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LAMPIRAN

Lampiran 1. Tabel Variabel *Control Charts*

■ APPENDIX VI

Factors for Constructing Variables Control Charts

Observations in Sample, <i>n</i>	Chart for Averages					Chart for Standard Deviations						Chart for Ranges				
	Factors for Control Limits			Factors for Center Line		Factors for Control Limits				Factors for Center Line		Factors for Control Limits				
	<i>A</i>	<i>A</i> ₂	<i>A</i> ₃	<i>c</i> ₄	1/ <i>c</i> ₄	<i>B</i> ₃	<i>B</i> ₄	<i>B</i> ₅	<i>B</i> ₆	<i>d</i> ₂	1/ <i>d</i> ₂	<i>d</i> ₃	<i>D</i> ₁	<i>D</i> ₂	<i>D</i> ₃	<i>D</i> ₄
2	2.121	1.880	2.659	0.7979	1.2533	0	3.267	0	2.606	1.128	0.8865	0.853	0	3.686	0	3.267
3	1.732	1.023	1.954	0.8862	1.1284	0	2.568	0	2.276	1.693	0.5907	0.888	0	4.358	0	2.574
4	1.500	0.729	1.628	0.9213	1.0854	0	2.266	0	2.088	2.059	0.4857	0.880	0	4.698	0	2.282
5	1.342	0.577	1.427	0.9400	1.0638	0	2.089	0	1.964	2.326	0.4299	0.864	0	4.918	0	2.114
6	1.225	0.483	1.287	0.9515	1.0510	0.030	1.970	0.029	1.874	2.534	0.3946	0.848	0	5.078	0	2.004
7	1.134	0.419	1.182	0.9594	1.0423	0.118	1.882	0.113	1.806	2.704	0.3698	0.833	0.204	5.204	0.076	1.924
8	1.061	0.373	1.099	0.9650	1.0363	0.185	1.815	0.179	1.751	2.847	0.3512	0.820	0.388	5.306	0.136	1.864
9	1.000	0.337	1.032	0.9693	1.0317	0.239	1.761	0.232	1.707	2.970	0.3367	0.808	0.547	5.393	0.184	1.816
10	0.949	0.308	0.975	0.9727	1.0281	0.284	1.716	0.276	1.669	3.078	0.3249	0.797	0.687	5.469	0.223	1.777
11	0.905	0.285	0.927	0.9754	1.0252	0.321	1.679	0.313	1.637	3.173	0.3152	0.787	0.811	5.535	0.256	1.744
12	0.866	0.266	0.886	0.9776	1.0229	0.354	1.646	0.346	1.610	3.258	0.3069	0.778	0.922	5.594	0.283	1.717
13	0.832	0.249	0.850	0.9794	1.0210	0.382	1.618	0.374	1.585	3.336	0.2998	0.770	1.025	5.647	0.307	1.693
14	0.802	0.235	0.817	0.9810	1.0194	0.406	1.594	0.399	1.563	3.407	0.2935	0.763	1.118	5.696	0.328	1.672
15	0.775	0.223	0.789	0.9823	1.0180	0.428	1.572	0.421	1.544	3.472	0.2880	0.756	1.203	5.741	0.347	1.653
16	0.750	0.212	0.763	0.9835	1.0168	0.448	1.552	0.440	1.526	3.532	0.2831	0.750	1.282	5.782	0.363	1.637
17	0.728	0.203	0.739	0.9845	1.0157	0.466	1.534	0.458	1.511	3.588	0.2787	0.744	1.356	5.820	0.378	1.622
18	0.707	0.194	0.718	0.9854	1.0148	0.482	1.518	0.475	1.496	3.640	0.2747	0.739	1.424	5.856	0.391	1.608
19	0.688	0.187	0.698	0.9862	1.0140	0.497	1.503	0.490	1.483	3.689	0.2711	0.734	1.487	5.891	0.403	1.597
20	0.671	0.180	0.680	0.9869	1.0133	0.510	1.490	0.504	1.470	3.735	0.2677	0.729	1.549	5.921	0.415	1.585
21	0.655	0.173	0.663	0.9876	1.0126	0.523	1.477	0.516	1.459	3.778	0.2647	0.724	1.605	5.951	0.425	1.575
22	0.640	0.167	0.647	0.9882	1.0119	0.534	1.466	0.528	1.448	3.819	0.2618	0.720	1.659	5.979	0.434	1.566
23	0.626	0.162	0.633	0.9887	1.0114	0.545	1.455	0.539	1.438	3.858	0.2592	0.716	1.710	6.006	0.443	1.557
24	0.612	0.157	0.619	0.9892	1.0109	0.555	1.445	0.549	1.429	3.895	0.2567	0.712	1.759	6.031	0.451	1.548
25	0.600	0.153	0.606	0.9896	1.0105	0.565	1.435	0.559	1.420	3.931	0.2544	0.708	1.806	6.056	0.459	1.541

Lampiran 2. Perhitungan Kapabilitas Proses

1. Penentuan kapabilitas proses kadar ALB (Asam Lemak Bebas) CPKO (*Crude Palm Kernel Oil*)

$$Cp : \frac{USL-LSL}{UCL-LCL} = \frac{USL-LSL}{6s} \text{ dimana } S = \frac{Rbar}{d2} = \frac{0,66}{2,534} = 0,2604$$

$$Cp : \frac{USL-LSL}{UCL-LCL} = \frac{2,51-0}{6 \times 0,2604} = 1,6101$$

2. Penentuan kapabilitas proses kadar air CPKO (*Crude Palm Kernel Oil*)

$$Cp : \frac{USL-LSL}{UCL-LCL} = \frac{USL-LSL}{6s} \text{ dimana } S = \frac{Rbar}{d2} = \frac{0,11}{2,534} = 0,0434$$

$$Cp : \frac{USL-LSL}{UCL-LCL} = \frac{0,34-0,05}{6 \times 0,0434} = 1,1134$$

3. Penentuan kapabilitas proses kadar kotoran CPKO (*Crude Palm Kernel Oil*)

$$Cp : \frac{USL-LSL}{UCL-LCL} = \frac{USL-LSL}{6s} \text{ dimana } S = \frac{Rbar}{d2} = \frac{0,007}{2,534} = 0,0027$$

$$Cp : \frac{USL-LSL}{UCL-LCL} = \frac{0,045-0,020}{6 \times 0,0027} = 1,4748$$

4. Penentuan kapabilitas proses mutu OER CPKO (*Crude Palm Kernel Oil*)

$$Cp : \frac{USL-LSL}{UCL-LCL} = \frac{USL-LSL}{6s} \text{ dimana } S = \frac{Rbar}{d2} = \frac{1,53}{2,534} = 0,6037$$

$$Cp : \frac{USL-LSL}{UCL-LCL} = \frac{45-43,24}{6 \times 0,6037} = 0,4835$$

Dimana:

USL : Upper Specification Limit

LCL : Lower Spesification Limit

S : Standar deviasi proses = R / d2

D2 : dengan ukuran subgrup 6 (lihat tabel variabel)