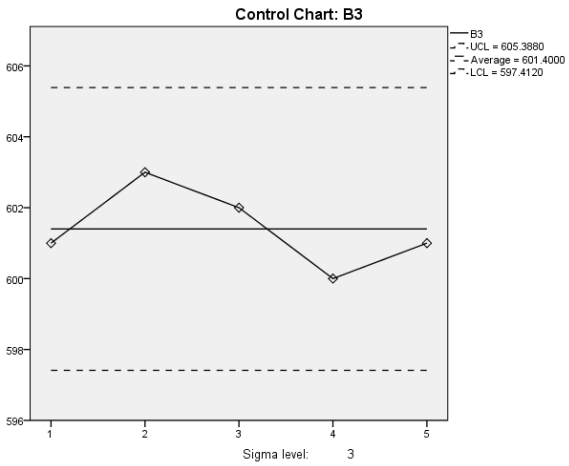

Control Chart: A3
A3
UCL = 10.5234
Average = 7.2000
LCL = 3.8766
12
10
8
6
4
2
1
2
3
4
5
Sigma level: 3

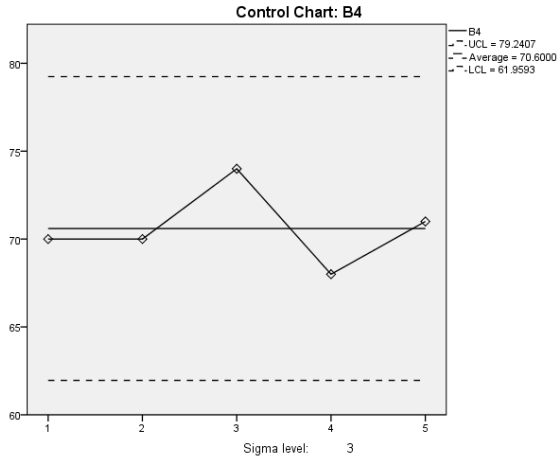

Control Chart: A4
A4
UCL = 13932.5234
Average = 13929.2000
LCL = 13925.8766
13,934
13,932
13,930
13,928
13,926
13,924
1
2
3
4
5
Sigma level: 3

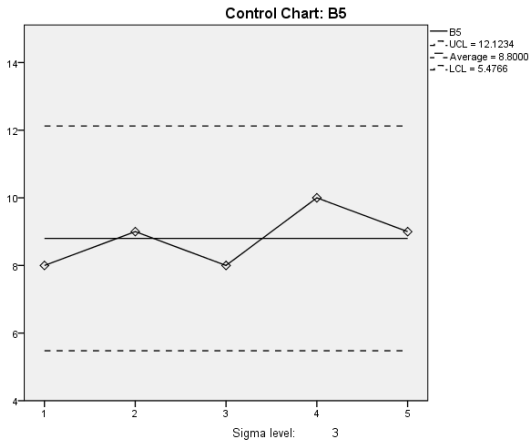

Control Chart: A5
A5
UCL = 127.5820
Average = 121.6000
LCL = 115.6180
130
125
120
115
1
2
3
4
5
Sigma level: 3

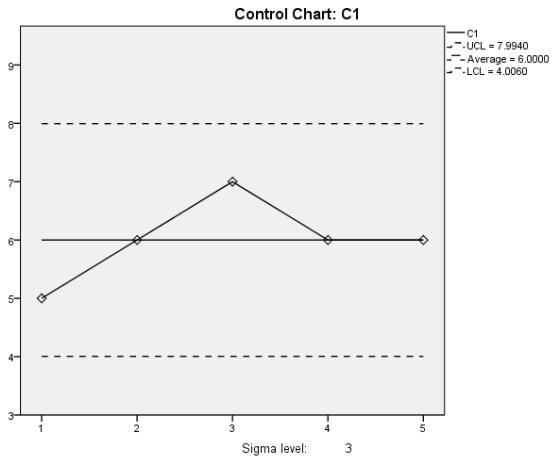

Control Chart: B1
B1
UCL = 605.3701
Average = 595.4000
LCL = 585.4299
610
600
590
580
1
2
3
4
5
Sigma level: 3

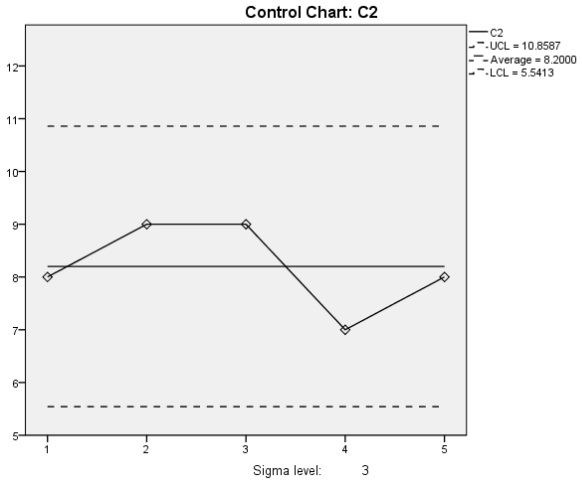

Control Chart: B2
B2
UCL = 129.2527
Average = 124.6000
LCL = 119.9473
130.0
127.5
125.0
122.5
120.0
1
2
3
4
5
Sigma level: 3

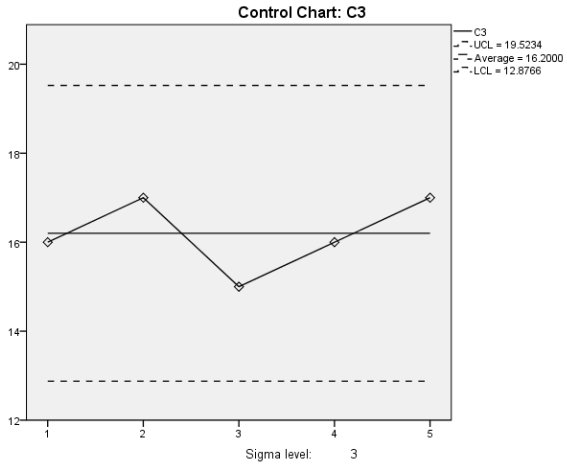

Control Chart: B3
B3
UCL = 605.3880
Average = 601.4000
LCL = 597.4120
606
604
602
600
598
596
1
2
3
4
5
Sigma level: 3

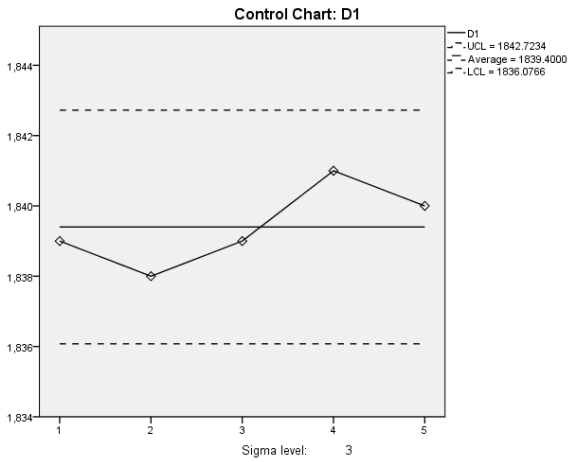

Control Chart: B4
B4
UCL = 79.2407
Average = 70.6000
LCL = 61.9593
80
75
70
65
60
1
2
3
4
5
Sigma level: 3

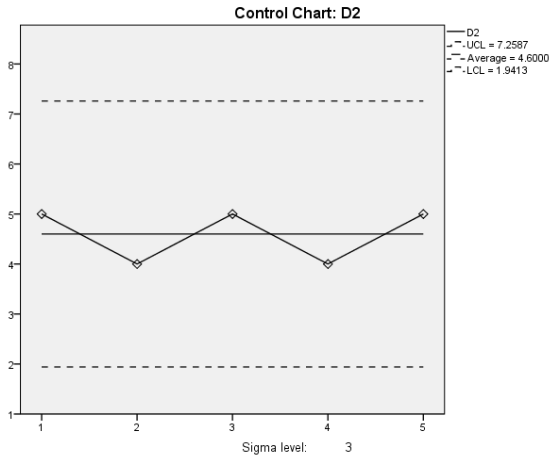

Control Chart: B5
B5
UCL = 12.1234
Average = 8.8000
LCL = 5.4766
14
12
10
8
6
4
1
2
3
4
5
Sigma level: 3

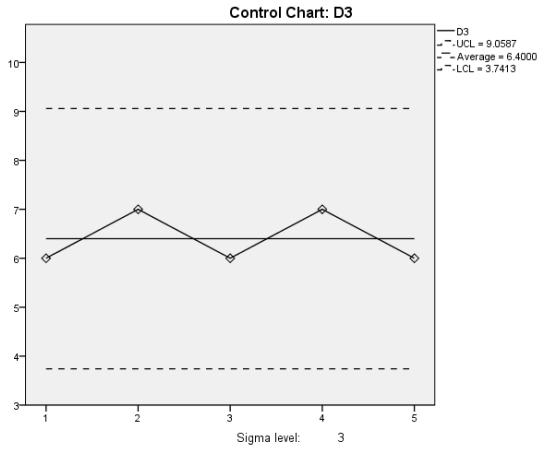

Control Chart: C1
C1
UCL = 7.9940
Average = 6.0000
LCL = 4.0060
9
8
7
6
5
4
3
1
2
3
4
5
Sigma level: 3

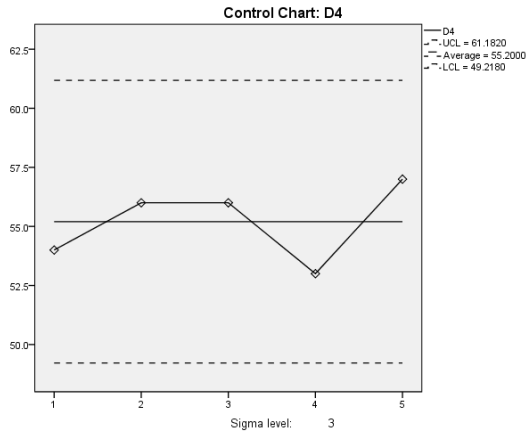

Control Chart: C2
C2
UCL = 10.8587
Average = 8.2000
LCL = 5.5413
12
11
10
9
8
7
6
5
1
2
3
4
5
Sigma level: 3

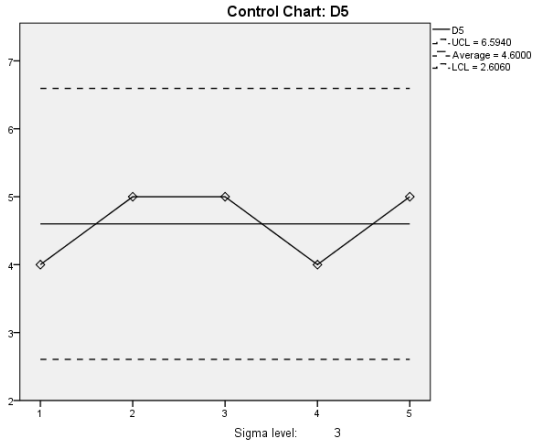

Control Chart: C3
C3
UCL = 19.5234
Average = 16.2000
LCL = 12.8766
20
18
16
14
12
1
2
3
4
5
Sigma level: 3

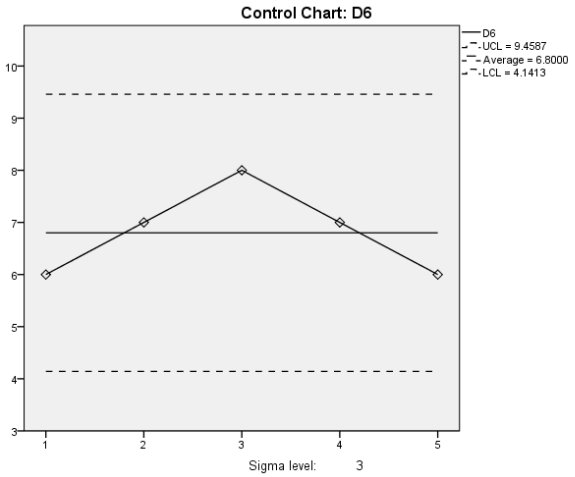

Control Chart: D1
D1
UCL = 1842.7234
Average = 1839.4000
LCL = 1836.0766
1,844
1,842
1,840
1,838
1,836
1,834
1
2
3
4
5
Sigma level: 3

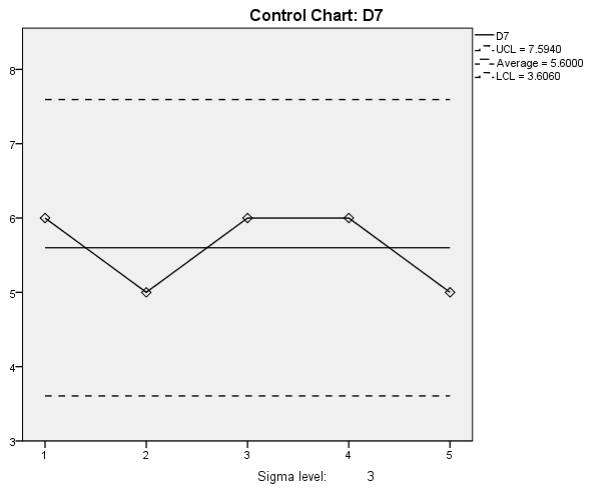

Control Chart: D2
D2
UCL = 7.2587
Average = 4.6000
LCL = 1.9413
8
7
6
5
4
3
2
1
1
2
3
4
5
Sigma level: 3

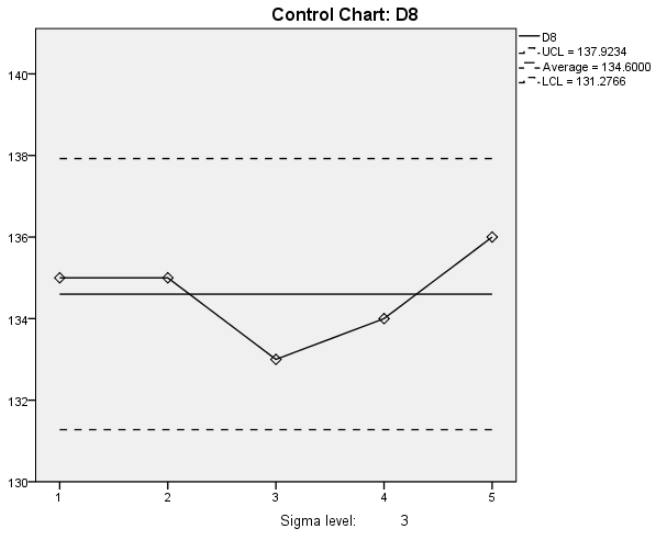

Control Chart: D3
D3
UCL = 9.0587
Average = 6.4000
LCL = 3.7413
10
9
8
7
6
5
4
3
1
2
3
4
5
Sigma level: 3

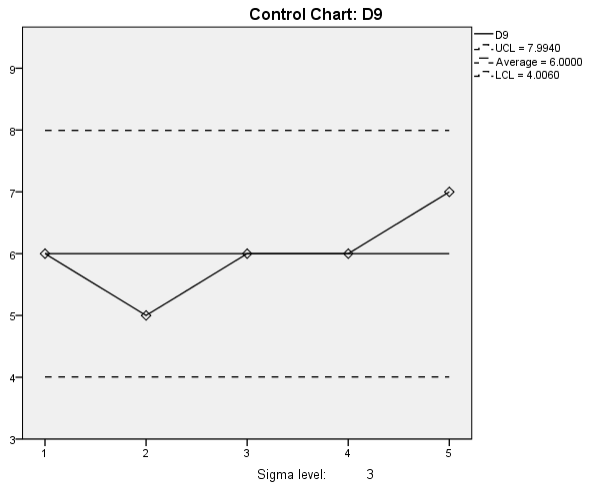

Control Chart: D4
D4
UCL = 61.1820
Average = 55.2000
LCL = 49.2180
62.5
60.0
57.5
55.0
52.5
50.0
1
2
3
4
5
Sigma level: 3

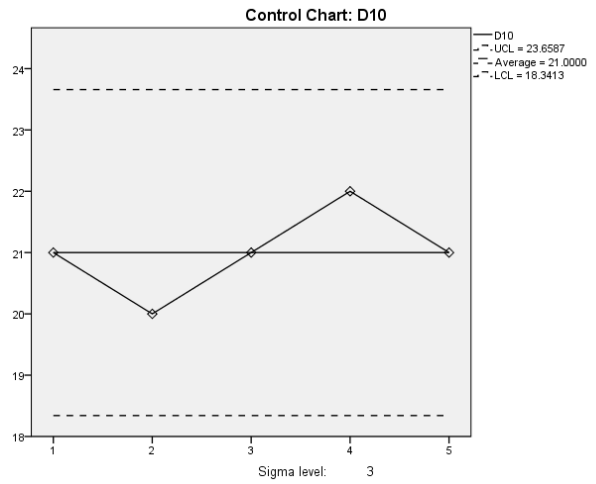

Control Chart: D5
D5
UCL = 6.5940
Average = 4.6000
LCL = 2.6060
7
6
5
4
3
2
1
2
3
4
5
Sigma level: 3

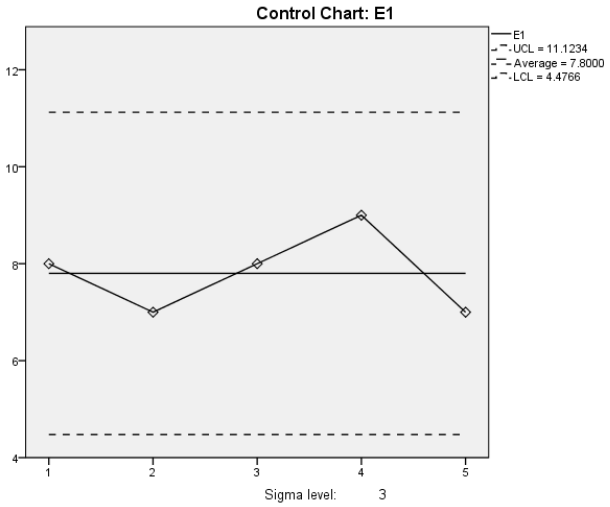

Control Chart: D6
D6
UCL = 9.4587
Average = 6.8000
LCL = 4.1413
10
9
8
7
6
5
4
3
1
2
3
4
5
Sigma level: 3

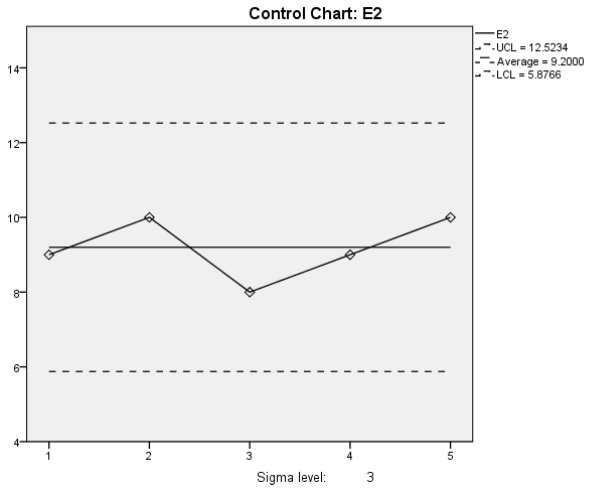

Control Chart: D7
D7
UCL = 7.5940
Average = 5.6000
LCL = 3.6060
8
7
6
5
4
3
1
2
3
4
5
Sigma level: 3

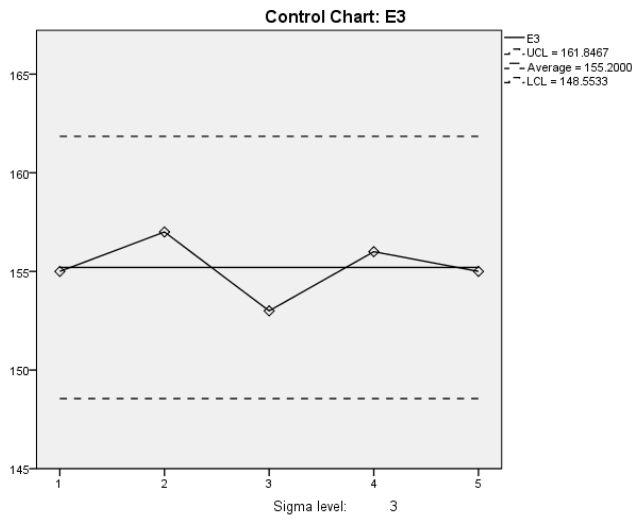

Control Chart: D8
D8
UCL = 137.9234
Average = 134.6000
LCL = 131.2766
140
138
136
134
132
130
1
2
3
4
5
Sigma level: 3

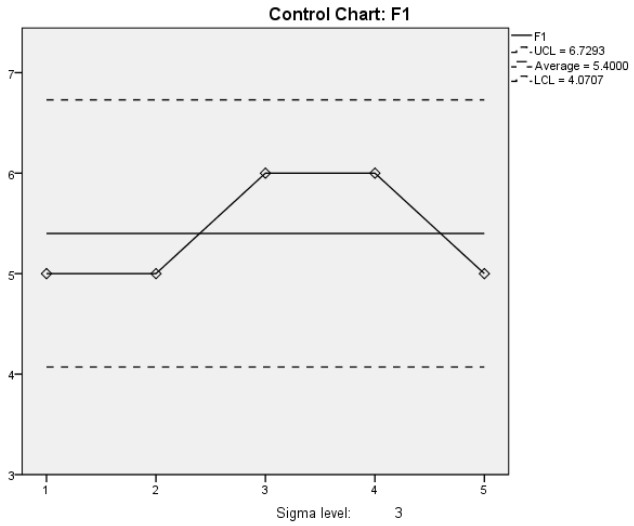

Control Chart: D9
D9
UCL = 7.9940
Average = 6.0000
LCL = 4.0060
9
8
7
6
5
4
3
1
2
3
4
5
Sigma level: 3

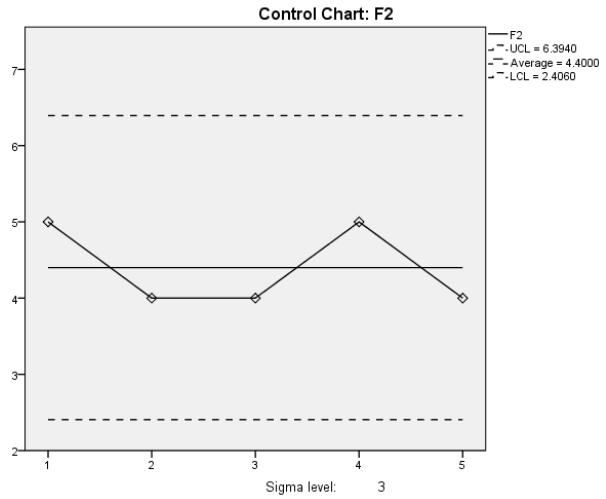

Control Chart: D10
D10
UCL = 23.6587
Average = 21.0000
LCL = 18.3413
24
23
22
21
20
19
18
1
2
3
4
5
Sigma level: 3

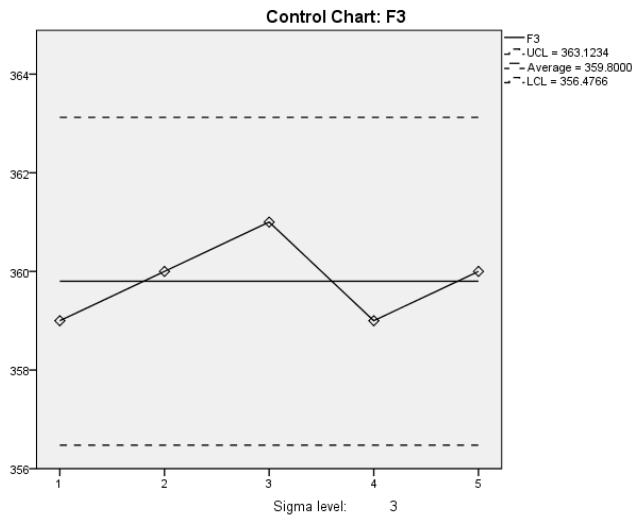

Control Chart: E1
E1
UCL = 11.1234
Average = 7.8000
LCL = 4.4766
12
10
8
6
4
1
2
3
4
5
Sigma level: 3

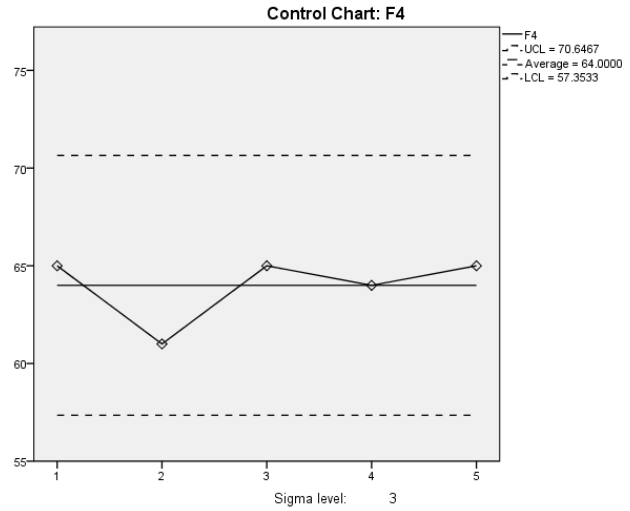

Control Chart: E2
E2
UCL = 12.5234
Average = 9.2000
LCL = 5.8766
14
12
10
8
6
4
1
2
3
4
5
Sigma level: 3

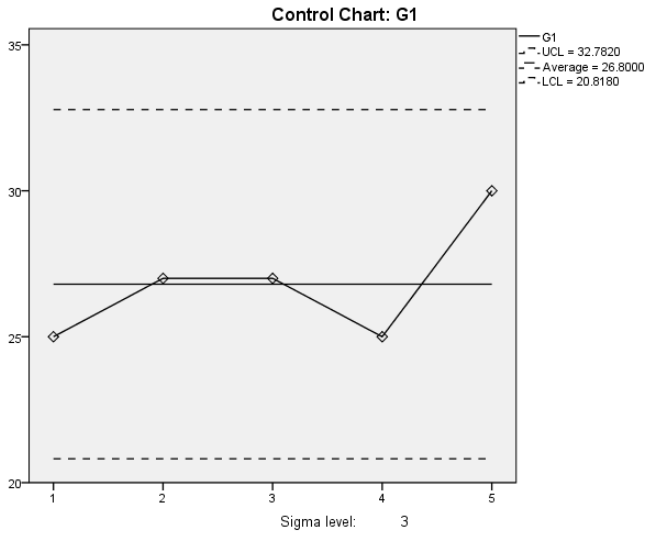

Control Chart: E3
E3
UCL = 161.8467
Average = 155.2000
LCL = 148.5533
165
160
155
150
145
1
2
3
4
5
Sigma level: 3

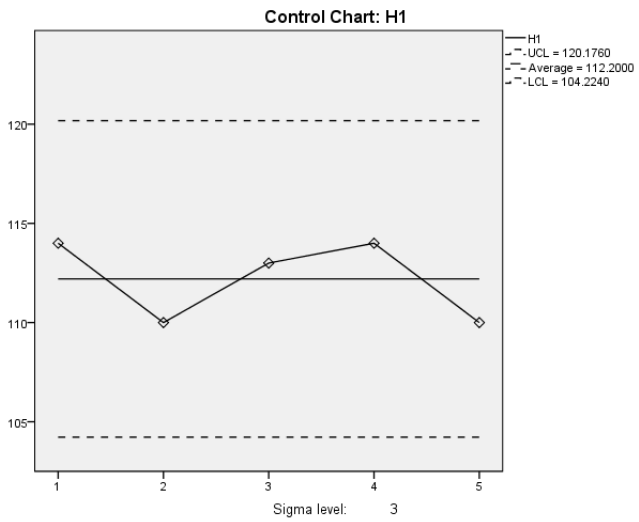

Control Chart: F1
F1
UCL = 6.7293
Average = 5.4000
LCL = 4.0707
7
6
5
4
3
1
2
3
4
5
Sigma level: 3

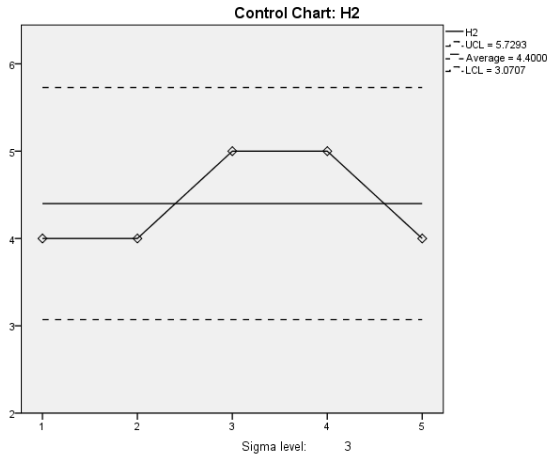

Control Chart: F2
F2
UCL = 6.3940
Average = 4.4000
LCL = 2.4060
7
6
5
4
3
2
1
2
3
4
5
Sigma level: 3

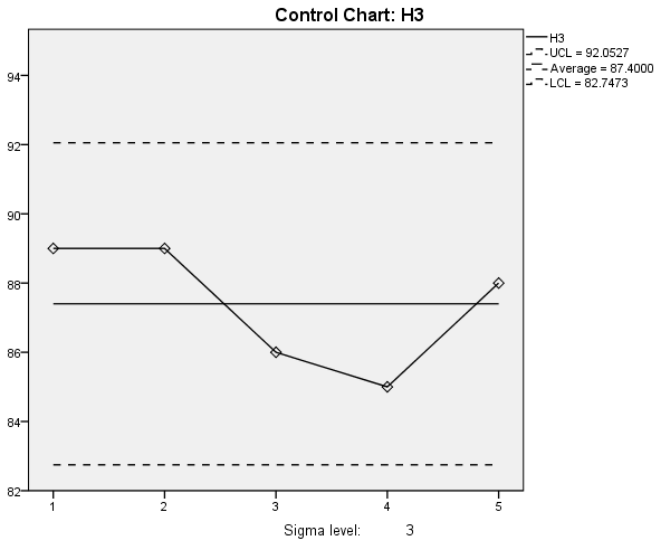

Control Chart: F3
F3
UCL = 363.1234
Average = 359.8000
LCL = 356.4766
364
362
360
358
356
1
2
3
4
5
Sigma level: 3

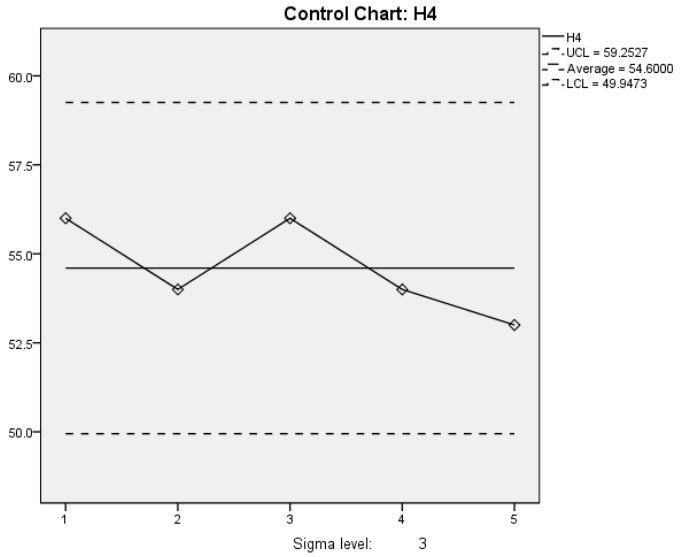

Control Chart: F4
F4
UCL = 70.6467
Average = 64.0000
LCL = 57.3533
75
70
65
60
55
1
2
3
4
5
Sigma level: 3

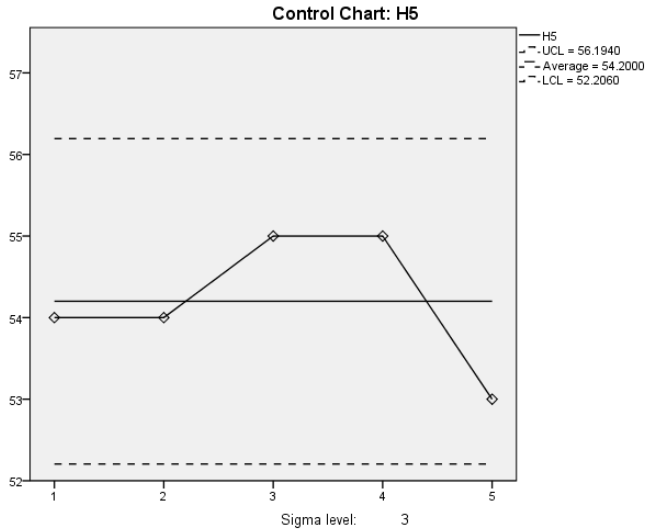

Control Chart: G1
G1
UCL = 32.7820
Average = 26.8000
LCL = 20.8180
35
30
25
20
1
2
3
4
5
Sigma level: 3

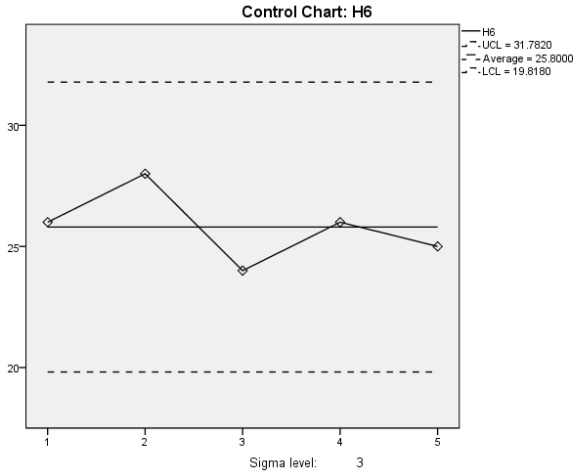

Control Chart: H1
H1
UCL = 120.1760
Average = 112.2000
LCL = 104.2240
120
115
110
105
1
2
3
4
5
Sigma level: 3

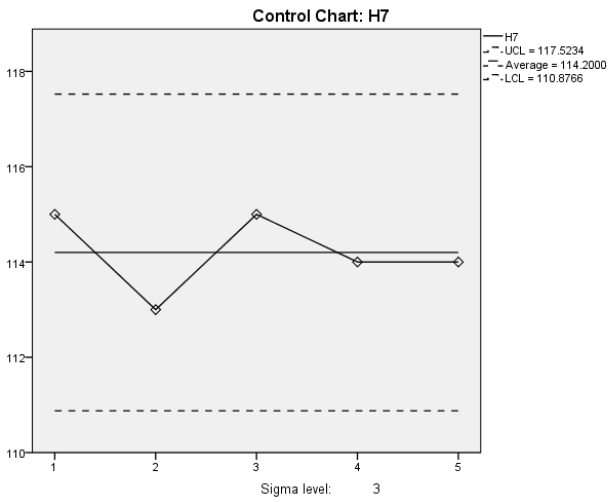

Control Chart: H2
H2
UCL = 5.7293
Average = 4.4000
LCL = 3.0707
6
5
4
3
2
1
2
3
4
5
Sigma level: 3

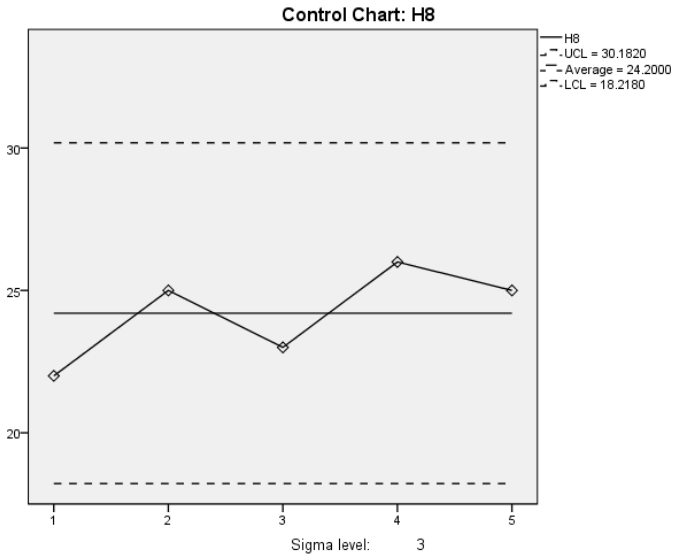

Control Chart: H3
H3
UCL = 92.0527
Average = 87.4000
LCL = 82.7473
94
92
90
88
86
84
82
1
2
3
4
5
Sigma level: 3

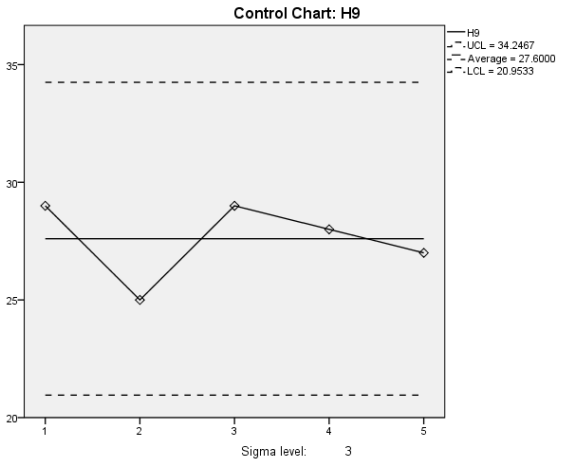

Control Chart: H4
H4
UCL = 59.2527
Average = 54.6000
LCL = 49.9473
60.0
57.5
55.0
52.5
50.0
1
2
3
4
5
Sigma level: 3

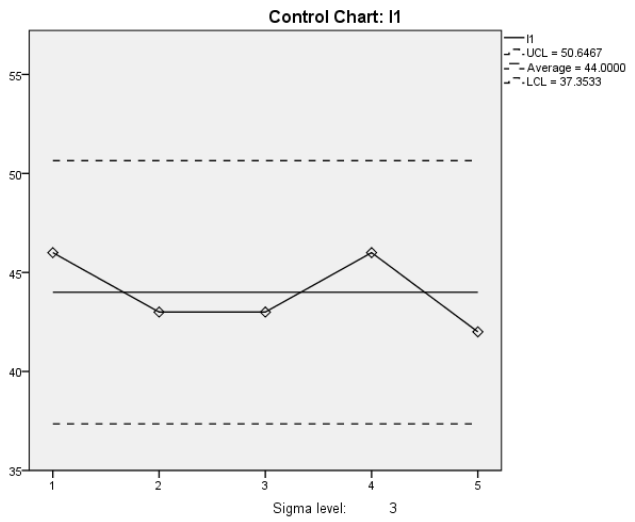

Control Chart: H5
H5
UCL = 56.1940
Average = 54.2000
LCL = 52.2060
57
56
55
54
53
52
1
2
3
4
5
Sigma level: 3

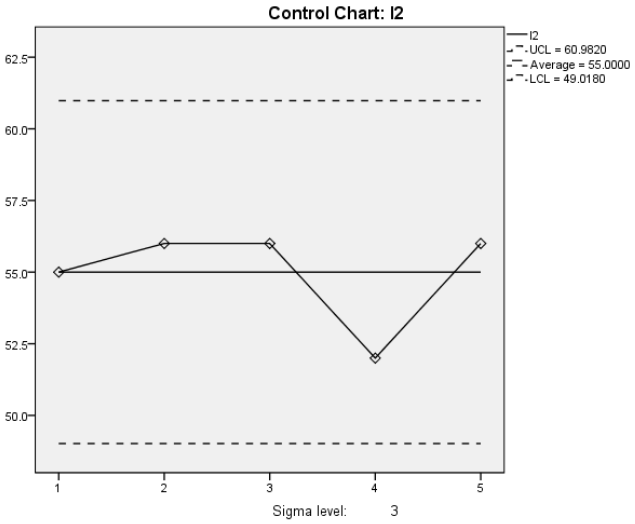

Control Chart: H6
H6
UCL = 31.7820
Average = 25.8000
LCL = 19.8180
30
25
20
1
2
3
4
5
Sigma level: 3

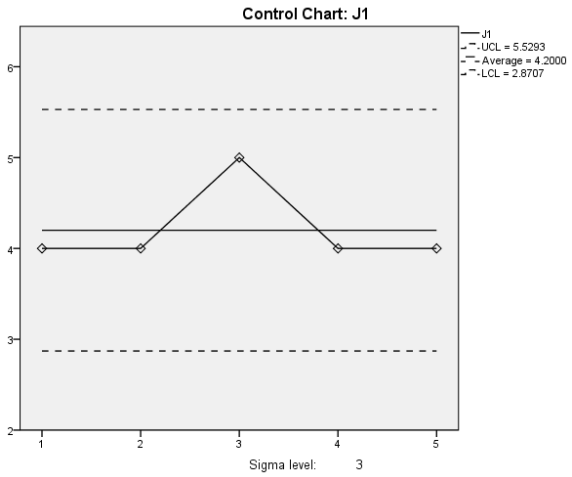

Control Chart: H7
H7
UCL = 117.5234
Average = 114.2000
LCL = 110.8766
118
116
114
112
110
1
2
3
4
5
Sigma level: 3

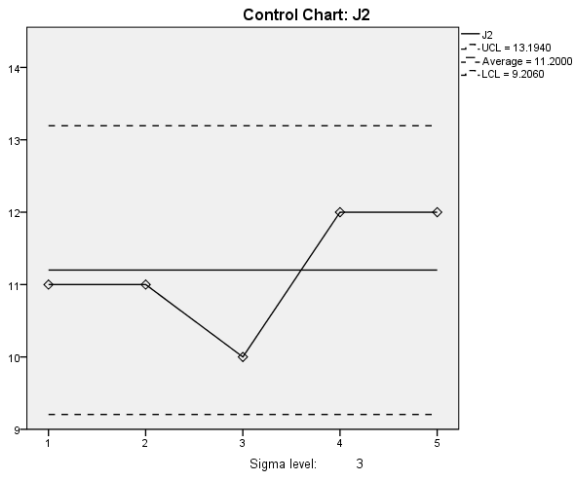

Control Chart: H8
H8
UCL = 30.1820
Average = 24.2000
LCL = 18.2180
30
25
20
1
2
3
4
5
Sigma level: 3

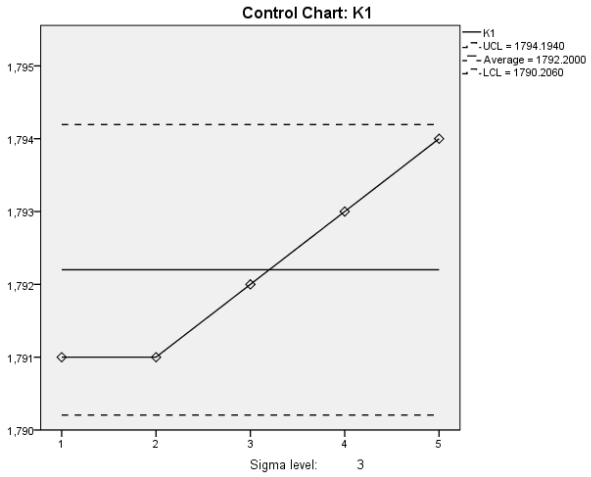

Control Chart: H9
H9
UCL = 34.2467
Average = 27.6000
LCL = 20.9533
35
30
25
20
1
2
3
4
5
Sigma level: 3

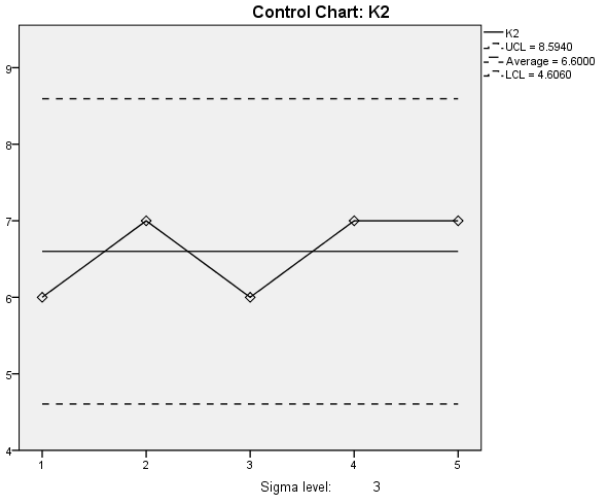

Control Chart: I1
I1
UCL = 50.6467
Average = 44.0000
LCL = 37.3533
55
50
45
40
35
1
2
3
4
5
Sigma level: 3

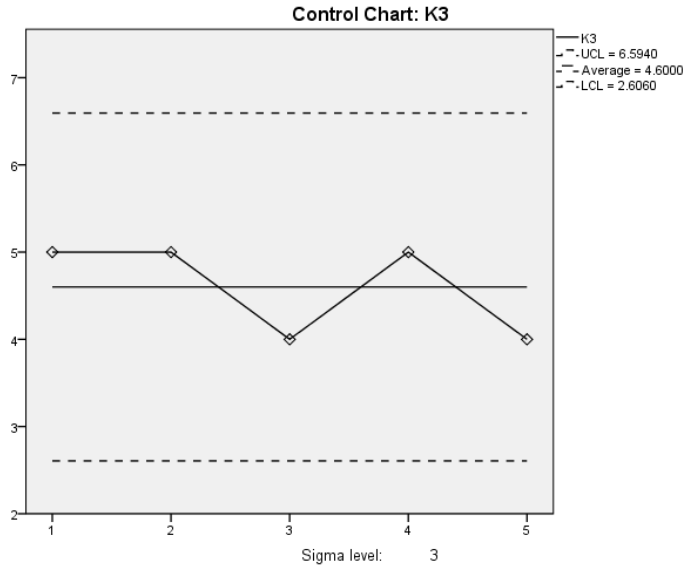

Control Chart: I2
I2
UCL = 60.9820
Average = 55.0000
LCL = 49.0180
62.5
60.0
57.5
55.0
52.5
50.0
1
2
3
4
5
Sigma level: 3

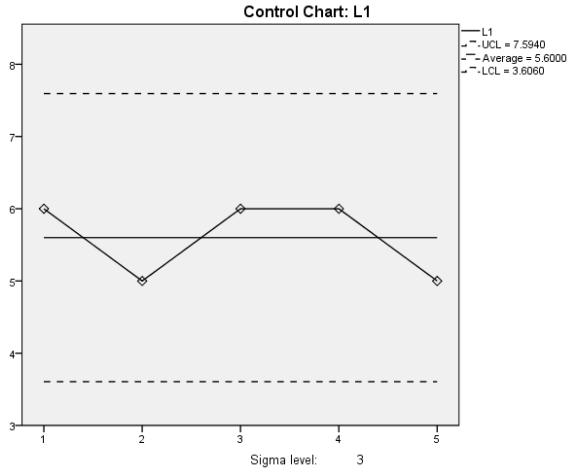

Control Chart: J1
J1
UCL = 5.5293
Average = 4.2000
LCL = 2.8707
6
5
4
3
2
1
2
3
4
5
Sigma level: 3

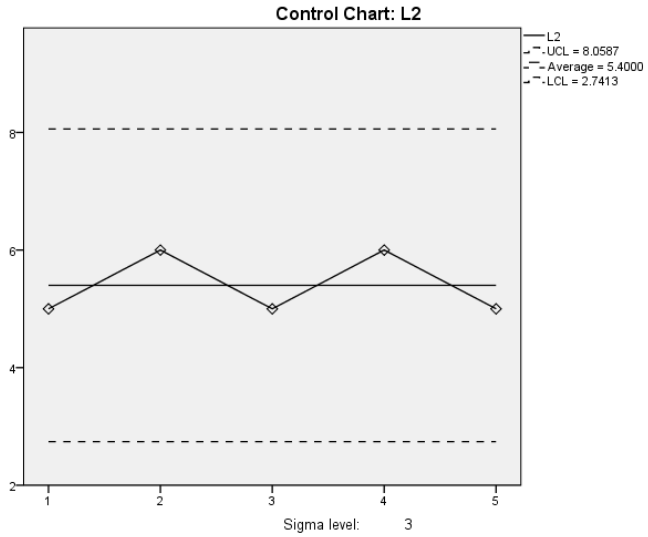

Control Chart: J2
J2
UCL = 13.1940
Average = 11.2000
LCL = 9.2060
14
13
12
11
10
9
1
2
3
4
5
Sigma level: 3

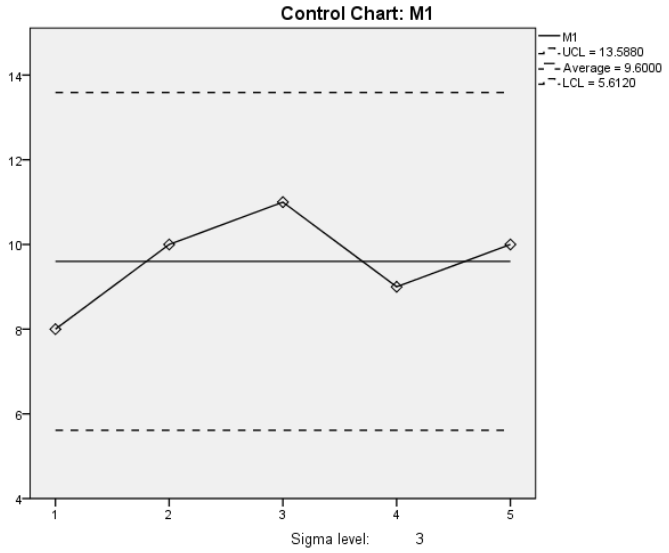

Control Chart: K1
K1
UCL = 1794.1940
Average = 1792.2000
LCL = 1790.2060
1,795
1,794
1,793
1,792
1,791
1,790
1
2
3
4
5
Sigma level: 3

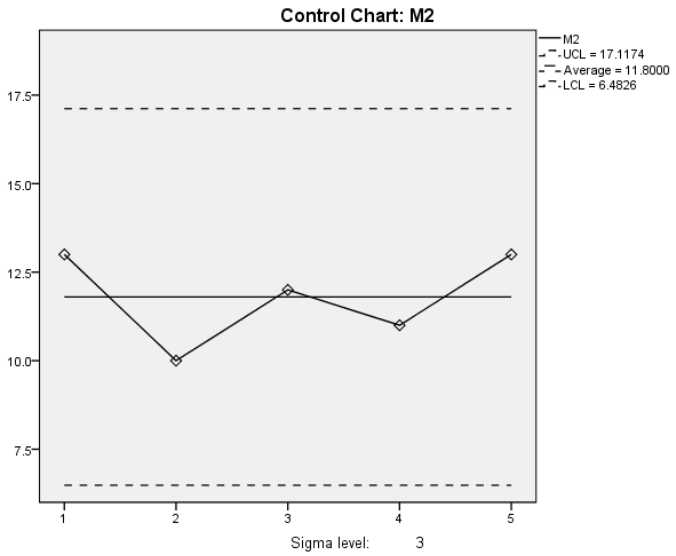

Control Chart: K2
K2
UCL = 8.5940
Average = 6.6000
LCL = 4.6060
9
8
7
6
5
4
1
2
3
4
5
Sigma level: 3

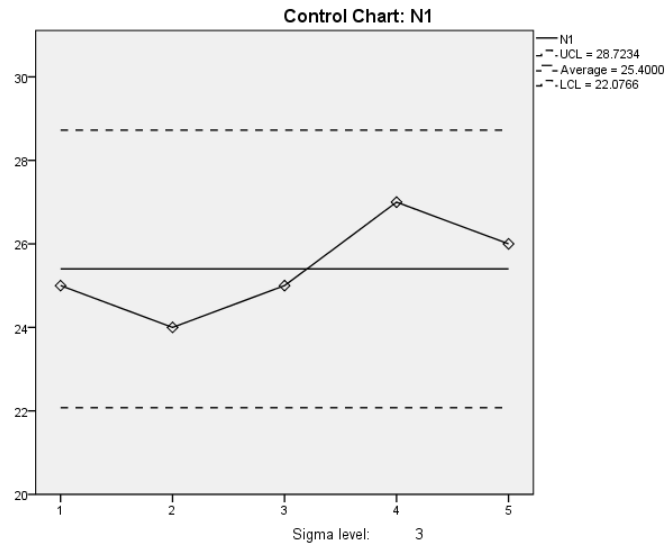

Control Chart: K3
K3
UCL = 6.5940
Average = 4.6000
LCL = 2.6060
7
6
5
4
3
2
1
2
3
4
5
Sigma level: 3

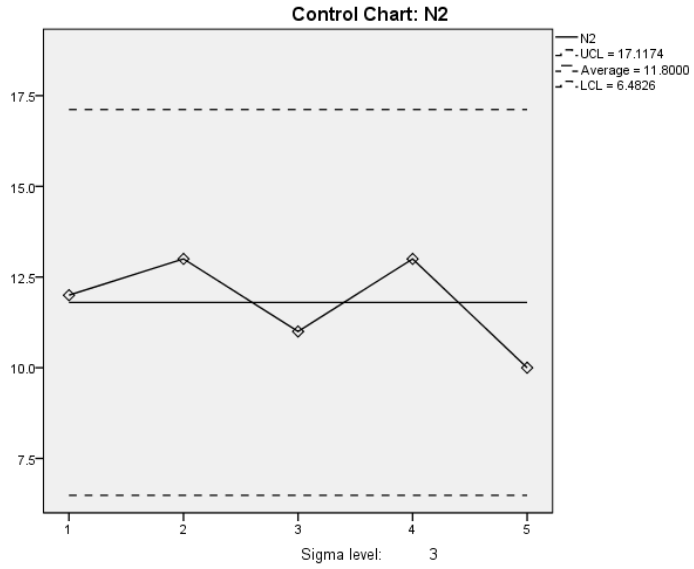

Control Chart: L1
L1
UCL = 7.5940
Average = 5.6000
LCL = 3.6060
8
7
6
5
4
3
1
2
3
4
5
Sigma level: 3

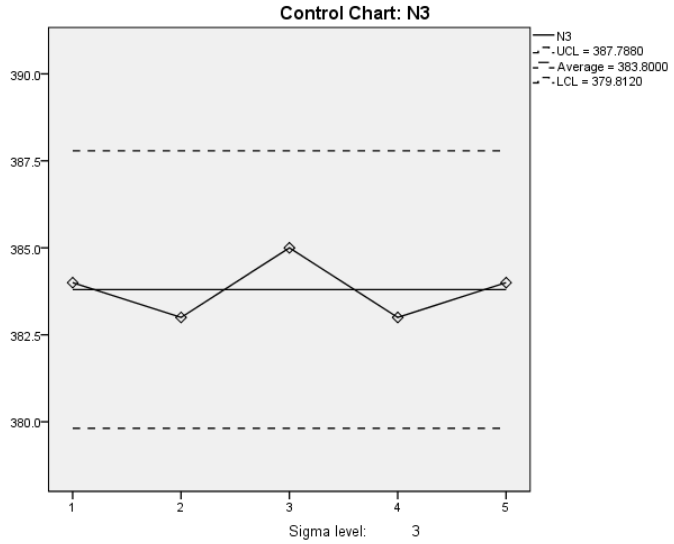

Control Chart: L2
L2
UCL = 8.0587
Average = 5.4000
LCL = 2.7413
8
6
4
2
1
2
3
4
5
Sigma level: 3


Control Chart: M1
M1
UCL = 13.5880
Average = 9.6000
LCL = 5.6120
14
12
10
8
6
4
1
2
3
4
5
Sigma level: 3


Control Chart: M2
M2
UCL = 17.1174
Average = 11.8000
LCL = 6.4826
17.5
15.0
12.5
10.0
7.5
1
2
3
4
5
Sigma level: 3


Control Chart: N1
N1
UCL = 28.7234
Average = 25.4000
LCL = 22.0766
30
28
26
24
22
20
1
2
3
4
5
Sigma level: 3


Control Chart: N2
N2
UCL = 17.1174
Average = 11.8000
LCL = 6.4826
17.5
15.0
12.5
10.0
7.5
1
2
3
4
5
Sigma level: 3


Control Chart: N3
N3
UCL = 387.7880
Average = 383.8000
LCL = 379.8120
390.0
387.5
385.0
382.5
380.0
1
2
3
4
5
Sigma level: 3