Lampiran 1 **Data Diameter Pin Baja (X_t) untuk 3 hari**

Waktu (t) (menit)	Diameter (inchi)	Waktu (t) (menit)	Diameter (inchi)
1	0.1247	31	0.1248
2	0.1264	32	0.1235
3	0.1252	33	0.1243
4	0.1253	34	0.1265
5	0.1263	35	0.1270
6	0.1251	36	0.1229
7	0.1254	37	0.1250
8	0.1239	38	0.1248
9	0.1235	39	0.1252
10	0.1257	40	0.1243
11	0.1271	41	0.1255
12	0.1253	42	0.1237
13	0.1265	43	0.1235
14	0.1254	44	0.1264
15	0.1243	45	0.1239
16	0.1240	46	0.1266
17	0.1246	47	0.1242
18	0.1244	48	0.1231
19	0.1271	49	0.1232
20	0.1241	50	0.1244
21	0.1251	51	0.1233
22	0.1238	52	0.1237
23	0.1255	53	0.1244
24	0.1234	54	0.1254
25	0.1235	55	0.1247
26	0.1266	56	0.1254
27	0.1250	57	0.1258
28	0.1246	58	0.1260
29	0.1243	59	0.1235
30	0.1248	60	0.1273

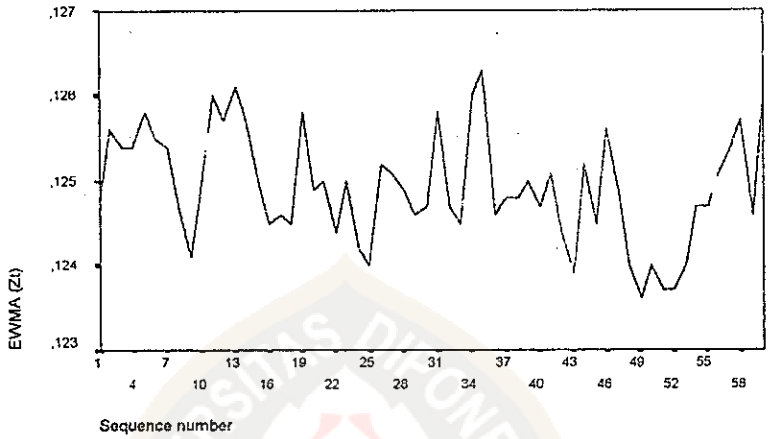
Sumber: http:// www. itl.nist. gov

Lampiran 2. Nilai EWMA Z_t untuk Diameter Pin Baja dengan $\lambda = 0{,}5$

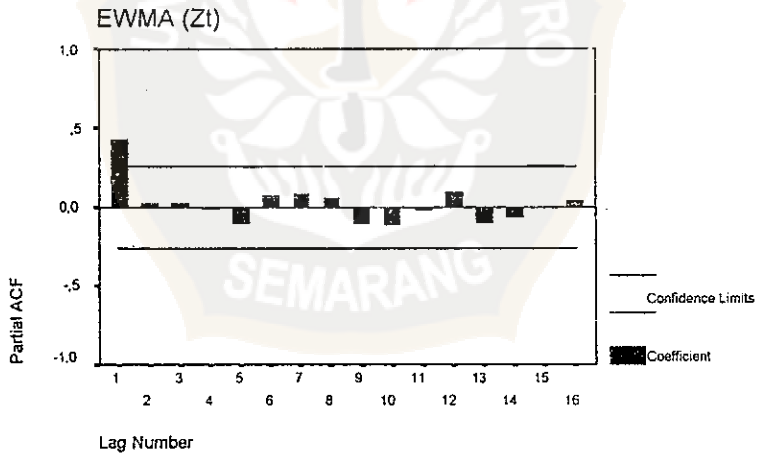
X_t	EWMA Z_t^*	X_t	EWMA Z_t^*	X_t	EWMA Z_t^*
0,1247	0,1248	0,1251	0,1250	0,1255	0,1251
0,1264	0,1256	0,1238	0,1244	0,1237	0,1244
0,1252	0,1254	0,1255	0,1250	0,1235	0,1239
0,1253	0,1254	0,1234	0,1242	0,1264	0,1252
0,1263	0,1258	0,1235	0,1240	0,1239	0,1245
0,1251	0,1255	0,1266	0,1252	0,1266	0,1256
0,1254	0,1254	0,1250	0,1251	0,1242	0,1249
0,1239	0,1247	0,1246	0,1249	0,1231	0,1240
0,1235	0,1241	0,1243	0,1246	0,1232	0,1236
0,1257	0,1249	0,1248	0,1247	0,1244	0,1240
0,1271	0,1260	0,1248	0,1258	0,1233	0,1237
0,1253	0,1257	0,1235	0,1247	0,1237	0,1237
0,1265	0,1261	0,1243	0,1245	0,1244	0,1240
0,1254	0,1257	0,1265	0,1260	0,1254	0,1247
0,1243	0,1250	0,1270	0,1263	0,1247	0,1247
0,1240	0,1245	0,1229	0,1246	0,1254	0,1251
0,1246	0,1246	0,1250	0,1248	0,1258	0,1254
0,1244	0,1245	0,1248	0,1248	0,1260	0,1257
0,1271	0,1258	0,1252	0,1250	0,1235	0,1246
0,1241	0,1249	0,1243	0,1247	0,1273	0,1260

Lampiran 3. Data Runtun waktu EWMA (Z_t), FAK dan FAKP

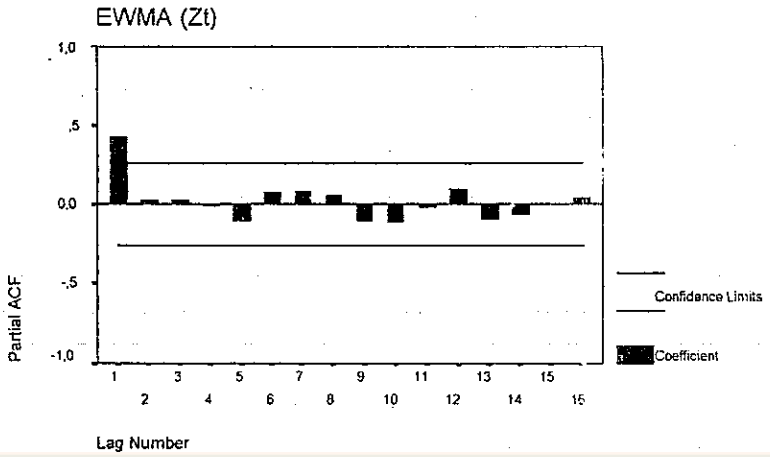
Data Runtun Waktu EWMA (Z_t)



FAK EWMA (Z_t)



FAKP EWMA (Z_t)



Lampiran 3. Data Runtun waktu EWMA (Z_t), FAK dan FAKP (lanjutan)

Autocorrelations (AR): EWMA(Z_t)

Lag	Auto-Corr.	Stand. Err	Box-Ljung	Prob.
1	,428	,126	11,557	,001
2	,205	,125	14,253	,001
3	,115	,124	15,116	,002
4	,054	,123	15,308	,004
5	-,058	,122	15,535	,008
6	,003	,120	15,535	,016
7	,072	,119	15,900	,026
8	,100	,118	16,618	,034
9	-,005	,117	16,620	,055
10	-,088	,116	17,201	,070
11	-,090	,115	17,813	,086
12	-,006	,114	17,815	,121
13	-,090	,112	18,456	,141
14	-,103	,111	19,311	,153
15	-,041	,110	19,448	,194
16	,005	,109	19,450	,246

Plot Symbols: Autocorrelations * Two Standard Error Limits .

Total cases: 60 Computable first lags: 59

Partial Autocorrelations: EWMA(Z_t)

Lag	Pr-Aut-Corr.	Stand. Err.
1	,428	,129
2	,027	,129
3	,022	,129
4	-,009	,129
5	-,103	,129
6	,075	,129
7	,077	,129
8	,055	,129
9	-,099	,129
10	-,109	,129
11	-,017	,129
12	,096	,129
13	-,098	,129
14	-,066	,129
15	,004	,129
16	,037	,129

Plot Symbols: Autocorrelations * Two Standard Error Limits .

Total cases: 60 Computable first lags: 59

Lampiran 4. FAK dan FAKP Diameter Pin Baja (X_t)

Autocorrelations: Diameter pin Baja (Xt)

Lag	Auto-Corr.	Stand. Err.	-1 -.75 -.5 -.25 0 .25 .5 .75 1	Box-Ljung	Prob.
1	-,020	,126	. * .	,025	,874
2	,007	,125	. * .	,029	,986
3	-,019	,124	. * .	,053	,997
4	,014	,123	. * .	,067	,999
5	-,115	,122	. **| .	,967	,965
6	,000	,120	. * .	,967	,987
7	,092	,119	. |** .	1,564	,980
8	,102	,118	. |** .	2,310	,970
9	,059	,117	. |* .	2,566	,979
10	-,156	,116	. ***| .	4,368	,929
11	-,028	,115	. * | .	4,429	,956
12	,053	,114	. |* .	4,649	,969
13	-,135	,112	. ***| .	6,087	,943
14	-,045	,111	. * | .	6,248	,960
15	-,001	,110	. * .	6,248	,975
16	,195	,109	. |****	9,479	,892

Plot Symbols: Autocorrelations * Two Standard Error Limits .

Total cases: 60 Computable first lags: 59

Partial Autocorrelations: Diameter Pin Baja (Xt)

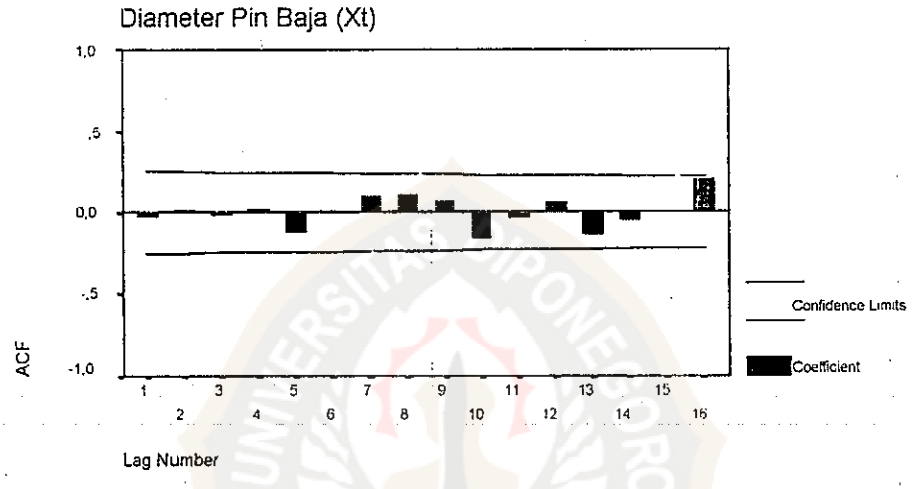
Lag	Pr-Aut-Corr.	Stand. Err.	-1 -.75 -.5 -.25 0 .25 .5 .75 1
1	-,020	,129	. * .
2	,007	,129	. * .
3	-,019	,129	. * .
4	,014	,129	. * .
5	-,115	,129	. **| .
6	-,005	,129	. * .
7	,095	,129	. |** .
8	,103	,129	. |** .
9	,067	,129	. |* .
10	-,171	,129	. ***| .
11	-,042	,129	. * | .
12	,083	,129	. |** .
13	-,115	,129	. **| .
14	-,047	,129	. * | .
15	-,059	,129	. * | .
16	,180	,129	. |**** .

Plot Symbols: Autocorrelations * Two Standard Error Limits .

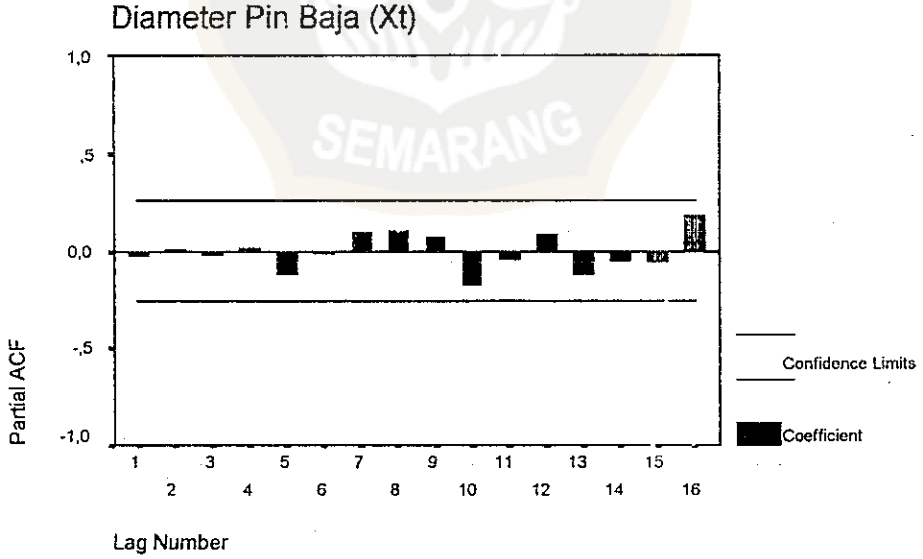
Total cases: 60 Computable first lags: 59

Lampiran 4. FAK dan FAKP Diameter Pin Baja (X_t)
(lanjutan)

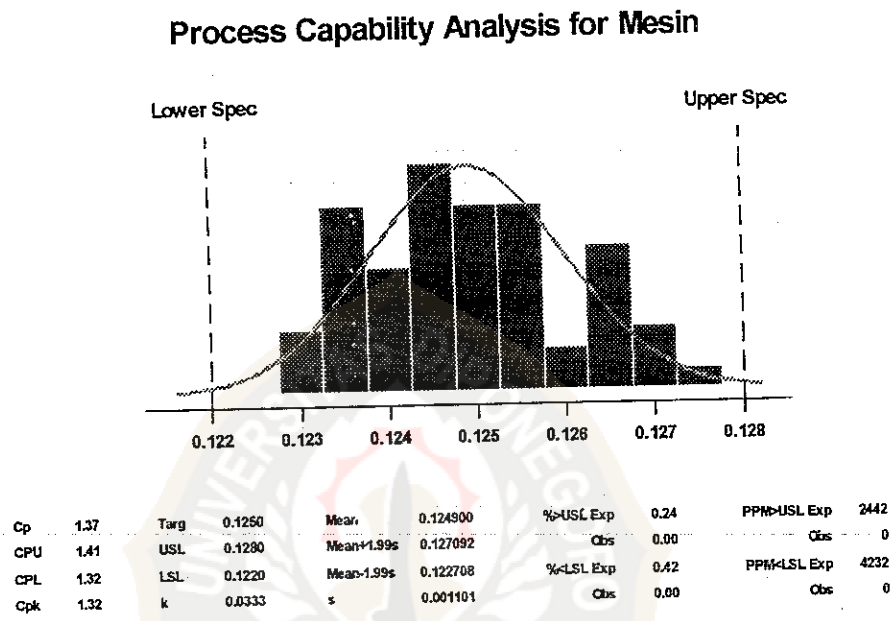
FAK Diameter Pin Baja (X_t)



FAKP Diameter Pin Baja (X_t)



Lampiran 5. Analisis Kapabiliti Proses Untuk Kinerja Mesin



Cp	1.37	Targ	0.1250	Mean	0.124900	%>USL Exp	0.24	PPM>USL Exp	2442
CPU	1.41	USL	0.1280	Mean+1.99s	0.127092	Obs	0.00	Obs	0
CPL	1.32	LSL	0.1220	Mean-1.99s	0.122708	%<LSL Exp	0.42	PPM<LSL Exp	4232
Cpk	1.32	k	0.0333	s	0.001101	Obs	0.00	Obs	0
Cpm	0.87	n	60.0000						

Lampiran 6. Hasil Pengukuran Baseline Kinerja Mesin pada Pengukuran Diameter Pin Baja

Langkah	Tindakan	Persamaan	Hasil
1	Proses apa yang anda ingin mengetahui	Pengukuran Diameter Pin Baja pada mesin	-
2	Tentukan nilai batas spesifikasi atas	USL	0.128 inchi
3	Tentukan nilai batas spesifikasi bawah	LSL	0.122 inchi
4	Tentukan nilai spesifikasi target	T	0.125 inchi
5	Berapa nilai rata-rata (mean) proses	$\overline{X} = \frac{\sum_{i=1} X_i}{n}$	0.1249 inchi
6	Berapa nilai standar deviasi dari proses	S	0.0011014
7	Hitung kemungkinan kegagalan yang berada di atas nilai USL per satu juta kesempatan	$P(z \geq \lvert USL - \overline{X} \rvert / S) \times 1000000$	2401
8	Hitung kemungkinan kegagalan yang berada di bawah per sejuta kesempatan	$P(z \leq \lvert LSL - \overline{X} \rvert / S) \times 1000000$	4269
9	Hitung kemungkinan cacat per sejuta kesempatan yang dihasilkan proses	= langkah 7 + langkah 8	6670
10	Konversi DPMO ke dalam nilai Sigma (lihat tabel)	-	3.98
11	Hitung kemampuan proses di atas dalam ukuran nilai Sigma	$C_{pm} = \frac{\lvert USL - LSL \rvert}{6\sqrt{(\mu - T)^2 + S}}$	0.87

Lampiran 7 Batas Pengendali EWMA Dengan $\lambda = 0.5$

X_t	Z_t	BPA	BPB
0.1247	0.1248	0.126992	0.122608
0.1264	0.1256	0.127250	0.122350
0.1252	0.1254	0.127311	0.122289
0.1253	0.1254	0.127326	0.122274
0.1263	0.1258	0.127330	0.122270
0.1251	0.1255	0.127331	0.122269
0.1254	0.1254	0.127331	0.122269
0.1239	0.1247	0.127331	0.122269
0.1235	0.1241	0.127331	0.122269
0.1257	0.1249	0.127331	0.122269
0.1271	0.1260	0.127331	0.122269
0.1253	0.1257	0.127331	0.122269
0.1265	0.1261	0.127331	0.122269
0.1254	0.1257	0.127331	0.122269
0.1243	0.1250	0.127331	0.122269
0.1240	0.1245	0.127331	0.122269
0.1246	0.1246	0.127331	0.122269
0.1244	0.1245	0.127331	0.122269
0.1271	0.1258	0.127331	0.122269
0.1241	0.1249	0.127331	0.122269
0.1251	0.1251	0.127331	0.122269
0.1238	0.1238	0.127331	0.122269
0.1255	0.1255	0.127331	0.122269
0.1234	0.1234	0.127331	0.122269
0.1235	0.1235	0.127331	0.122269
0.1266	0.1266	0.127331	0.122269
0.1250	0.1250	0.127331	0.122269
0.1246	0.1246	0.127331	0.122269
0.1243	0.1243	0.127331	0.122269
0.1248	0.1248	0.127331	0.122269
0.1248	0.1248	0.127331	0.122269
0.1235	0.1235	0.127331	0.122269
0.1243	0.1243	0.127331	0.122269
0.1265	0.1265	0.127331	0.122269
0.1270	0.1270	0.127331	0.122269
0.1229	0.1229	0.127331	0.122269
0.1250	0.1250	0.127331	0.122269
0.1248	0.1248	0.127331	0.122269
0.1252	0.1252	0.127331	0.122269
0.1243	0.1243	0.127331	0.122269
0.1255	0.1251	0.127331	0.122269
0.1237	0.1244	0.127331	0.122269
0.1235	0.1239	0.127331	0.122269
0.1264	0.1252	0.127331	0.122269
0.1239	0.1245	0.127331	0.122269
0.1266	0.1256	0.127331	0.122269
0.1242	0.1249	0.127331	0.122269
0.1231	0.1240	0.127331	0.122269
0.1232	0.1236	0.127331	0.122269
0.1244	0.1240	0.127331	0.122269
0.1233	0.1237	0.127331	0.122269
0.1237	0.1237	0.127331	0.122269
0.1244	0.1240	0.127331	0.122269
0.1254	0.1247	0.127331	0.122269
0.1247	0.1247	0.127331	0.122269
0.1254	0.1251	0.127331	0.122269
0.1258	0.1254	0.127331	0.122269
0.1260	0.1257	0.127331	0.122269
0.1235	0.1246	0.127331	0.122269
0.1273	0.1260	0.127331	0.122269

Lampiran 8 Konversi DPMO ke Nilai Sigma Berdasarkan Konsep Six Sigma

Nilai Sigma	DPMO	Nilai Sigma	DPMO	Nilai Sigma	DPMO	Nilai Sigma	DPMO
0,00	933.193	0,51	838.913	1,02	684.386	1,53	488.033
0,01	931.888	0,52	836.457	1,03	680.822	1,54	484.047
0,02	930.563	0,53	833.977	1,04	677.242	1,55	480.061
0,03	929.219	0,54	831.472	1,05	673.645	1,56	476.078
0,04	927.855	0,55	828.944	1,06	670.031	1,57	472.097
0,05	926.471	0,56	826.391	1,07	666.402	1,58	468.119
0,06	925.066	0,57	823.814	1,08	662.757	1,59	464.144
0,07	923.641	0,58	821.214	1,09	659.097	1,60	460.172
0,08	922.196	0,59	818.589	1,10	655.422	1,61	456.205
0,09	920.730	0,60	815.940	1,11	651.732	1,62	452.242
0,10	919.243	0,61	813.267	1,12	648.027	1,63	448.283
0,11	917.736	0,62	810.570	1,13	644.309	1,64	444.330
0,12	916.207	0,63	807.850	1,14	640.576	1,65	440.382
0,13	914.656	0,64	805.106	1,15	636.831	1,66	436.441
0,14	913.085	0,65	802.338	1,16	633.072	1,67	432.505
0,15	911.492	0,66	799.546	1,17	629.300	1,68	428.576
0,16	909.877	0,67	796.731	1,18	625.516	1,69	424.655
0,17	908.241	0,68	793.892	1,19	621.719	1,70	420.740
0,18	906.582	0,69	791.030	1,20	617.911	1,71	416.834
0,19	904.902	0,70	788.145	1,21	614.092	1,72	412.936
0,20	903.199	0,71	785.236	1,22	610.261	1,73	409.046
0,21	901.475	0,72	782.305	1,23	606.420	1,74	405.165
0,22	899.727	0,73	779.350	1,24	602.568	1,75	401.294
0,23	897.958	0,74	776.373	1,25	598.706	1,76	397.432
0,24	896.165	0,75	773.373	1,26	594.835	1,77	393.580
0,25	894.350	0,76	770.350	1,27	590.954	1,78	389.739
0,26	892.512	0,77	767.305	1,28	587.064	1,79	385.908
0,27	890.651	0,78	764.238	1,29	583.166	1,80	382.089
0,28	888.767	0,79	761.148	1,30	579.260	1,81	378.281
0,29	886.860	0,80	758.036	1,31	575.345	1,82	374.484
0,30	884.930	0,81	754.903	1,32	571.424	1,83	370.700
0,31	882.977	0,82	751.748	1,33	567.495	1,84	366.928
0,32	881.000	0,83	748.571	1,34	563.559	1,85	363.169
0,33	878.999	0,84	745.373	1,35	559.618	1,86	359.424
0,34	876.976	0,85	742.154	1,36	555.670	1,87	355.691
0,35	874.928	0,86	738.914	1,37	551.717	1,88	351.973
0,36	872.857	0,87	735.653	1,38	547.758	1,89	348.268
0,37	870.762	0,88	732.371	1,39	543.795	1,90	344.578
0,38	868.643	0,89	729.069	1,40	539.828	1,91	340.903
0,39	866.500	0,90	725.747	1,41	535.856	1,92	337.243
0,40	864.334	0,91	722.405	1,42	531.881	1,93	333.598
0,41	862.143	0,92	719.043	1,43	527.903	1,94	329.969
0,42	859.929	0,93	715.661	1,44	523.922	1,95	326.355
0,43	857.690	0,94	712.260	1,45	519.939	1,96	322.758
0,44	855.428	0,95	708.840	1,46	515.953	1,97	319.178
0,45	853.141	0,96	705.402	1,47	511.967	1,98	315.614
0,46	850.830	0,97	701.944	1,48	507.978	1,99	312.067
0,47	848.495	0,98	698.468	1,49	503.989	2,00	308.538
0,48	846.136	0,99	694.974	1,50	500.000	2,01	305.026
0,49	843.752	1,00	691.462	1,51	496.011	2,02	301.532
0,50	841.345	1,01	687.933	1,52	492.022	2,03	298.056

Sumber: nilai-nilai dibangkitkan menggunakan program oleh: Vincent Gaspersz (2002)

Lampiran 8 Konversi DPMO ke Nilai Sigma Berdasarkan Konsep Six Sigma (Lanjutan)

Nilai Sigma	DPMO	Nilai Sigma	DPMO	Nilai Sigma	DPMO	Nilai Sigma	DPMO
2,04	294.598	2,55	146.859	3,06	59.380	3,57	19.226
2,05	291.160	2,56	144.572	3,07	58.208	3,58	18.763
2,06	287.740	2,57	142.310	3,08	57.053	3,59	18.309
2,07	284.339	2,58	140.071	3,09	55.917	3,60	17.864
2,08	280.957	2,59	137.857	3,10	54.799	3,61	17.429
2,09	277.595	2,60	135.666	3,11	53.699	3,62	17.003
2,10	274.253	2,61	133.500	3,12	52.616	3,63	16.586
2,11	270.931	2,62	131.357	3,13	51.551	3,64	16.177
2,12	267.629	2,63	129.238	3,14	50.503	3,65	15.778
2,13	264.347	2,64	127.143	3,15	49.471	3,66	15.386
2,14	261.086	2,65	125.072	3,16	48.457	3,67	15.003
2,15	257.846	2,66	123.024	3,17	47.460	3,68	14.629
2,16	254.627	2,67	121.001	3,18	46.479	3,69	14.262
2,17	251.429	2,68	119.000	3,19	45.514	3,70	13.903
2,18	248.252	2,69	117.023	3,20	44.565	3,71	13.553
2,19	245.097	2,70	115.070	3,21	43.633	3,72	13.209
2,20	241.964	2,71	113.140	3,22	42.716	3,73	12.874
2,21	238.852	2,72	111.233	3,23	41.815	3,74	12.545
2,22	235.762	2,73	109.349	3,24	40.929	3,75	12.224
2,23	232.695	2,74	107.488	3,25	40.059	3,76	11.911
2,24	229.650	2,75	105.650	3,26	39.204	3,77	11.604
2,25	226.627	2,76	103.835	3,27	38.364	3,78	11.304
2,26	223.627	2,77	102.042	3,28	37.538	3,79	11.011
2,27	220.650	2,78	100.273	3,29	36.727	3,80	10.724
2,28	217.695	2,79	98.525	3,30	35.930	3,81	10.444
2,29	214.764	2,80	96.801	3,31	35.148	3,82	10.170
2,30	211.855	2,81	95.098	3,32	34.379	3,83	9.903
2,31	208.970	2,82	93.418	3,33	33.625	3,84	9.642
2,32	206.108	2,83	91.759	3,34	32.884	3,85	9.387
2,33	203.269	2,84	90.123	3,35	32.157	3,86	9.137
2,34	200.454	2,85	88.508	3,36	31.443	3,87	8.894
2,35	197.662	2,86	86.915	3,37	30.742	3,88	8.656
2,36	194.894	2,87	85.344	3,38	30.054	3,89	8.424
2,37	192.150	2,88	83.793	3,39	29.379	3,90	8.198
2,38	189.430	2,89	82.264	3,40	28.716	3,91	7.976
2,39	186.733	2,90	80.757	3,41	28.067	3,92	7.760
2,40	184.060	2,91	79.270	3,42	27.429	3,93	7.549
2,41	181.411	2,92	77.804	3,43	26.803	3,94	7.344
2,42	178.786	2,93	76.359	3,44	26.190	3,95	7.143
2,43	176.186	2,94	74.934	3,45	25.588	3,96	6.947
2,44	173.609	2,95	73.529	3,46	24.998	3,97	6.756
2,45	171.056	2,96	72.145	3,47	24.419	3,98	6.569
2,46	168.528	2,97	70.781	3,48	23.852	3,99	6.387
2,47	166.023	2,98	69.437	3,49	23.295	4,00	6.210
2,48	163.543	2,99	68.112	3,50	22.750	4,01	6.037
2,49	161.087	3,00	66.807	3,51	22.216	4,02	5.868
2,50	158.655	3,01	65.522	3,52	21.692	4,03	5.703
2,51	156.248	3,02	64.256	3,53	21.178	4,04	5.543
2,52	153.864	3,03	63.008	3,54	20.675	4,05	5.386
2,53	151.505	3,04	61.780	3,55	20.182	4,06	5.234
2,54	149.170	3,05	60.571	3,56	19.699	4,07	5.085

Sumber: nilai-nilai dibangkitkan menggunakan program oleh: Vincent Gaspersz (2002)

Lampiran 8 Konversi DPMO ke Nilai Sigma Berdasarkan Konsep Six Sigma (Lanjutan)

Nilai Sigma	DPMO	Nilai Sigma	DPMO	Nilai Sigma	DPMO	Nilai Sigma	DPMO
4,08	4.940	4,59	1.001	5,10	159	5,61	20
4,09	4.799	4,60	968	5,11	153	5,62	19
4,10	4.661	4,61	936	5,12	147	5,63	18
4,11	4.527	4,62	904	5,13	142	5,64	17
4,12	4.397	4,63	874	5,14	136	5,65	17
4,13	4.269	4,64	845	5,15	131	5,66	16
4,14	4.145	4,65	816	5,16	126	5,67	15
4,15	4.025	4,66	789	5,17	121	5,68	15
4,16	3.907	4,67	762	5,18	117	5,69	14
4,17	3.793	4,68	736	5,19	112	5,70	13
4,18	3.681	4,69	711	5,20	108	5,71	13
4,19	3.573	4,70	687	5,21	104	5,72	12
4,20	3.467	4,71	664	5,22	100	5,73	12
4,21	3.364	4,72	641	5,23	96	5,74	11
4,22	3.264	4,73	619	5,24	92	5,75	11
4,23	3.167	4,74	598	5,25	88	5,76	10
4,24	3.072	4,75	577	5,26	85	5,77	10
4,25	2.980	4,76	557	5,27	82	5,78	9
4,26	2.890	4,77	538	5,28	78	5,79	9
4,27	2.803	4,78	519	5,29	75	5,80	9
4,28	2.718	4,79	501	5,30	72	5,81	8
4,29	2.635	4,80	483	5,31	70	5,82	8
4,30	2.555	4,81	467	5,32	67	5,83	7
4,31	2.477	4,82	450	5,33	64	5,84	7
4,32	2.401	4,83	434	5,34	62	5,85	7
4,33	2.327	4,84	419	5,35	59	5,86	7
4,34	2.256	4,85	404	5,36	57	5,87	6
4,35	2.186	4,86	390	5,37	54	5,88	6
4,36	2.118	4,87	376	5,38	52	5,89	6
4,37	2.052	4,88	362	5,39	50	5,90	5
4,38	1.988	4,89	350	5,40	48	5,91	5
4,39	1.926	4,90	337	5,41	46	5,92	5
4,40	1.866	4,91	325	5,42	44	5,93	5
4,41	1.807	4,92	313	5,43	42	5,94	5
4,42	1.750	4,93	302	5,44	41	5,95	4
4,43	1.695	4,94	291	5,45	39	5,96	4
4,44	1.641	4,95	280	5,46	37	5,97	4
4,45	1.589	4,96	270	5,47	36	5,98	4
4,46	1.538	4,97	260	5,48	34	5,99	4
4,47	1.489	4,98	251	5,49	33	6,00	3
4,48	1.441	4,99	242	5,50	32		
4,49	1.395	5,00	233	5,51	30		
4,50	1.350	5,01	224	5,52	29		
4,51	1.306	5,02	216	5,53	28		
4,52	1.264	5,03	208	5,54	27		
4,53	1.223	5,04	200	5,55	26		
4,54	1.183	5,05	193	5,56	25		
4,55	1.144	5,06	185	5,57	24		
4,56	1.107	5,07	179	5,58	23		
4,57	1.070	5,08	172	5,59	22		
4,58	1.035	5,09	165	5,60	21		

Catatan: Tabel konversi ini Mencakup pergeseran 1,5-sigma untuk semua nilai Z

Sumber: nilai-nilai dibangkitkan menggunakan program oleh: Vincent Gaspersz (2002)

Lampiran 9 Daftar Nilai Kritis untuk Distribusi Khi-Kuadrat

Derajat Bebas (n)	*Tingkat Signifikansi (α)*											
	0,995	0,99	0,975	0,95	0,90	0,80	0,20	0,10	0,05	0,025	0,01	0,005
1	0,000039	0,0002	0,0010	0,0039	0,0158	0,0642	1,6424	2,7055	3,8415	5,0239	6,6349	7,8794
2	0,0100	0,0201	0,0506	0,1026	0,2107	0,4463	3,2189	4,6052	5,9915	7,3778	9,2104	12,8381
3	0,0717	0,1148	0,2158	0,3518	0,5844	1,0052	4,6416	6,2514	7,8147	9,3484	11,3449	14,8602
4	0,2070	0,2971	0,4844	0,7107	1,0636	1,6488	5,9886	7,7794	9,4877	11,1433	13,2767	16,7496
5	0,4118	0,5543	0,8312	1,1455	1,6103	2,3425	7,2893	9,2363	11,0705	12,8325	15,0863	20,2777
6	0,6757	0,8721	1,2373	1,6354	2,2041	3,0701	8,5581	10,6446	12,5916	14,4494	16,8119	21,9549
7	0,9893	1,2390	1,6899	2,1673	2,8331	3,8223	9,8032	12,0170	14,0671	16,0128	18,4753	23,5893
8	1,3444	1,6465	2,1797	2,7326	3,4895	4,5936	11,0301	13,3616	15,5073	17,5345	20,0902	26,7569
9	1,7349	2,0879	2,7004	3,3251	4,1682	5,3801	12,2421	14,6837	16,9190	19,0228	21,6660	28,2995
10	2,1558	2,5582	3,2470	3,9403	4,8652	6,1791	13,4420	15,9872	18,3070	20,4832	23,2093	29,8195
11	2,6032	3,0535	3,8157	4,5748	5,5778	6,9887	14,6314	17,2750	19,6752	21,9200	24,7250	31,3194
12	3,0738	3,5706	4,4038	5,2260	6,3038	7,8073	15,8120	18,5493	21,0261	23,3367	26,2170	32,8015
13	3,5650	4,1069	5,0087	5,8919	7,0415	8,6339	16,9848	19,8119	22,3620	24,7356	27,6882	34,2671
14	4,0747	4,6604	5,6287	6,5706	7,7895	9,4673	18,1508	21,0641	23,6848	26,1189	29,1412	37,1564
15	4,6009	5,2294	6,2621	7,2609	8,5468	10,3070	19,3107	22,3071	24,9958	27,4884	30,5780	38,5821
16	5,1422	5,8122	6,9077	7,9616	9,3122	11,1521	20,4651	23,5418	26,2962	28,8453	31,9999	39,9969
17	5,6973	6,4077	7,5642	8,6718	10,0852	12,0023	21,6146	24,7690	27,5871	30,1910	33,4087	41,4009
18	6,2648	7,0149	8,2307	9,3904	10,8649	12,8570	22,7595	25,9894	28,8693	31,5264	34,8052	42,7957
19	6,8439	7,6327	8,9065	10,1170	11,6509	13,7158	23,9004	27,2036	30,1435	32,8523	36,1908	44,1814
20	7,4338	8,2604	9,5908	10,8508	12,4426	14,5784	25,0375	28,4120	31,4104	34,1696	37,5663	46,9280
21	8,0336	8,8972	10,2829	11,5913	13,2396	15,4446	26,1711	29,6151	32,6706	35,4789	38,9322	48,2898
22	8,6427	9,5425	10,9823	12,3380	14,0415	16,3140	27,3015	30,8133	33,9245	36,7807	40,2894	49,6450
23	9,2604	10,1957	11,6885	13,0905	14,8480	17,1865	28,4288	32,0069	35,1725	38,0756	41,6383	50,9936
24	9,8862	10,8563	12,4011	13,8484	15,6587	18,0618	29,5533	33,1962	36,4150	39,3641	42,9798	52,3355
25	10,5196	11,5240	13,1197	14,6114	16,4734	18,9397	30,6752	34,3816	37,6525	40,6465	44,3140	53,6719
26	11,1602	12,1982	13,8439	15,3792	17,2919	19,8202	31,7946	35,5632	38,8851	41,9231	45,6416	55,0025
27	11,8077	12,8785	14,5734	16,1514	18,1139	20,7030	32,9117	36,7412	40,1133	43,1945	46,9628	56,3280
28	12,4613	13,5647	15,3079	16,9279	18,9392	21,5880	34,0266	37,9159	41,3372	44,4608	48,2782	58,9637
29	13,1211	14,2564	16,0471	17,7084	19,7677	22,4751	35,1394	39,0875	42,5569	45,7223	49,5878	60,2746
30	13,7867	14,9535	16,7908	18,4927	20,5992	23,3641	36,2502	40,2560	43,7730	46,9792	50,8922	61,5811
35	17,1917	18,5089	20,5694	22,4650	24,7966	27,8359	41,7780	46,0588	49,8018	53,2033	57,3420	68,0526
40	20,7066	22,1642	24,4331	26,5093	29,0505	32,3449	47,2685	51,8050	55,7585	59,3417	63,6908	75,7039
45	24,3110	25,9012	28,3662	30,6123	33,3504	36,8844	52,7288	57,5053	61,6562	65,4101	69,9569	82,0006
50	27,9908	29,7067	32,3574	34,7642	37,6886	41,4492	58,1638	63,1671	67,5048	71,4202	76,1538	89,4770
55	31,7349	33,5705	36,3981	38,9581	42,0596	46,0356	63,5772	68,7962	73,3115	77,3804	82,2920	95,6492
60	35,5344	37,4848	40,4817	43,1880	46,4589	50,6106	68,9721	74,3970	79,0820	83,2977	88,3794	101,7757
65	39,3832	41,4436	44,6030	47,4496	50,8829	55,2620	74,3506	79,9730	84,8206	89,1772	94,4220	109,0742
70	43,2753	45,4417	48,7573	51,7393	55,3289	59,9078	79,7147	85,5270	90,5313	95,0231	100,4251	115,1163
75	47,2061	49,4751	52,9419	56,0541	59,7946	64,5466	85,0658	91,0615	96,2167	100,8393	106,3929	122,3244
80	51,1719	53,5400	57,1532	60,3915	64,2778	69,2070	90,4053	96,5782	101,8795	106,6285	112,3288	128,2987
85	55,1695	57,6339	61,3888	64,7494	68,7771	73,8779	95,7343	102,0789	107,5217	112,3933	118,2356	134,2466
90	59,1963	61,7540	65,6466	69,1260	73,2911	78,5584	101,0537	107,5650	113,1452	118,1359	124,1162	141,3509
95	63,2493	65,8983	69,9249	73,5198	77,8184	83,2478	106,3643	113,0327	118,7516	123,8580	129,9725	147,2468
100	67,3275	70,0650	74,2219	77,9294	82,3581	87,9433	111,6667	118,4980	124,3421	129,5613	135,8069	153,1215

Sumber: nilai-nilai dibangkitkan menggunakan program oleh: Vincent Gaspersz (2002)

Catatan: formula yang digunakan *=chiinv(probability,deg_freedom)*