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# LAMPIRAN

**Lampiran 1.** Data Produksi Roti PT. Ugee Indonesia Periode 1 November – 20 Desember 2023

No	TANGGAL	JENIS CACAT PRODUK			TOTAL CACAT
		MINOR <i>f(a)</i>	CRITICAL <i>f(b)</i>	MAJOR <i>f(c)</i>	
1	1 November	3	1	1	5
2	2 November	3	2	2	7
3	3 November	4	4	2	10
4	4 November	8	5	2	15
5	5 November	7	2	1	10
6	6 November	5	3	4	12
7	7 November	2	5	1	8
8	8 November	2	3	0	5
9	9 November	6	3	2	11
10	10 November	5	4	1	10
11	11 November	5	2	1	8
12	12 November	7	3	2	12
13	13 November	5	2	2	9
14	14 November	3	3	1	7
15	15 November	8	0	4	12
16	16 November	6	0	3	9
17	17 November	4	3	0	7
18	18 November	7	4	1	12
19	19 November	4	1	1	6
20	20 November	6	4	1	11
21	21 November	3	3	2	8
22	22 November	5	4	1	10
23	23 November	2	4	1	7
24	24 November	3	3	0	6
25	25 November	6	5	2	13
26	26 November	0	4	4	8
27	27 November	4	3	2	9
28	28 November	5	6	2	13
29	29 November	6	5	1	12
30	30 November	1	3	3	7
31	1 Desember	3	4	1	8
32	2 Desember	5	3	3	11
33	3 Desember	4	4	1	9
34	4 Desember	4	0	2	6

**Lampiran 1.** Data Produksi Roti PT. Ugiee Indonesia Periode 1 November – 20 Desember 2023

No	TANGGAL	JENIS CACAT PRODUK			TOTAL CACAT
		MINOR <i>f(a)</i>	CRITICAL <i>f(b)</i>	MAJOR <i>f(c)</i>	
35	5 Desember	7	2	1	10
36	6 Desember	4	3	0	7
37	7 Desember	7	5	1	13
38	8 Desember	5	3	0	8
39	9 Desember	4	4	2	10
40	10 Desember	3	5	1	9
41	11 Desember	8	4	2	14
42	12 Desember	2	3	2	7
43	13 Desember	3	2	5	10
44	14 Desember	5	3	1	9
45	15 Desember	9	0	2	11
46	16 Desember	2	5	2	9
47	17 Desember	4	3	0	7
48	18 Desember	6	4	0	10
49	19 Desember	7	5	1	13
50	20 Desember	4	3	1	8

## Lampiran 2. Uji Kolmogorov-Smirnov

## One-Sample Kolmogorov-Smirnov Test

		VAR00001
N		50
Normal Parameters <sup>a,b</sup>	Mean	9.3600
	Std. Deviation	2.41391
Most Extreme Differences	Absolute	.113
	Positive	.113
	Negative	-.083
Test Statistic		.113
Asymp. Sig. (2-tailed)		.131 <sup>c</sup>

- a. Test distribution is Normal.
- b. Calculated from data.
- c. Lilliefors Significance Correction.

Lampiran 3. Tabel Nilai Kritis Uji Kolmogorov-Smirnov

$n$	$\alpha = 0.20$	$\alpha = 0.10$	$\alpha = 0.05$	$\alpha = 0.02$	$\alpha = 0.01$
1	0.900	0.950	0.975	0.990	0.995
2	0.684	0.776	0.842	0.900	0.929
3	0.565	0.636	0.708	0.785	0.829
4	0.493	0.565	0.624	0.689	0.734
5	0.447	0.509	0.563	0.627	0.669
6	0.410	0.468	0.519	0.577	0.617
7	0.381	0.436	0.483	0.538	0.576
8	0.359	0.410	0.454	0.507	0.542
9	0.339	0.387	0.430	0.480	0.513
10	0.323	0.369	0.409	0.457	0.486
11	0.308	0.352	0.391	0.437	0.468
12	0.296	0.338	0.375	0.419	0.449
13	0.285	0.325	0.361	0.404	0.432
14	0.275	0.314	0.349	0.390	0.418
15	0.266	0.304	0.338	0.377	0.404
16	0.258	0.295	0.327	0.366	0.392
17	0.250	0.286	0.318	0.355	0.381
18	0.244	0.279	0.309	0.346	0.371
19	0.237	0.271	0.301	0.337	0.361
20	0.232	0.265	0.294	0.329	0.352
21	0.226	0.259	0.287	0.321	0.344
22	0.221	0.253	0.281	0.314	0.337
23	0.216	0.247	0.275	0.307	0.330
24	0.212	0.242	0.269	0.301	0.323
25	0.208	0.238	0.264	0.295	0.317
26	0.204	0.233	0.259	0.290	0.311
27	0.200	0.229	0.254	0.284	0.305
28	0.197	0.225	0.250	0.279	0.300
29	0.193	0.221	0.246	0.275	0.295
30	0.190	0.218	0.242	0.270	0.290
35	0.177	0.202	0.224	0.251	0.269
40	0.165	0.189	0.210	0.235	0.252
45	0.156	0.179	0.198	0.222	0.238
50	0.148	0.170	0.188	0.211	0.226
55	0.142	0.162	0.180	0.201	0.216
60	0.136	0.155	0.172	0.193	0.207
65	0.131	0.149	0.166	0.185	0.199
70	0.126	0.144	0.160	0.179	0.192
75	0.122	0.139	0.154	0.173	0.185
80	0.118	0.135	0.150	0.167	0.179

**Lampiran 4.** Bagan Kendali *Fuzzy Exponentially Weighted Moving Average* untuk  $X(a)$  dengan  $\lambda = 0.05$

No	$Xa$	UCL	LCL	Status
1	3.5848	3.7074	3.6606	<i>Out Of Control</i>
2	3.5231	3.7162	3.6518	<i>Out Of Control</i>
3	3.5469	3.7225	3.6455	<i>Out Of Control</i>
4	3.6721	3.7274	3.6406	<i>In Control</i>
5	3.6760	3.7314	3.6366	<i>In Control</i>
6	3.6772	3.7347	3.6333	<i>In Control</i>
7	3.6908	3.7376	3.6304	<i>In Control</i>
8	3.6388	3.7400	3.6280	<i>In Control</i>
9	3.6593	3.7421	3.6259	<i>In Control</i>
10	3.6939	3.7440	3.6240	<i>In Control</i>
11	3.6617	3.7456	3.6224	<i>In Control</i>
12	3.6986	3.7470	3.6210	<i>In Control</i>
13	3.6662	3.7482	3.6198	<i>In Control</i>
14	3.6328	3.7493	3.6187	<i>In Control</i>
15	3.5912	3.7503	3.6177	<i>Out Of Control</i>
16	3.5166	3.7512	3.6168	<i>Out Of Control</i>
17	3.5083	3.7520	3.6160	<i>Out Of Control</i>
18	3.5854	3.7527	3.6153	<i>Out Of Control</i>
19	3.5086	3.7533	3.6147	<i>Out Of Control</i>
20	3.5682	3.7539	3.6141	<i>Out Of Control</i>
21	3.5398	3.7544	3.6136	<i>Out Of Control</i>
22	3.5803	3.7548	3.6132	<i>Out Of Control</i>
23	3.5663	3.7552	3.6128	<i>Out Of Control</i>
24	3.5380	3.7556	3.6124	<i>Out Of Control</i>
25	3.6286	3.7559	3.6121	<i>In Control</i>
26	3.5771	3.7562	3.6118	<i>Out Of Control</i>
27	3.5658	3.7565	3.6115	<i>Out Of Control</i>
28	3.6700	3.7567	3.6113	<i>In Control</i>
29	3.7540	3.7569	3.6111	<i>In Control</i>
30	3.6813	3.7571	3.6109	<i>In Control</i>
31	3.6797	3.7573	3.6107	<i>In Control</i>
32	3.6807	3.7574	3.6106	<i>In Control</i>



**Lampiran 4.** Bagan Kendali *Fuzzy Exponentially Weighted Moving Average* untuk  $X(a)$  dengan  $\lambda = 0.05$

No	$Xa$	UCL	LCL	Status
33	3.6967	3.7576	3.6104	<i>In Control</i>
34	3.5819	3.7577	3.6103	<i>Out Of Control</i>
35	3.5903	3.7578	3.6102	<i>Out Of Control</i>
36	3.5783	3.7579	3.6101	<i>Out Of Control</i>
37	3.6844	3.7580	3.6100	<i>In Control</i>
38	3.6851	3.7581	3.6099	<i>In Control</i>
39	3.7009	3.7582	3.6098	<i>In Control</i>
40	3.7308	3.7582	3.6098	<i>In Control</i>
41	3.8143	3.7583	3.6097	<i>Out Of Control</i>
42	3.7561	3.7583	3.6097	<i>In Control</i>
43	3.6858	3.7584	3.6096	<i>In Control</i>
44	3.6865	3.7584	3.6096	<i>In Control</i>
45	3.6597	3.7585	3.6095	<i>In Control</i>
46	3.6742	3.7585	3.6095	<i>In Control</i>
47	3.6580	3.7585	3.6095	<i>In Control</i>
48	3.7101	3.7586	3.6094	<i>In Control</i>
49	3.8096	3.7586	3.6094	<i>Out Of Control</i>
50	3.7866	3.7586	3.6094	<i>Out Of Control</i>

**Lampiran 5.** Bagan Kendali *Fuzzy Exponentially Weighted Moving Average* untuk  $X(b)$  dengan  $\lambda = 0.05$

No	$Xb$	UCL	LCL	Status
1	3.0710	3.2105	3.1495	<i>Out Of Control</i>
2	3.0175	3.2221	3.1379	<i>Out Of Control</i>
3	3.0666	3.2303	3.1297	<i>Out Of Control</i>
4	3.1632	3.2367	3.1233	<i>In Control</i>
5	3.1051	3.2419	3.1181	<i>Out Of Control</i>
6	3.0998	3.2463	3.1137	<i>Out Of Control</i>
7	3.1948	3.2499	3.1101	<i>In Control</i>
8	3.1851	3.2531	3.1069	<i>In Control</i>
9	3.1758	3.2559	3.1041	<i>In Control</i>
10	3.2171	3.2583	3.1017	<i>In Control</i>
11	3.1562	3.2604	3.0996	<i>In Control</i>
12	3.1484	3.2622	3.0978	<i>In Control</i>
13	3.0910	3.2639	3.0961	<i>Out Of Control</i>
14	3.0864	3.2653	3.0947	<i>Out Of Control</i>
15	2.9321	3.2666	3.0934	<i>Out Of Control</i>
16	2.7855	3.2677	3.0923	<i>Out Of Control</i>
17	2.7962	3.2688	3.0912	<i>Out Of Control</i>
18	2.8564	3.2697	3.0903	<i>Out Of Control</i>
19	2.7636	3.2705	3.0895	<i>Out Of Control</i>
20	2.8254	3.2712	3.0888	<i>Out Of Control</i>
21	2.8341	3.2719	3.0881	<i>Out Of Control</i>
22	2.8924	3.2725	3.0875	<i>Out Of Control</i>
23	2.9478	3.2730	3.0870	<i>Out Of Control</i>
24	2.9504	3.2735	3.0865	<i>Out Of Control</i>
25	3.0529	3.2739	3.0861	<i>Out Of Control</i>
26	3.1003	3.2743	3.0857	<i>In Control</i>
27	3.0952	3.2746	3.0854	<i>In Control</i>
28	3.2405	3.2749	3.0851	<i>In Control</i>
29	3.3285	3.2752	3.0848	<i>Out Of Control</i>
30	3.3120	3.2754	3.0846	<i>Out Of Control</i>
31	3.3464	3.2757	3.0843	<i>Out Of Control</i>
32	3.3291	3.2759	3.0841	<i>Out Of Control</i>
33	3.3627	3.2761	3.0839	<i>Out Of Control</i>
34	3.1945	3.2762	3.0838	<i>In Control</i>
35	3.1348	3.2764	3.0836	<i>In Control</i>
36	3.1281	3.2765	3.0835	<i>In Control</i>
37	3.2217	3.2766	3.0834	<i>In Control</i>

**Lampiran 5.** Bagan Kendali *Fuzzy Exponentially Weighted Moving Average* untuk  $X(b)$  dengan  $\lambda = 0.05$

No	$Xb$	UCL	LCL	Status
38	3.2106	3.2767	3.0833	<i>In Control</i>
39	3.2500	3.2768	3.0832	<i>In Control</i>
40	3.3375	3.2769	3.0831	<i>Out Of Control</i>
41	3.3707	3.2770	3.0830	<i>Out Of Control</i>
42	3.3521	3.2771	3.0829	<i>Out Of Control</i>
43	3.2845	3.2771	3.0829	<i>Out Of Control</i>
44	3.2703	3.2772	3.0828	<i>In Control</i>
45	3.1068	3.2772	3.0828	<i>In Control</i>
46	3.2014	3.2773	3.0827	<i>In Control</i>
47	3.1914	3.2773	3.0827	<i>In Control</i>
48	3.2318	3.2774	3.0826	<i>In Control</i>
49	3.3202	3.2774	3.0826	<i>Out Of Control</i>
50	3.3042	3.2774	3.0826	<i>Out Of Control</i>

**Lampiran 6.** Bagan Kendali *Fuzzy Exponentially Weighted Moving Average* untuk  $X(c)$  dengan  $\lambda = 0.05$

No	$X_c$	UCL	LCL	Status
1	2.5323	2.6327	2.5933	<i>Out Of Control</i>
2	2.5057	2.6402	2.5858	<i>Out Of Control</i>
3	2.5454	2.6455	2.5805	<i>Out Of Control</i>
4	2.6157	2.6496	2.5764	<i>In Control</i>
5	2.5674	2.6530	2.5730	<i>Out Of Control</i>
6	2.6065	2.6558	2.5702	<i>In Control</i>
7	2.6562	2.6582	2.5678	<i>In Control</i>
8	2.6209	2.6602	2.5658	<i>In Control</i>
9	2.6223	2.6620	2.5640	<i>In Control</i>
10	2.6387	2.6635	2.5625	<i>In Control</i>
11	2.5893	2.6649	2.5611	<i>In Control</i>
12	2.5923	2.6661	2.5599	<i>In Control</i>
13	2.5627	2.6671	2.5589	<i>In Control</i>
14	2.5496	2.6681	2.5579	<i>Out Of Control</i>
15	2.4921	2.6689	2.5571	<i>Out Of Control</i>
16	2.4200	2.6697	2.5563	<i>Out Of Control</i>
17	2.3965	2.6703	2.5557	<i>Out Of Control</i>
18	2.4242	2.6709	2.5551	<i>Out Of Control</i>
19	2.3530	2.6714	2.5546	<i>Out Of Control</i>
20	2.3828	2.6719	2.5541	<i>Out Of Control</i>
21	2.3962	2.6723	2.5537	<i>Out Of Control</i>
22	2.4239	2.6727	2.5533	<i>Out Of Control</i>
23	2.4502	2.6730	2.5530	<i>Out Of Control</i>
24	2.4252	2.6733	2.5527	<i>Out Of Control</i>
25	2.5014	2.6736	2.5524	<i>Out Of Control</i>
26	2.5763	2.6739	2.5521	<i>In Control</i>
27	2.5800	2.6741	2.5519	<i>In Control</i>
28	2.6810	2.6743	2.5517	<i>Out Of Control</i>
29	2.7270	2.6745	2.5515	<i>Out Of Control</i>
30	2.7406	2.6746	2.5514	<i>Out Of Control</i>
31	2.7511	2.6748	2.5512	<i>Out Of Control</i>
32	2.7635	2.6749	2.5511	<i>Out Of Control</i>
33	2.7729	2.6750	2.5510	<i>Out Of Control</i>
34	2.6692	2.6751	2.5509	<i>In Control</i>

**Lampiran 6.** Bagan Kendali *Fuzzy Exponentially Weighted Moving Average* untuk  $X(c)$  dengan  $\lambda = 0.05$

No	Xc	UCL	LCL	Status
35	2.6182	2.6752	2.5508	<i>In Control</i>
36	2.5848	2.6753	2.5507	<i>In Control</i>
37	2.6356	2.6754	2.5506	<i>In Control</i>
38	2.6013	2.6754	2.5506	<i>In Control</i>
39	2.6362	2.6755	2.5505	<i>In Control</i>
40	2.6844	2.6756	2.5504	<i>Out Of Control</i>
41	2.7152	2.6756	2.5504	<i>Out Of Control</i>
42	2.7120	2.6757	2.5503	<i>Out Of Control</i>
43	2.7289	2.6757	2.5503	<i>Out Of Control</i>
44	2.7074	2.6757	2.5503	<i>Out Of Control</i>
45	2.6070	2.6758	2.5502	<i>In Control</i>
46	2.6742	2.6758	2.5502	<i>In Control</i>
47	2.6380	2.6758	2.5502	<i>In Control</i>
48	2.6361	2.6759	2.5501	<i>In Control</i>
49	2.6843	2.6759	2.5501	<i>Out Of Control</i>
50	2.6651	2.6759	2.5501	<i>In Control</i>