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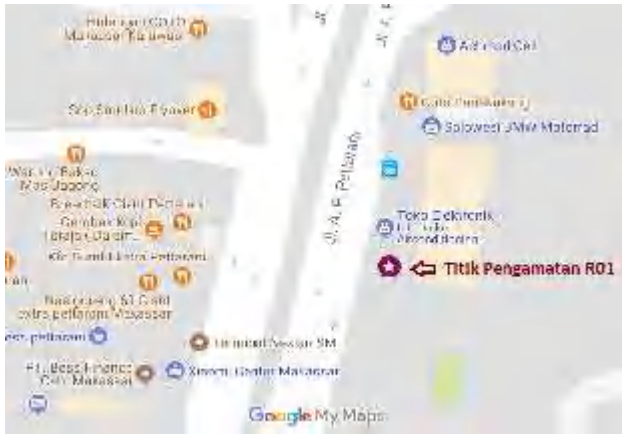


LAMPIRAN



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Lampiran 1 Layout Titik Pengambilan Data



Layout R01 Jalan A.P. Pettarani



Layout R02 Jalan A.P. Pettarani



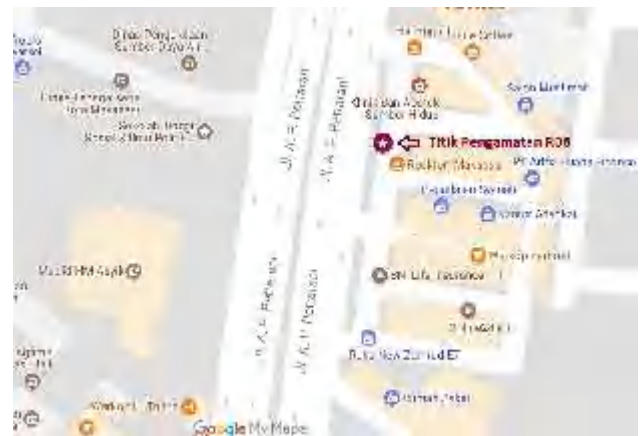
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Layout R04 Jalan A.P. Pettarani



Layout R05 Jalan A.P. Pettarani



Layout R06 Jalan A.P. Pettarani





Layout R07 Jalan A.P. Pettarani



Layout R08 Jalan A.P. Pettarani



Layout R09 Jalan A.P. Pettarani



Layout R10 Jalan A.P. Pettarani



Layout R11 Jalan A.P. Pettarani



Layout R12 Jalan A.P. Pettarani





Layout R13 Jalan A.P. Pettarani



Layout R14 Jalan A.P. Pettarani



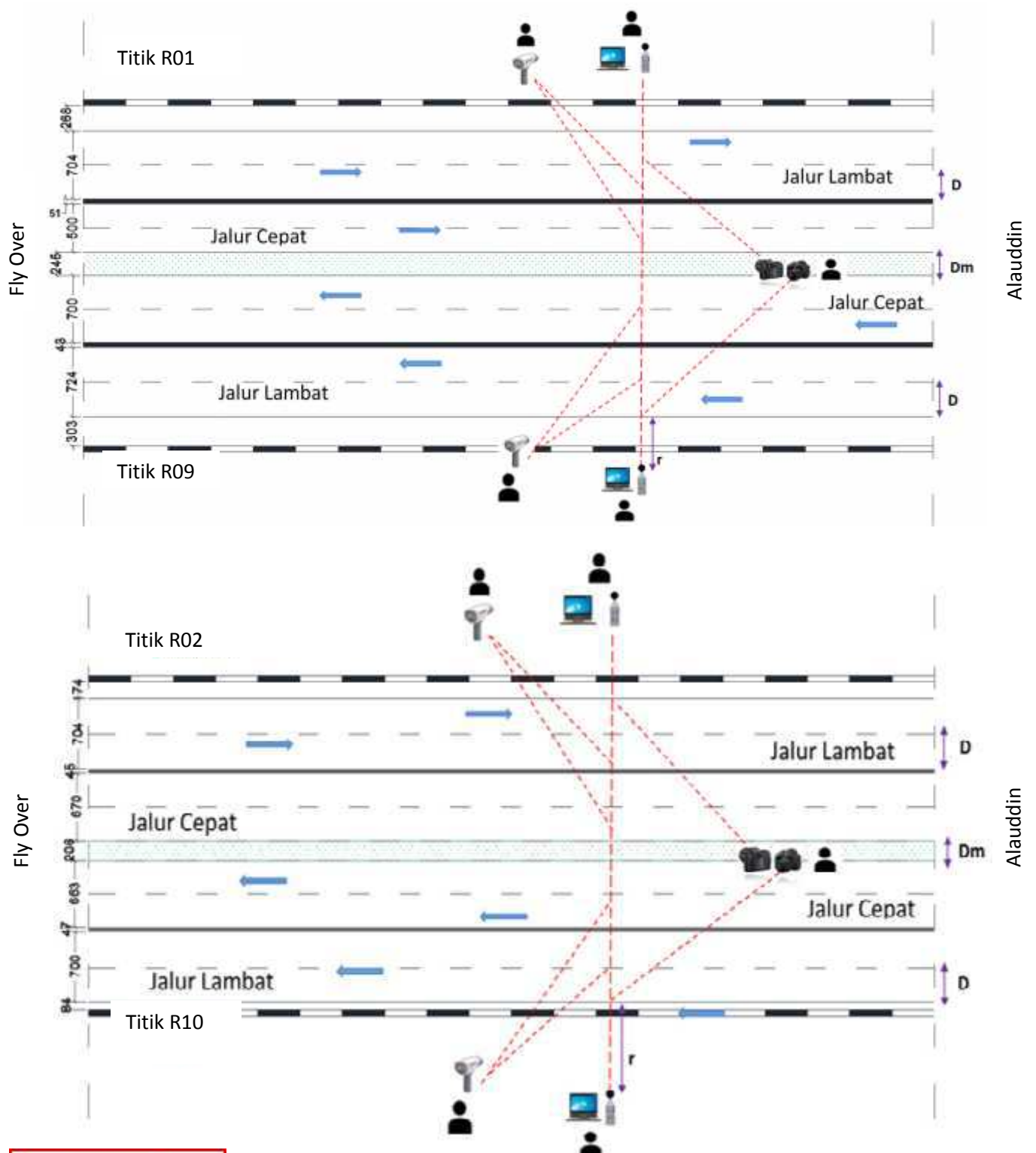
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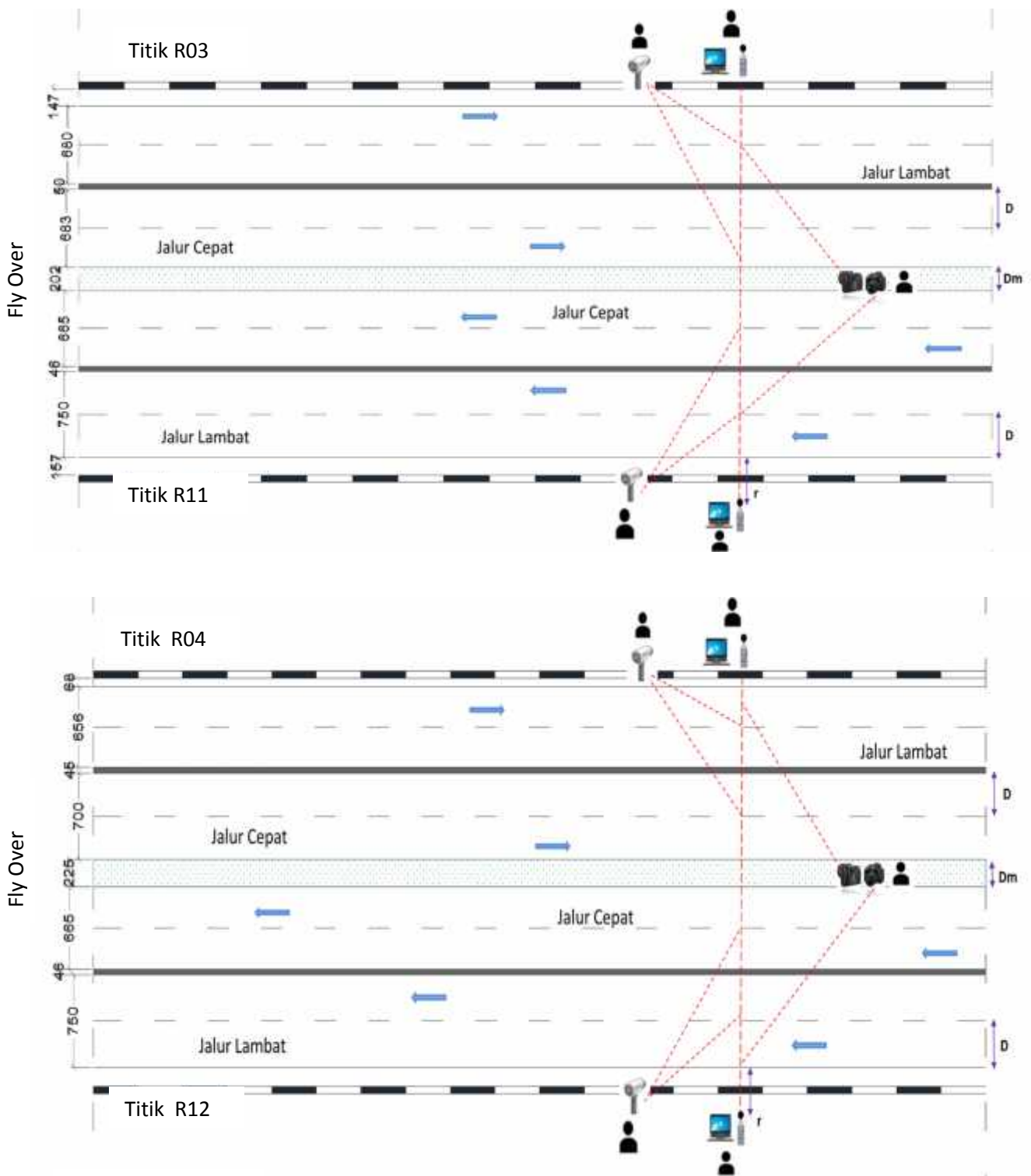


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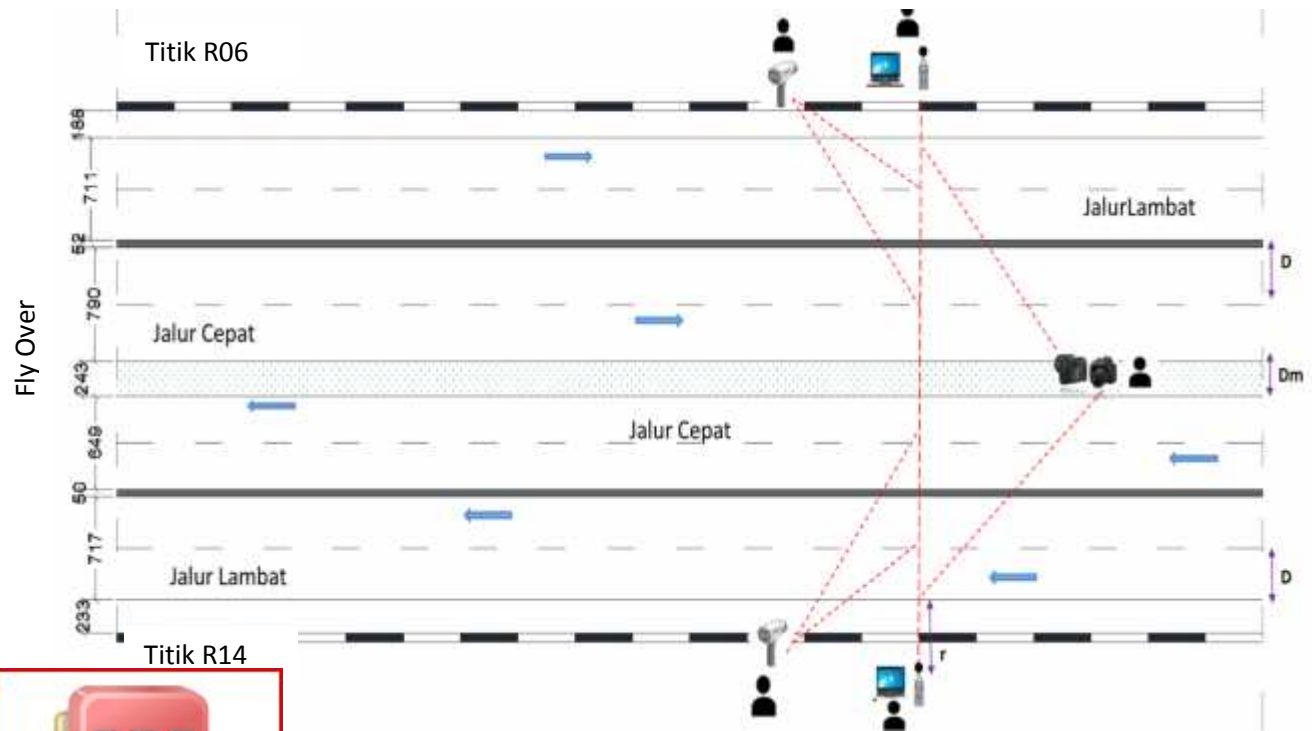
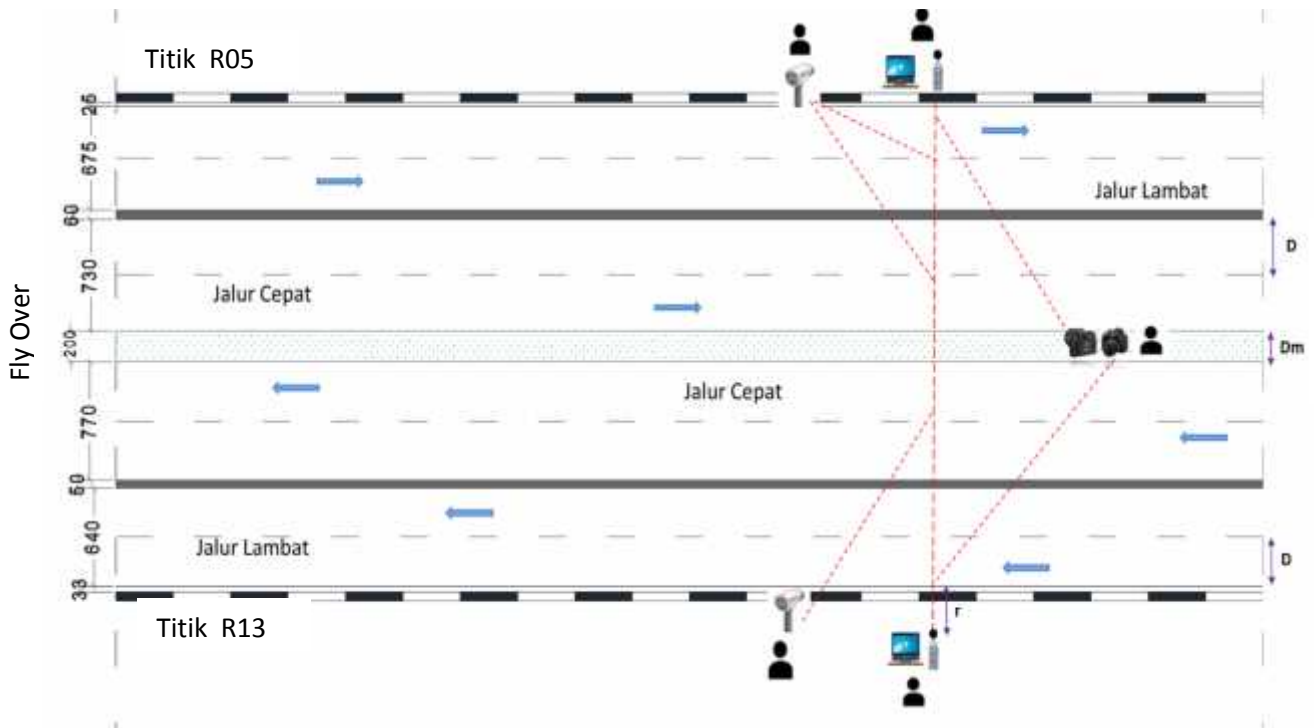
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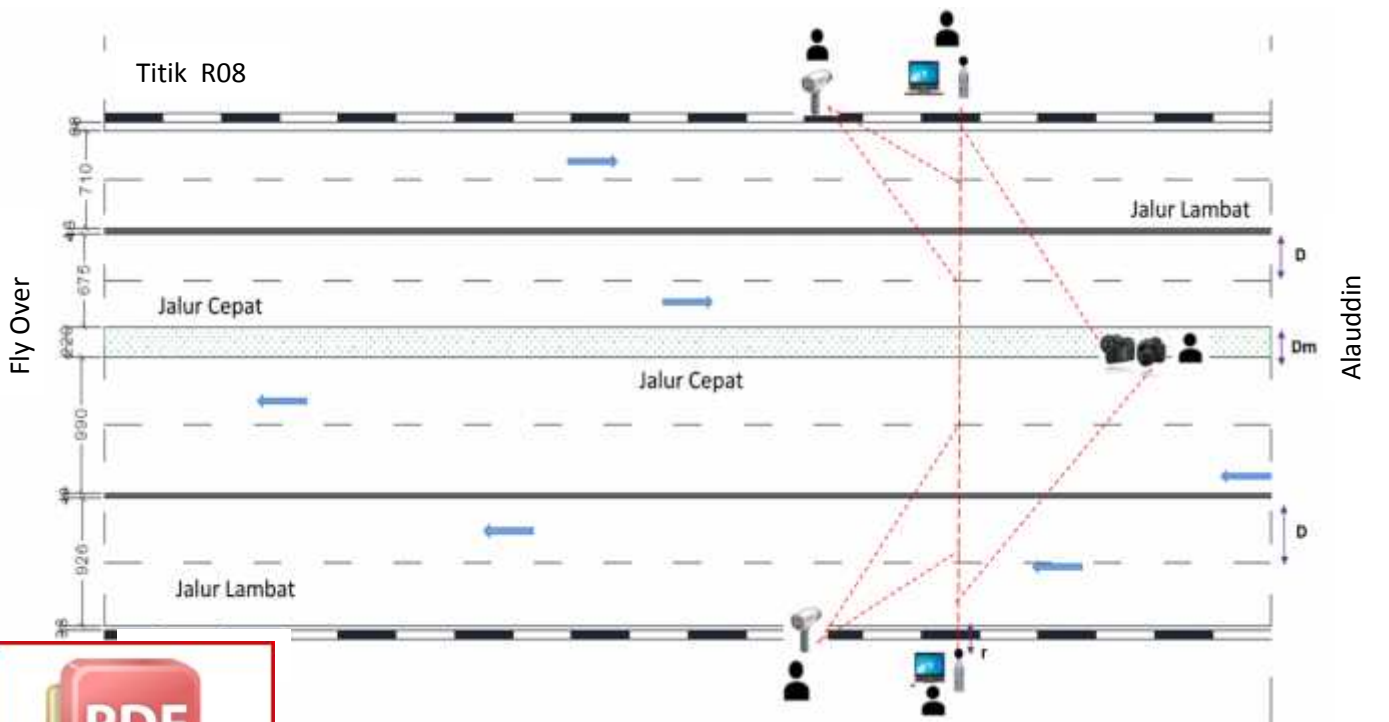
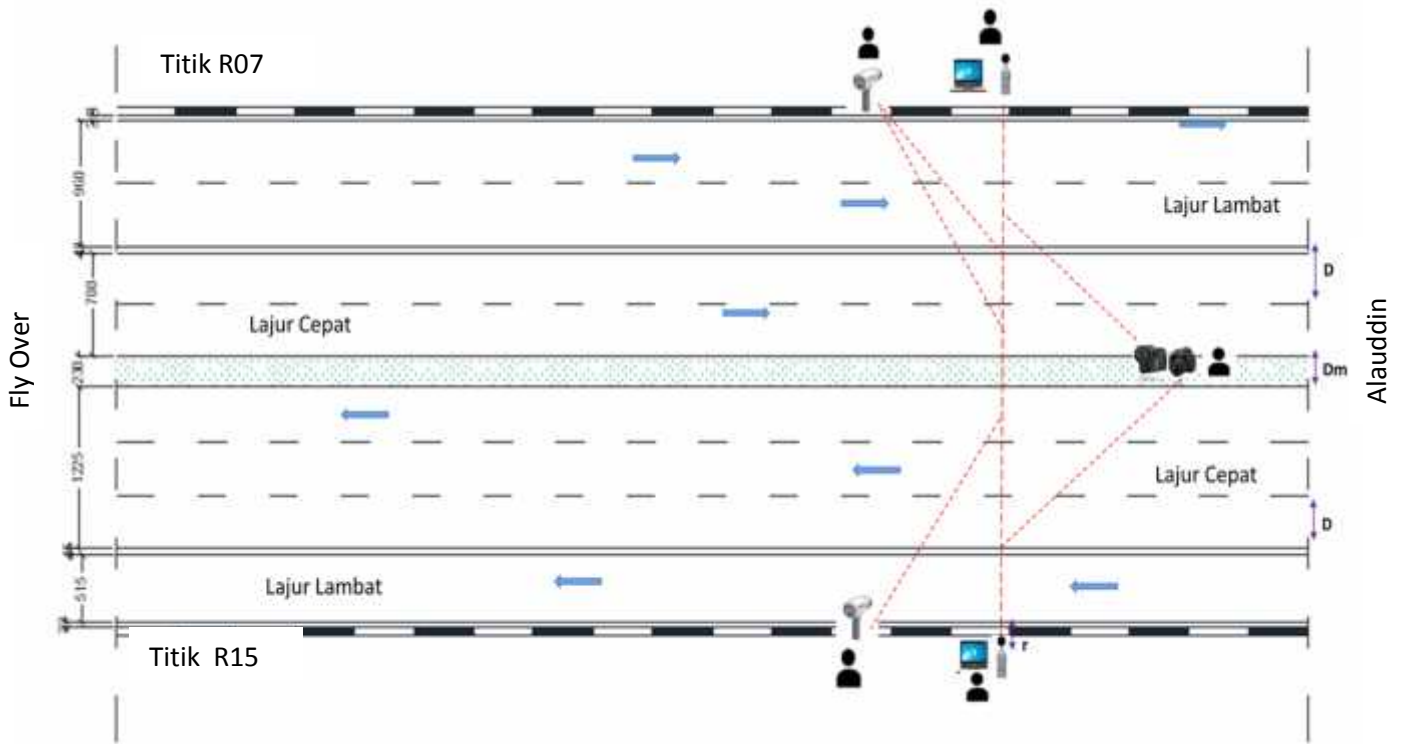


SKALA 1:100






Optimization Software:
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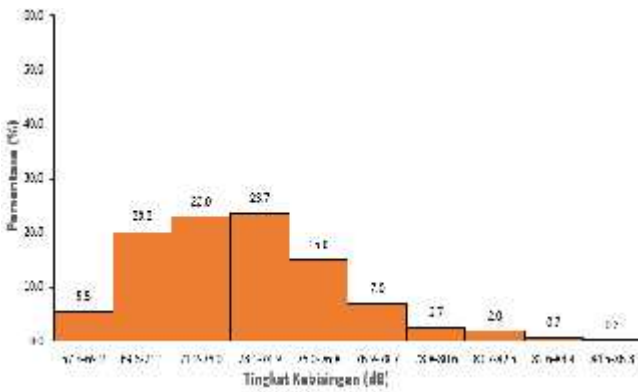



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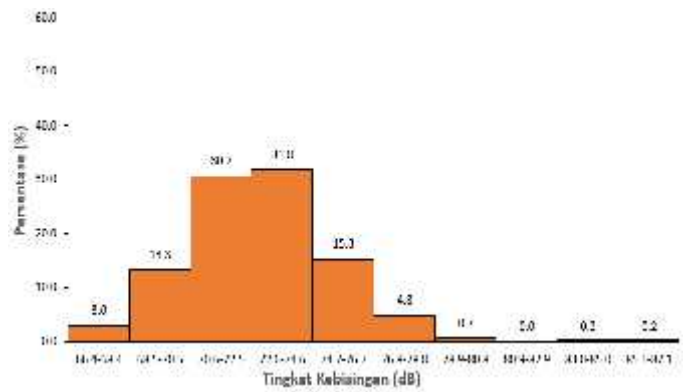
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Lampiran 3 Histogram Distribusi Tingkat Kebisingan

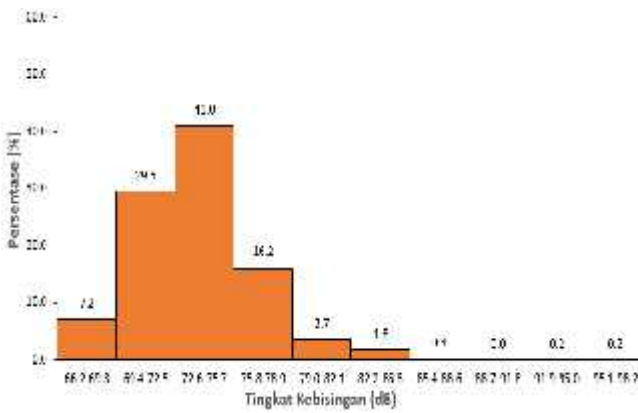
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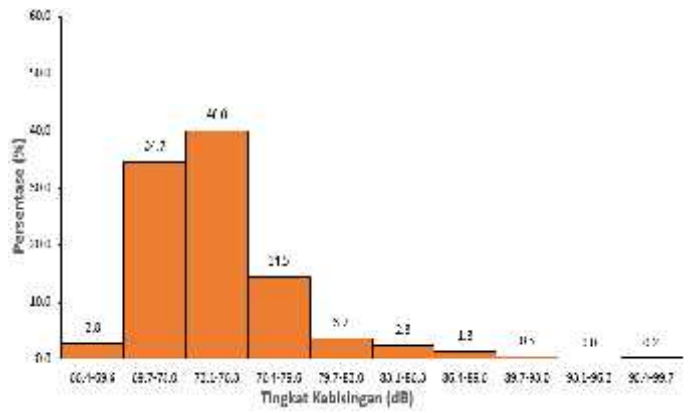
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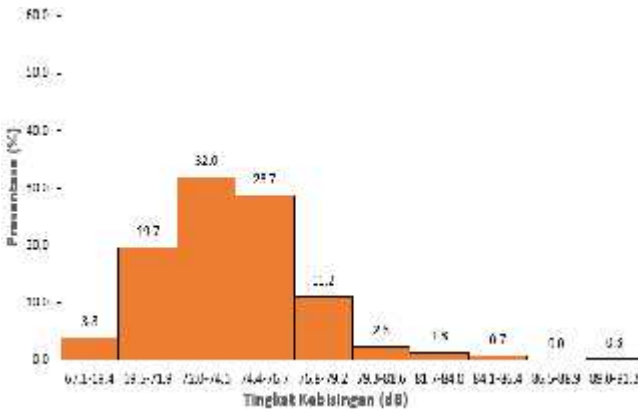
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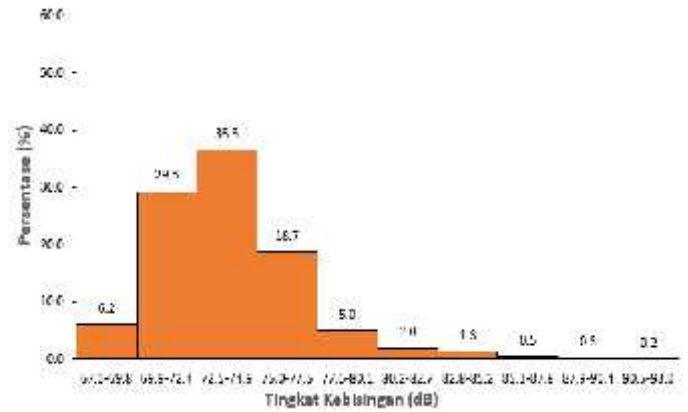
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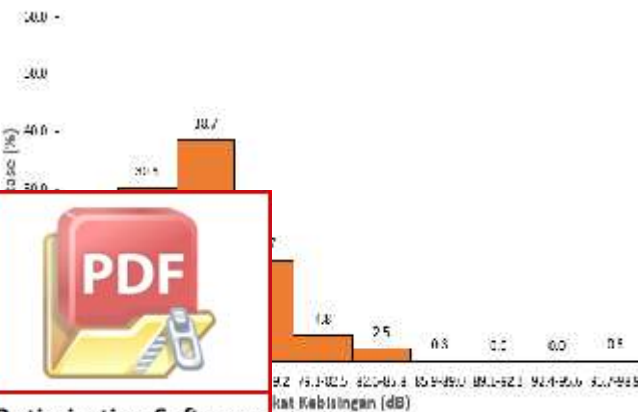
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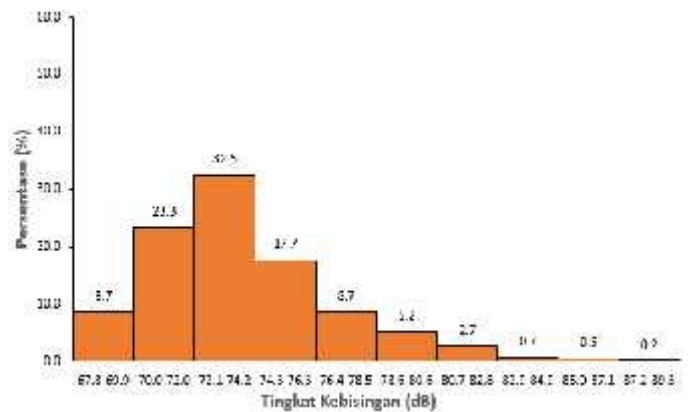
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Pukul 12.00-13.00



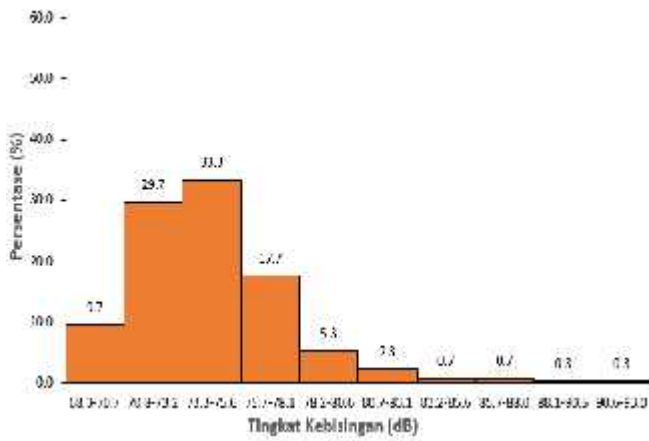
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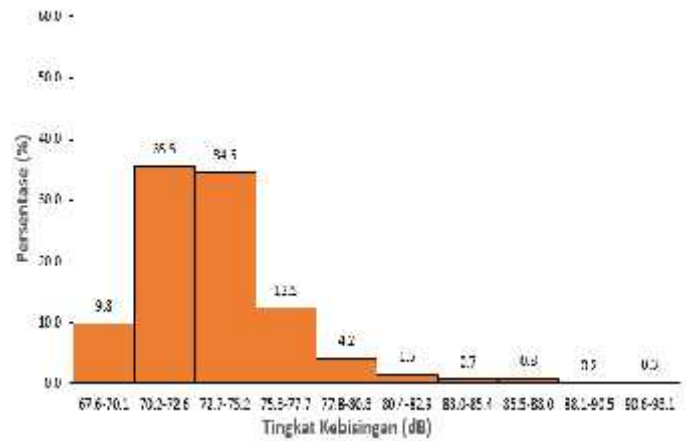
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Optimization Software:
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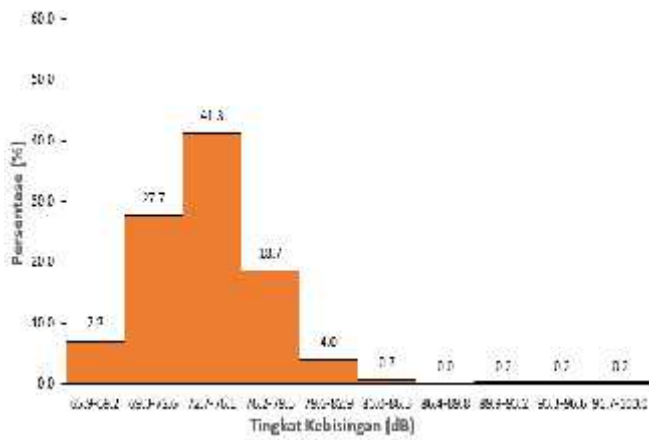


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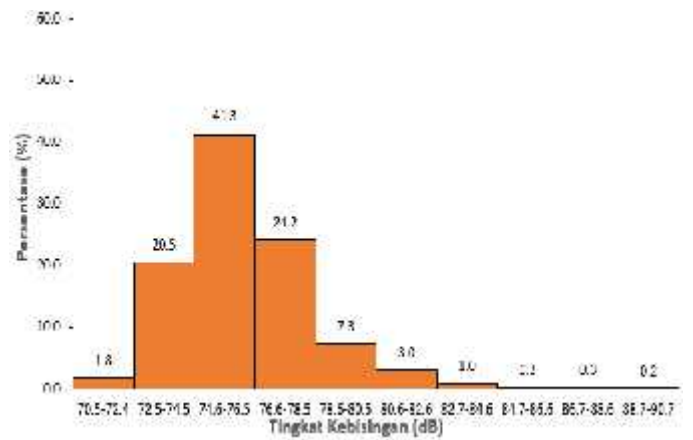


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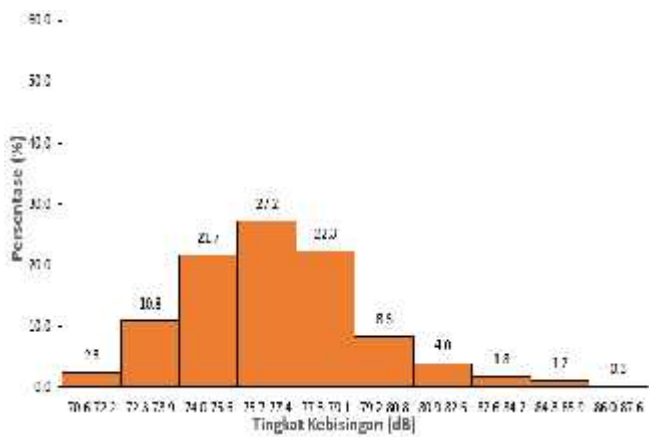
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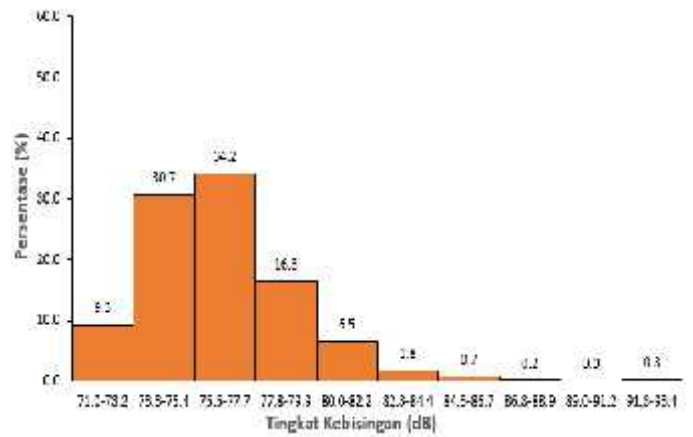
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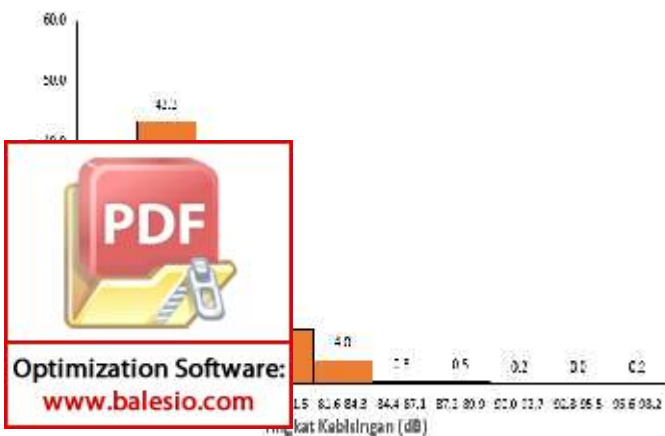
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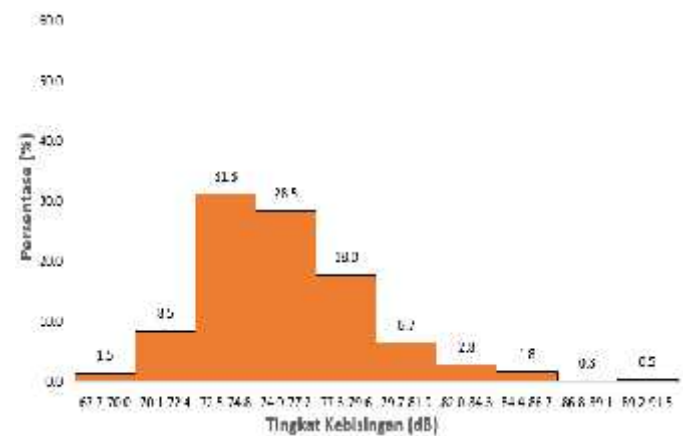
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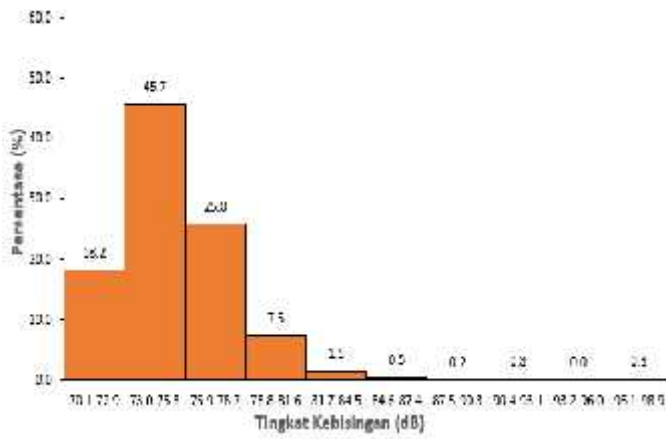


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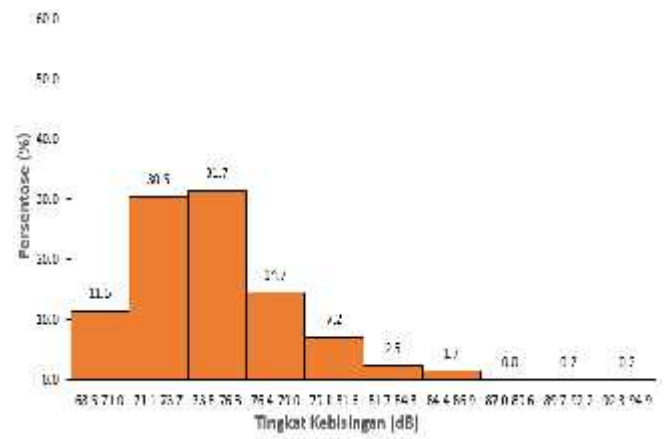


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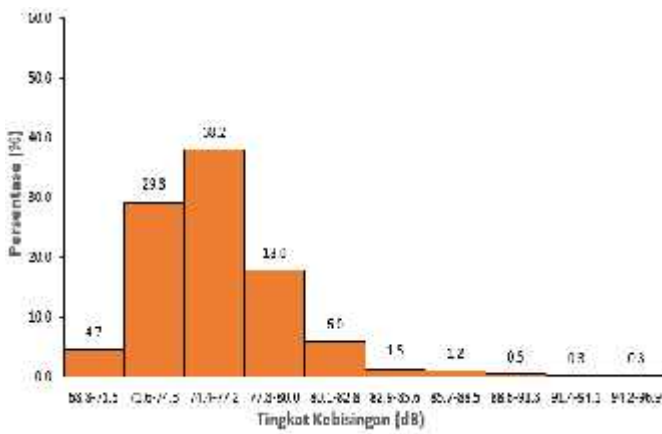
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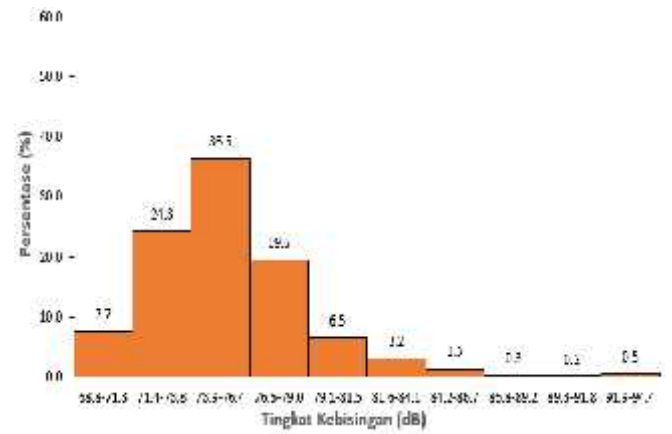
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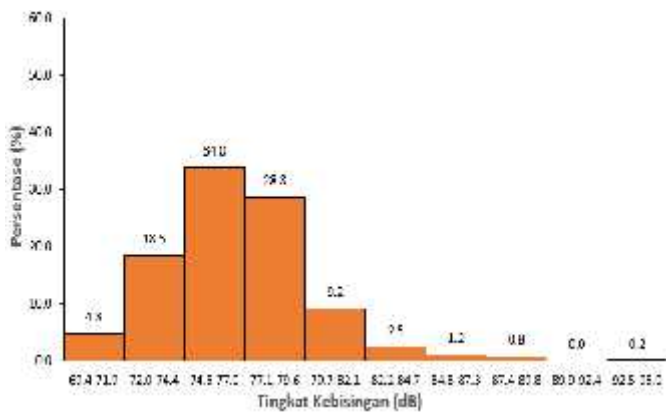
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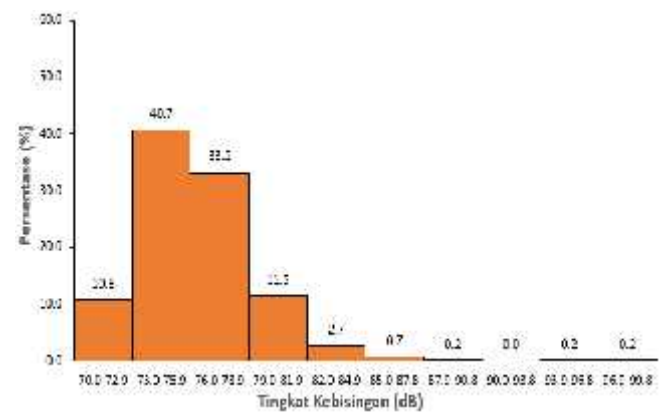
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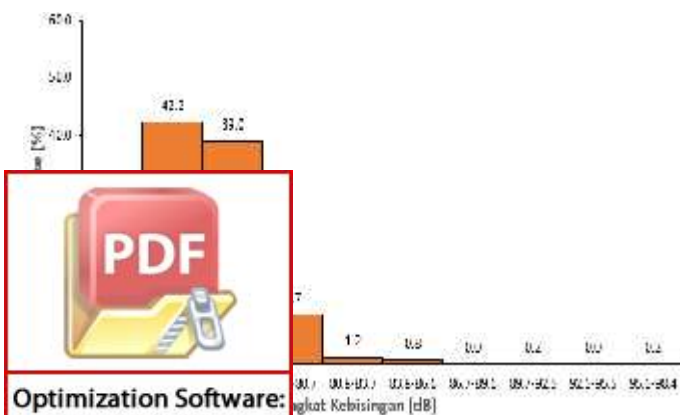


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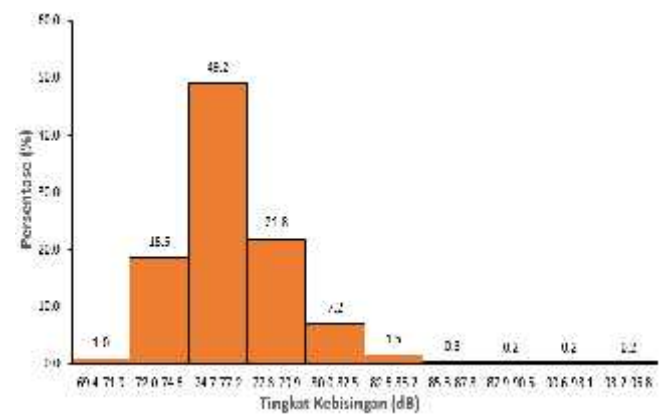


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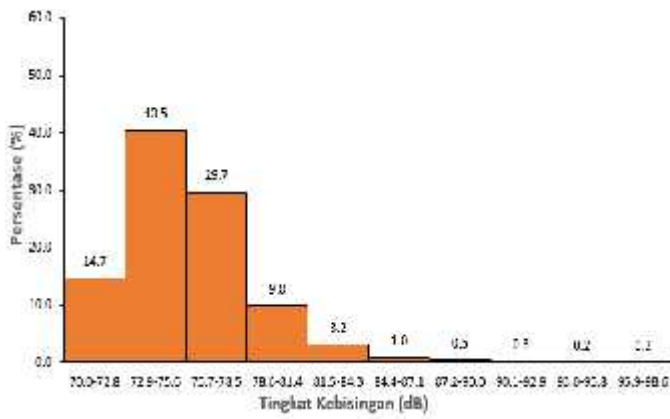


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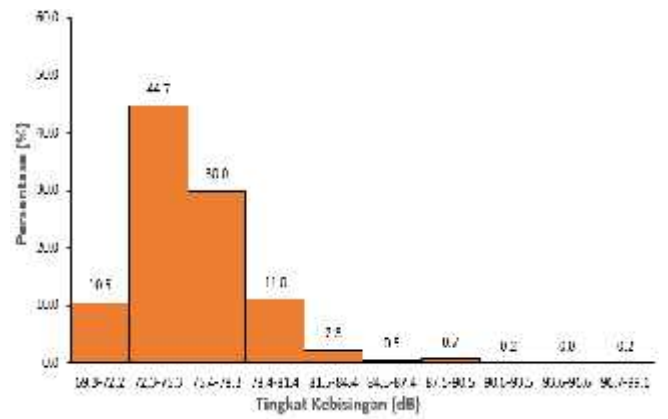


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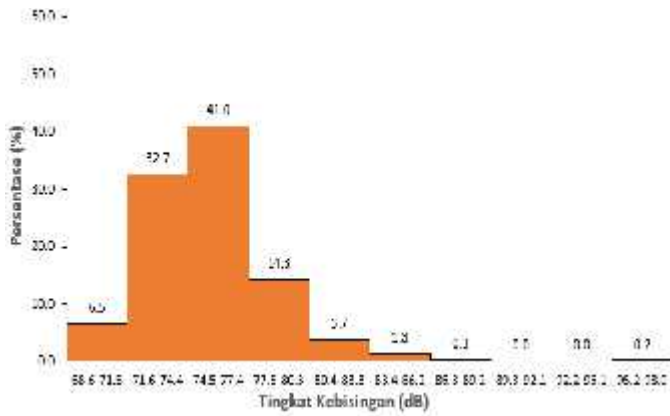
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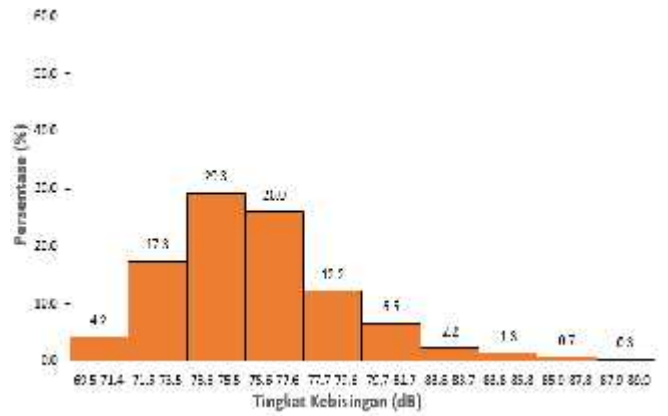
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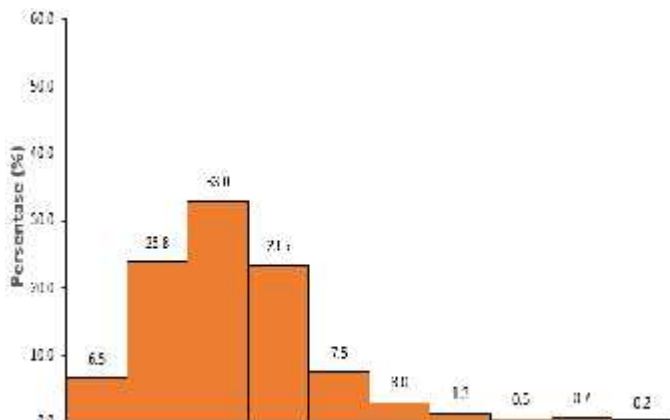
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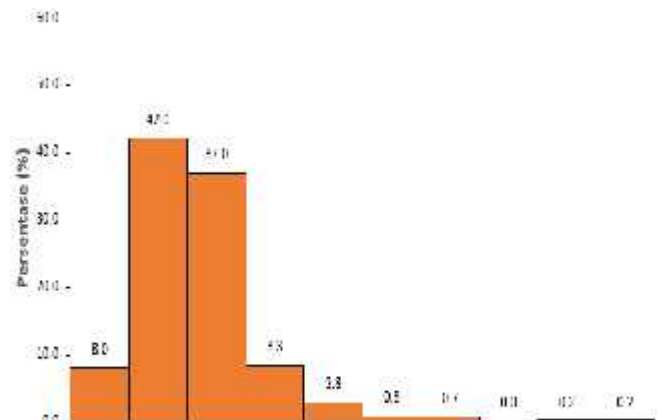
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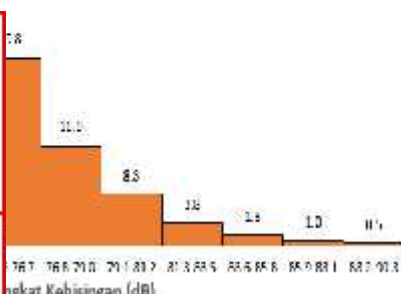


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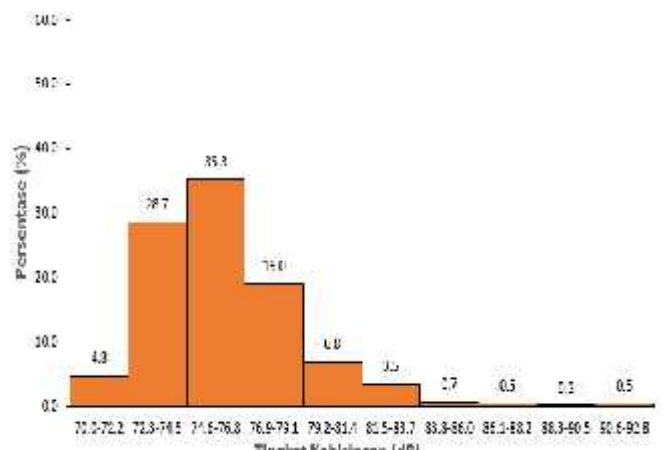


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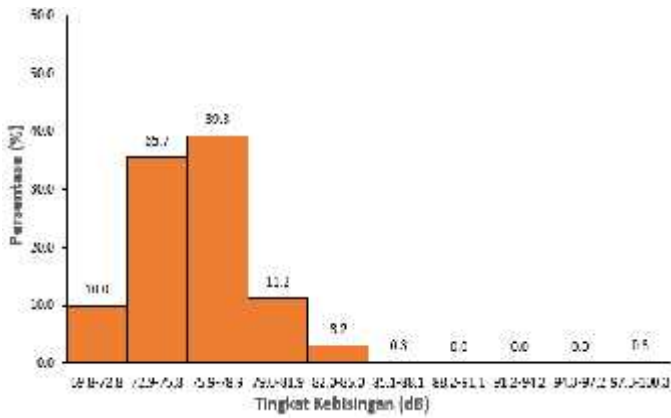
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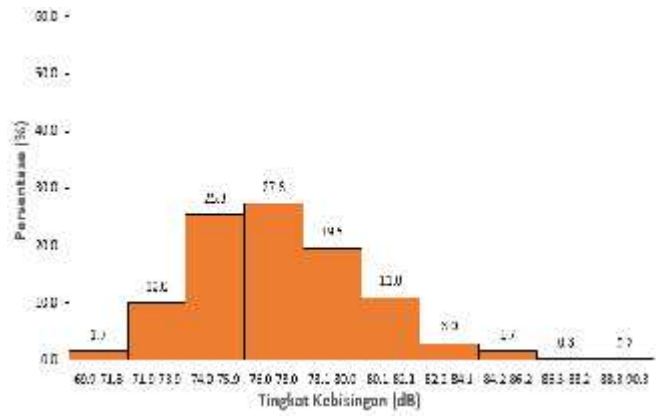


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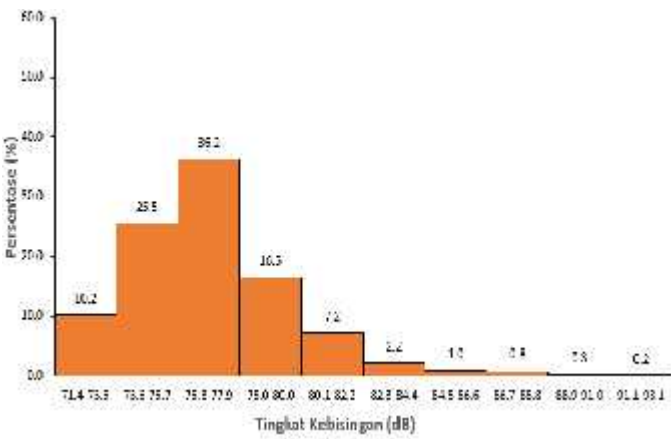


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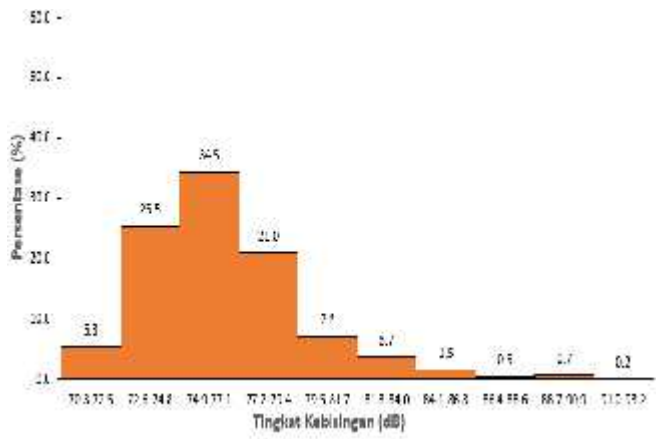
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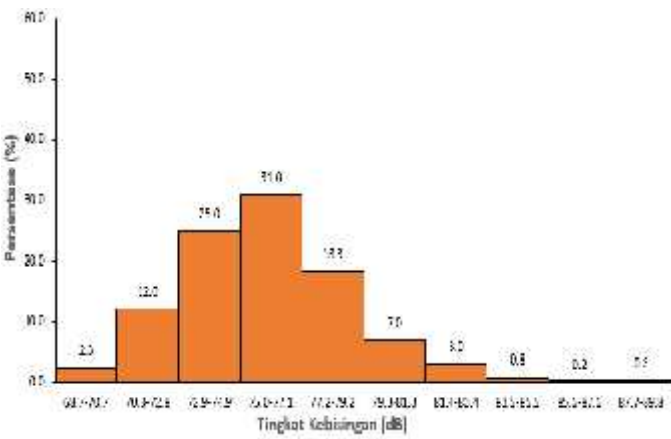
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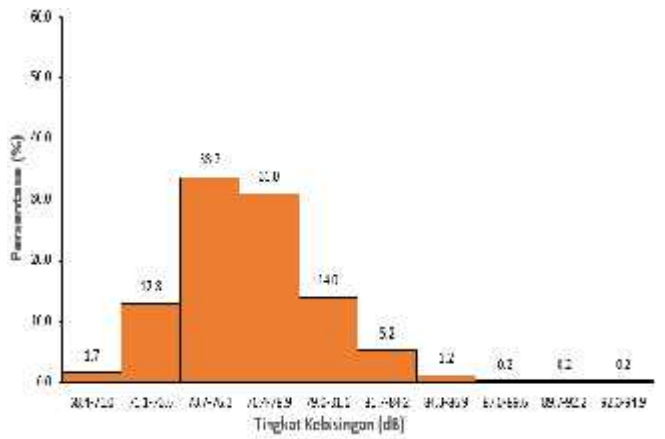
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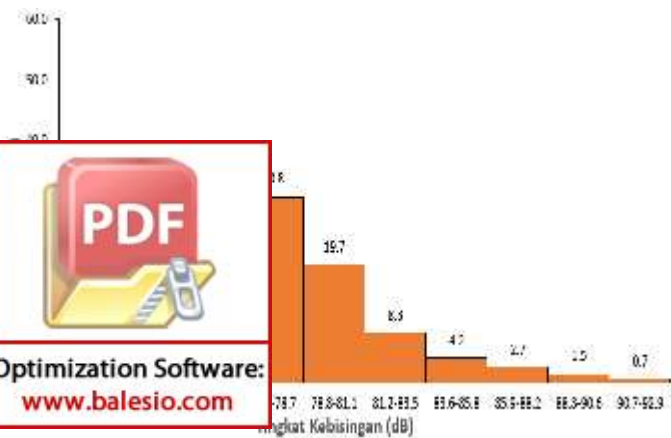
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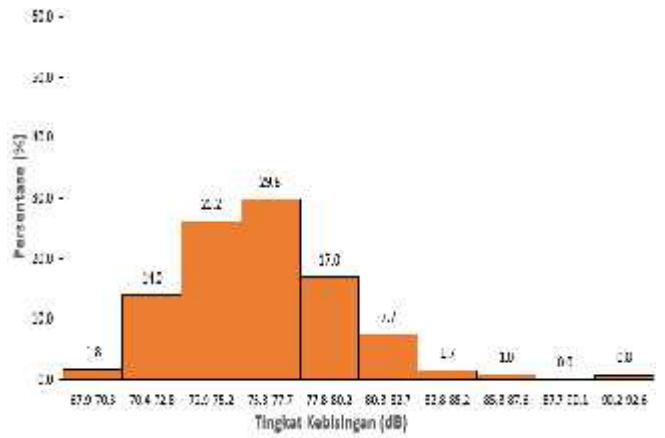
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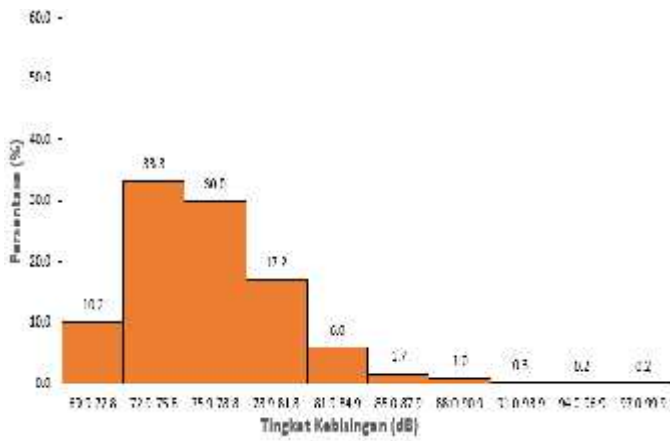


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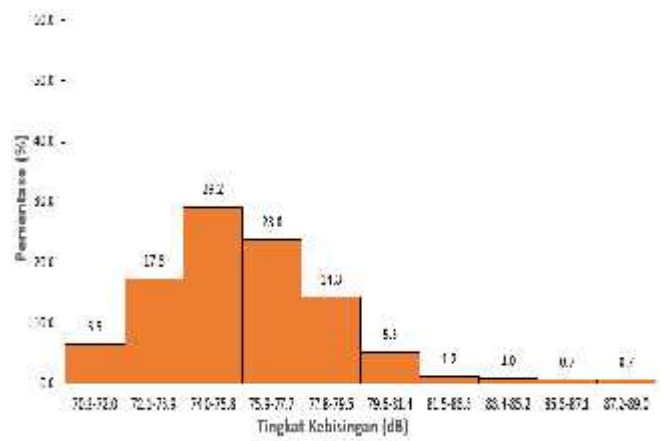


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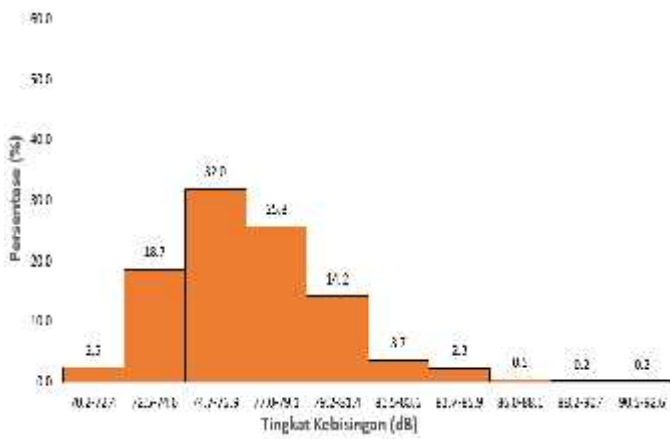




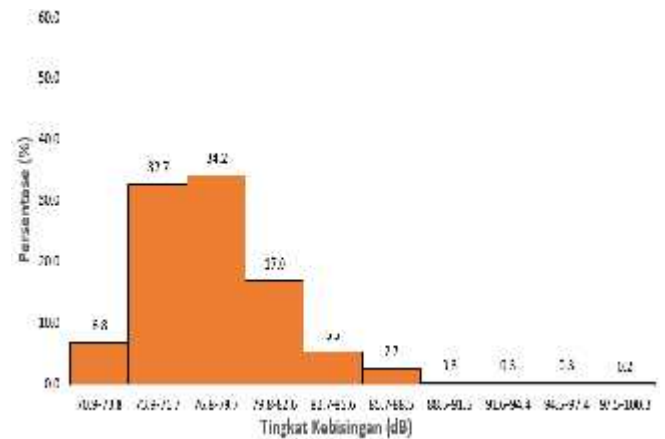
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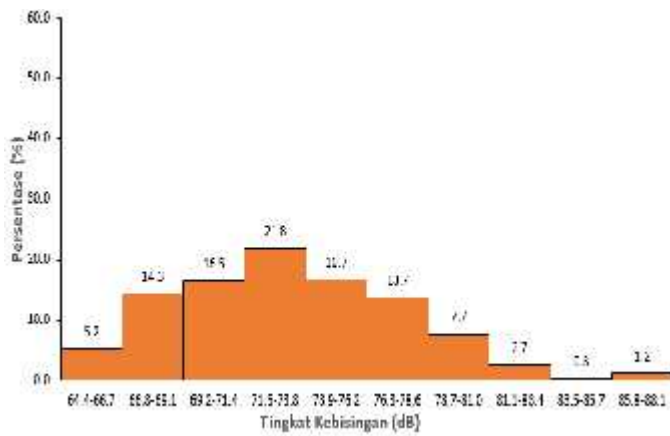


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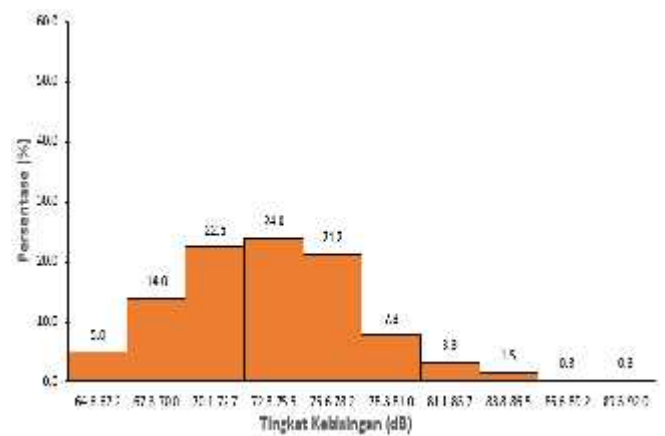


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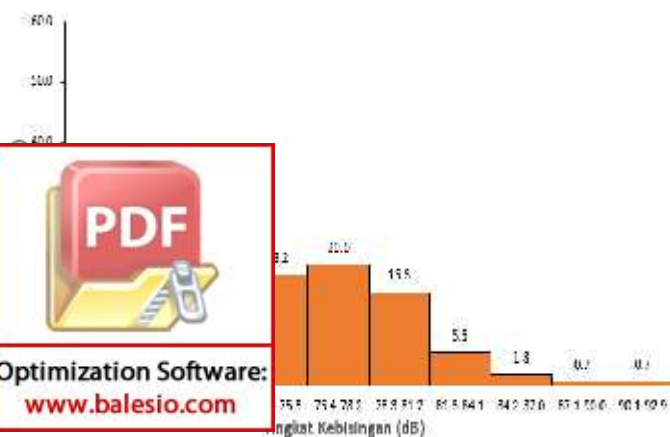
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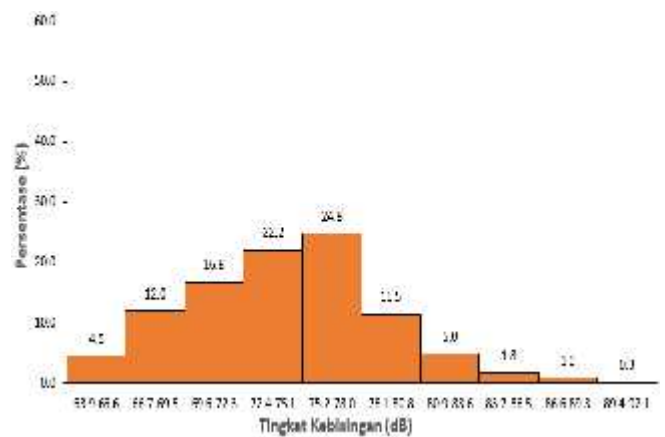
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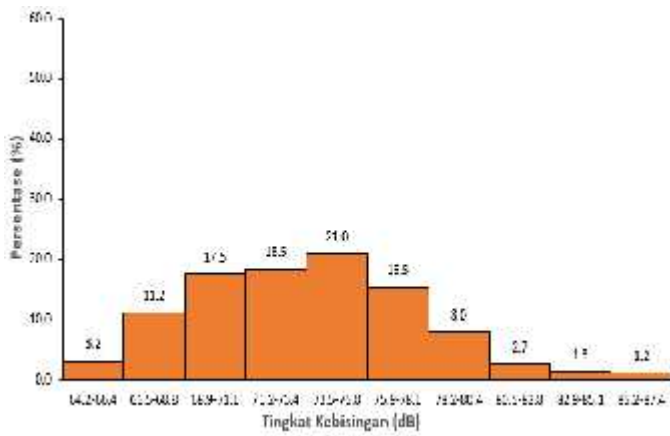
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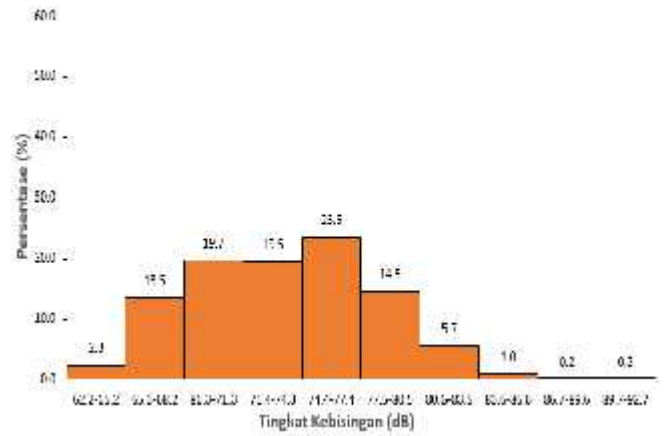
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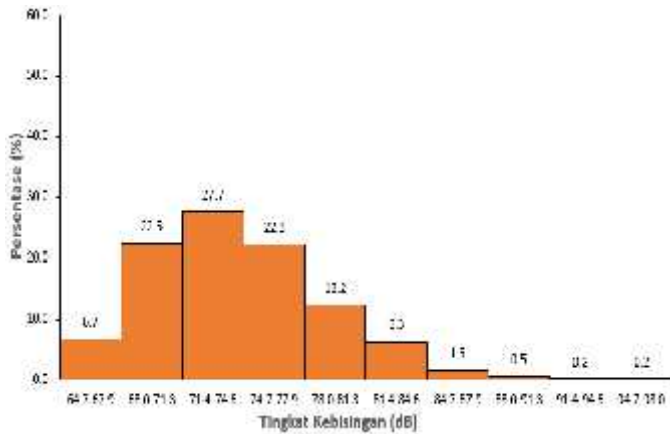
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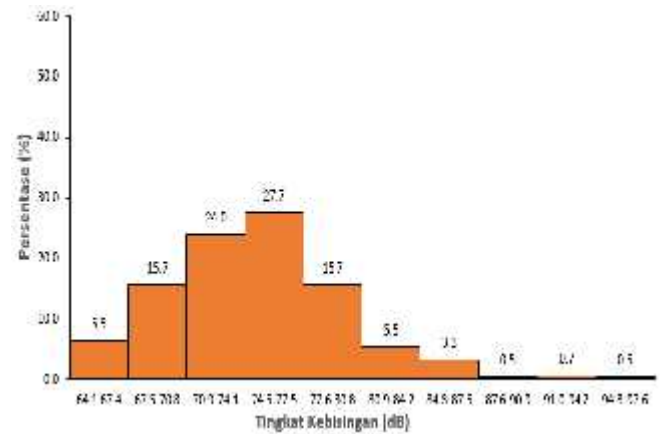
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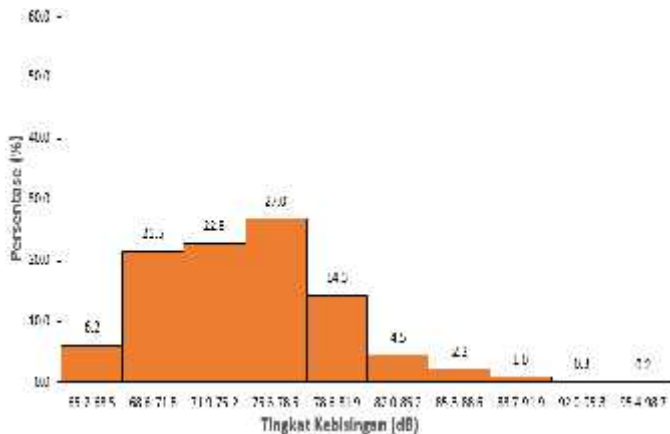
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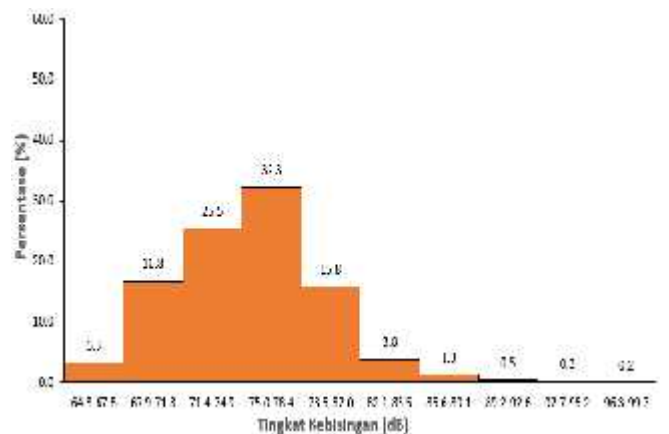
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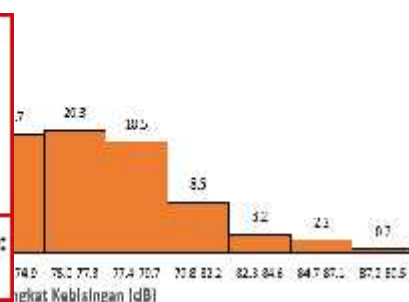
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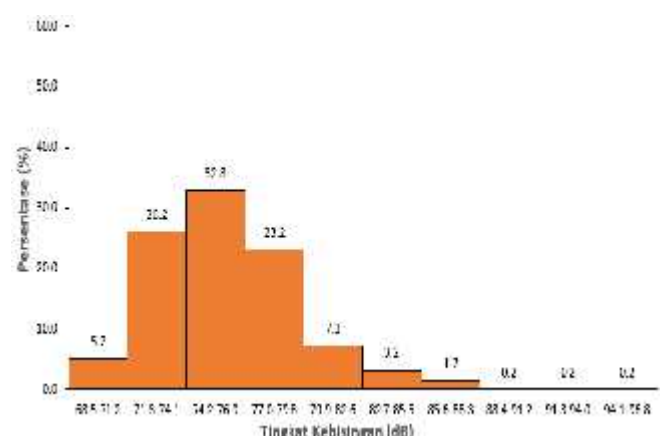
Pukul 16.00-17.00

F. Titik R06

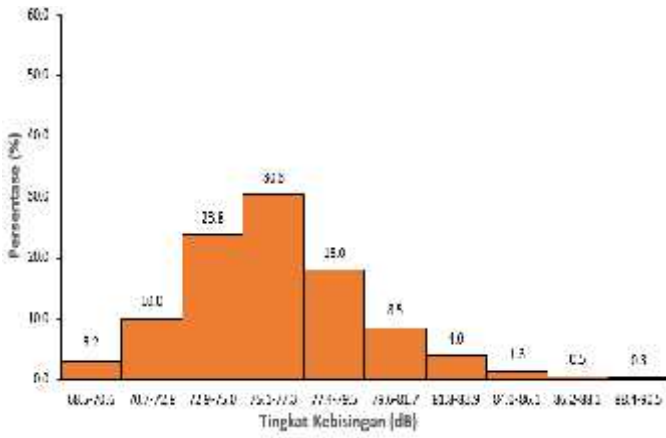
Optimization Software:
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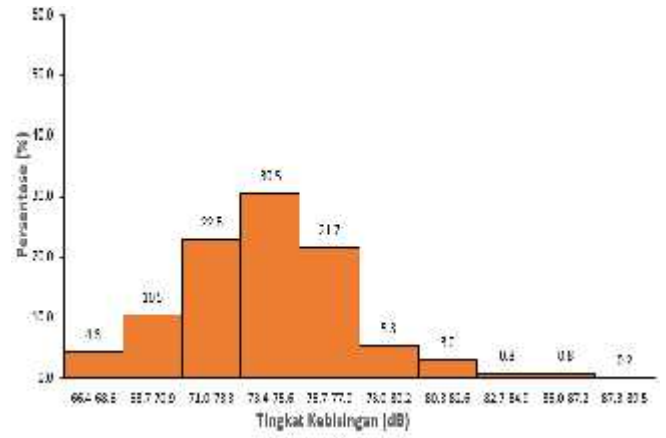
Pukul 17.00-18.00



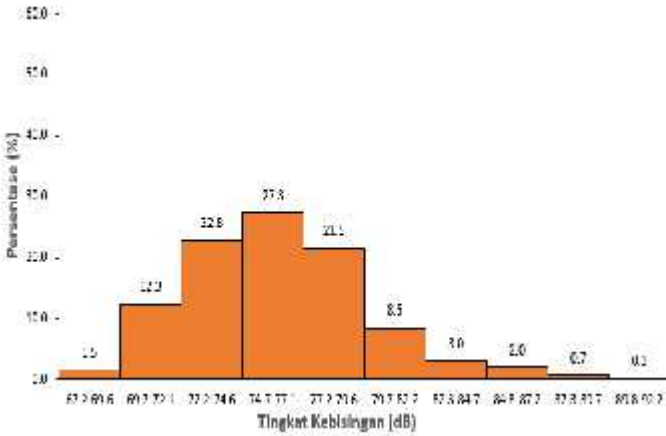
Pukul 07.00-08.00



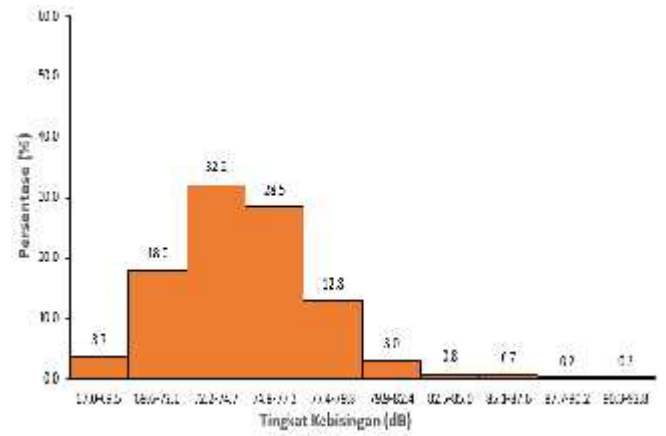
Pukul 08.00-09.00



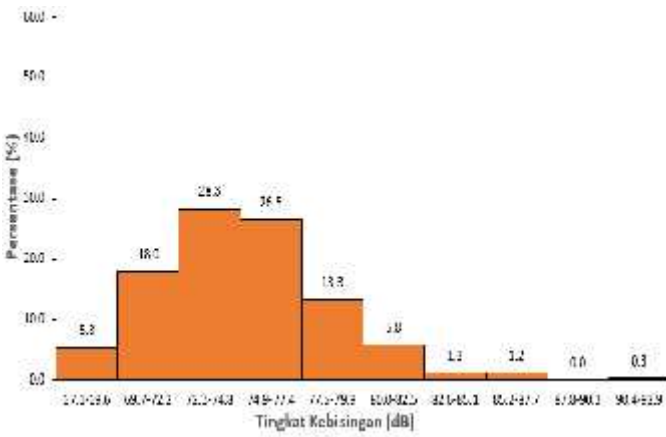
Pukul 09.00-10.00



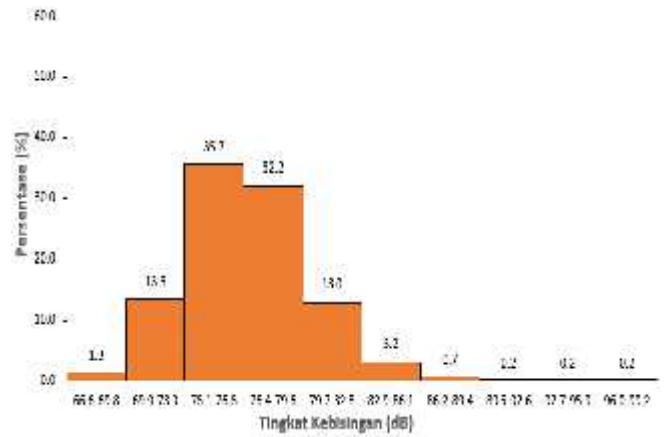
Pukul 10.00-11.00



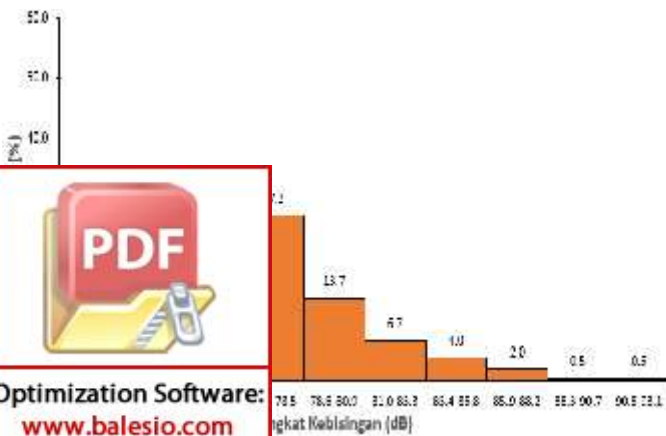
Pukul 11.00-12.00



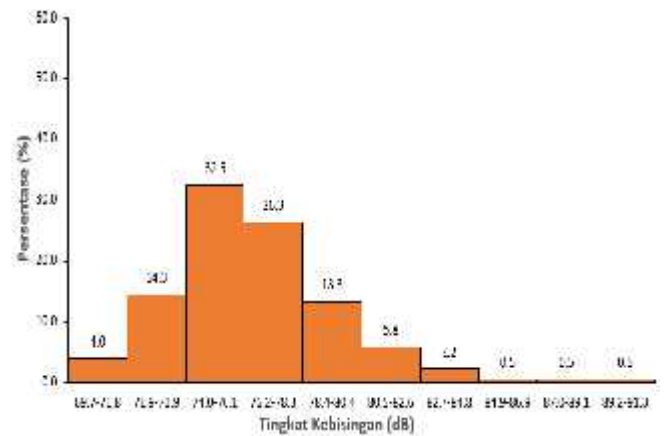
Pukul 12.00-13.00



Pukul 13.00-14.00



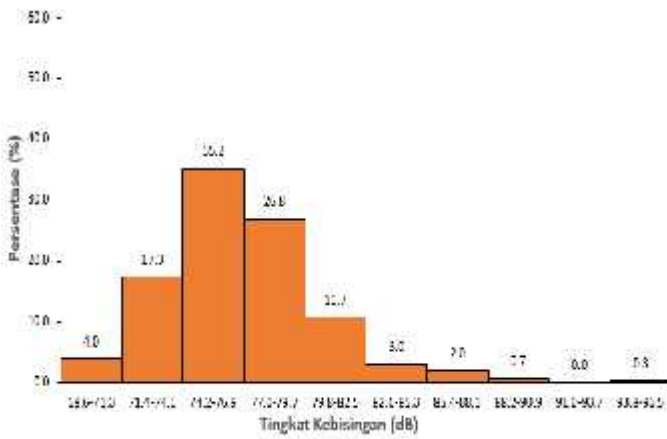
Pukul 14.00-15.00



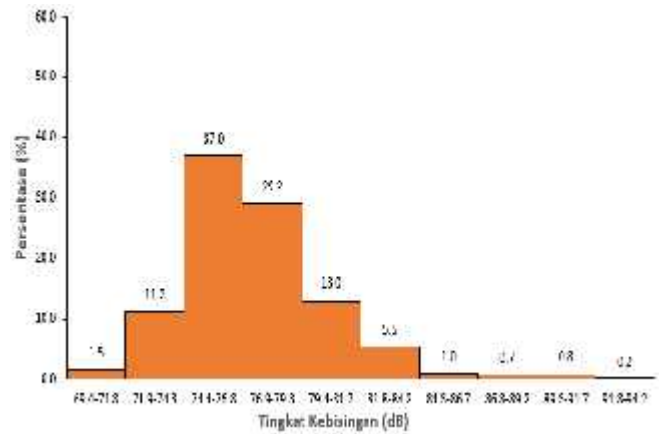
Pukul 15.00-16.00



Optimization Software:
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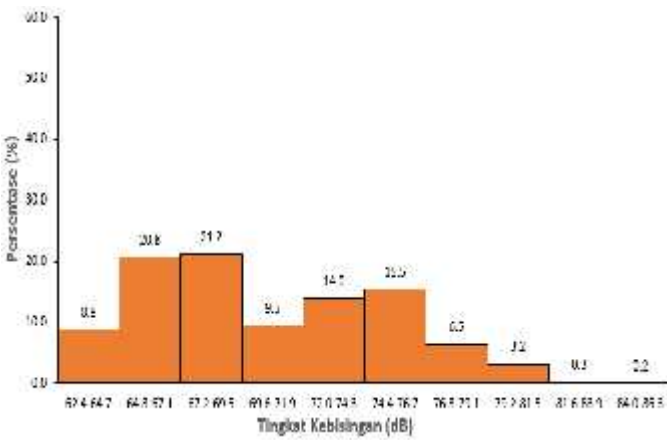


Pukul 16.00-17.00

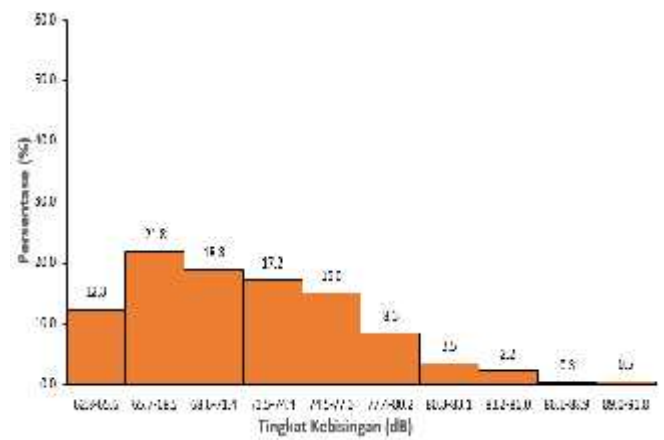


Pukul 17.00-18.00

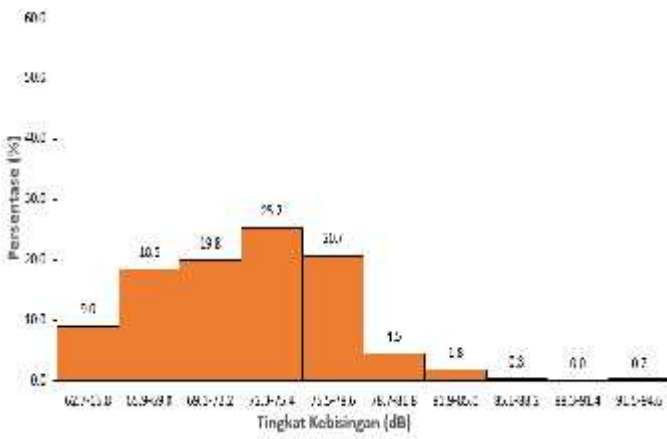
G. Titik R07



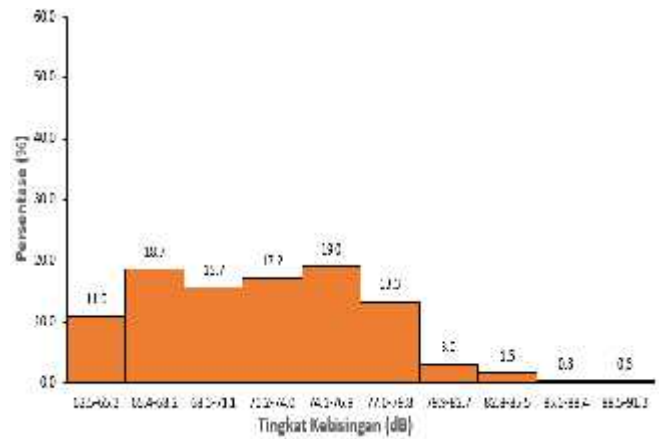
Pukul 07.00-08.00



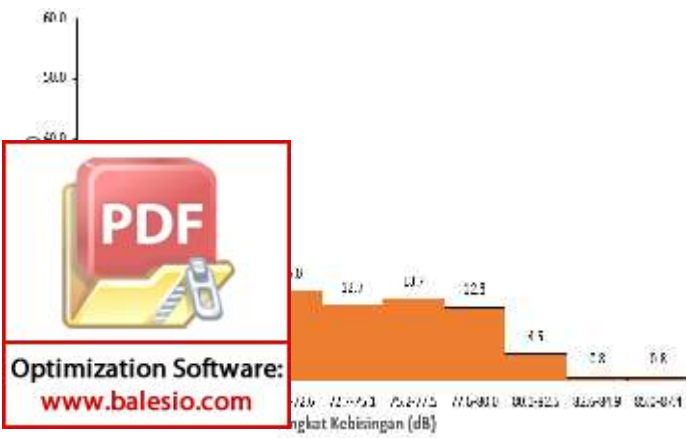
Pukul 08.00-09.00



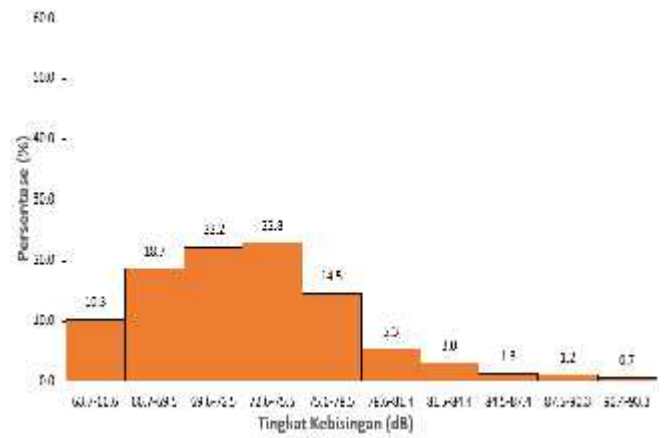
Pukul 09.00-10.00



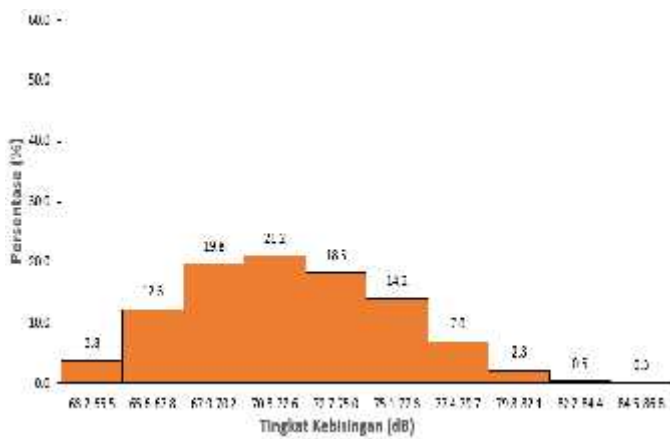
Pukul 10.00-11.00



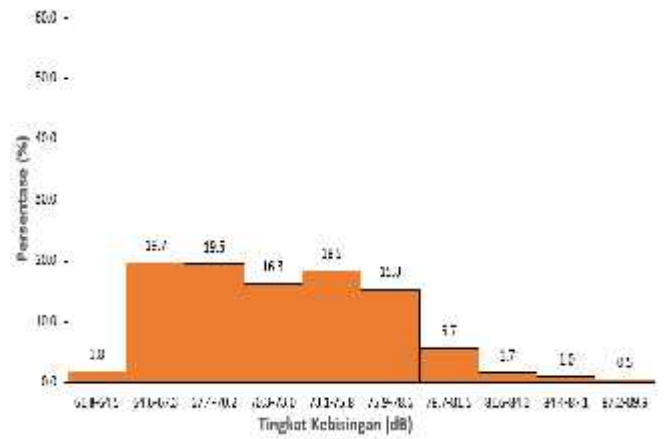
Pukul 11.00-12.00



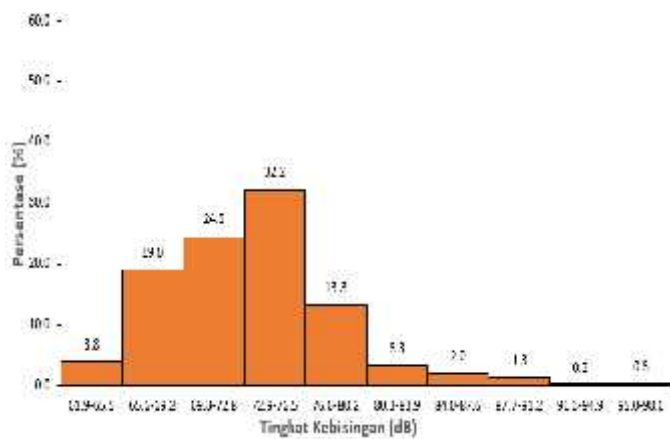
Pukul 12.00-13.00



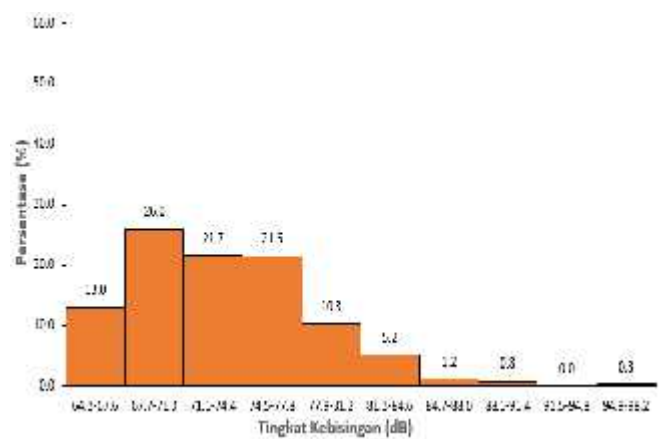
Pukul 13.00-14.00



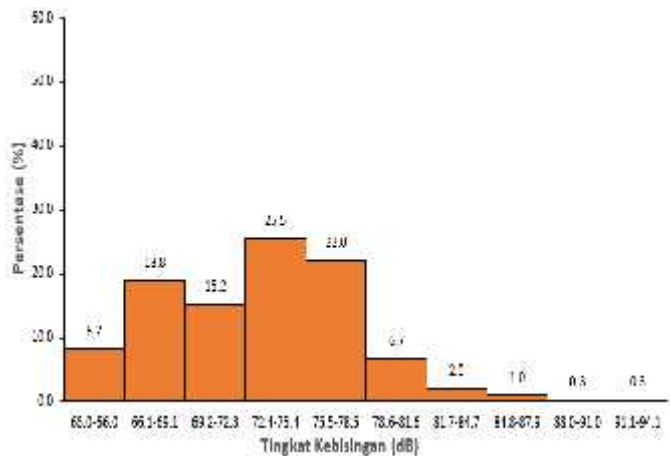
Pukul 14.00-15.00



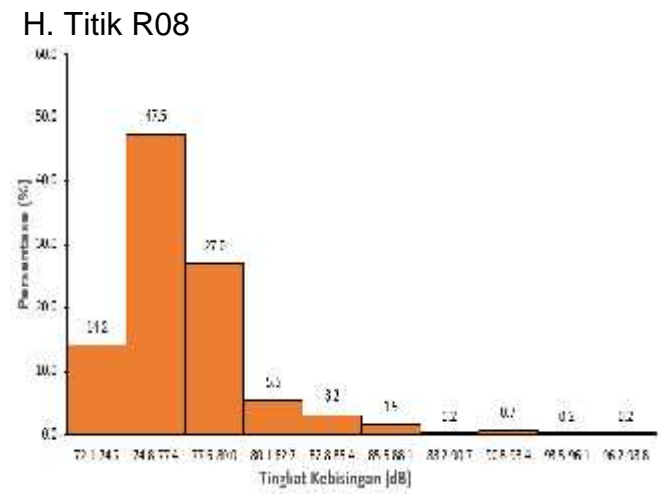
Pukul 15.00-16.00



Pukul 16.00-17.00



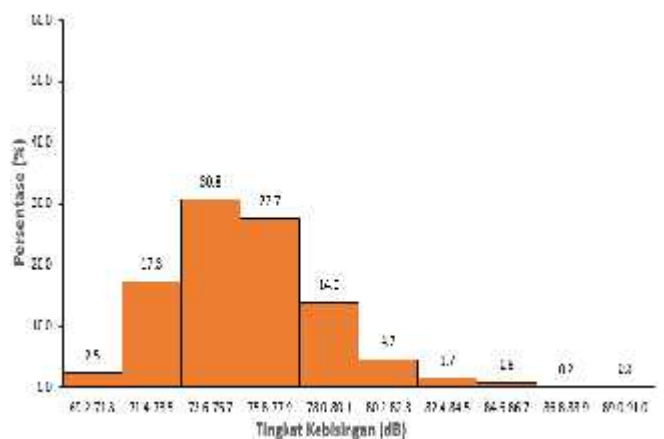
Pukul 17.00-18.00



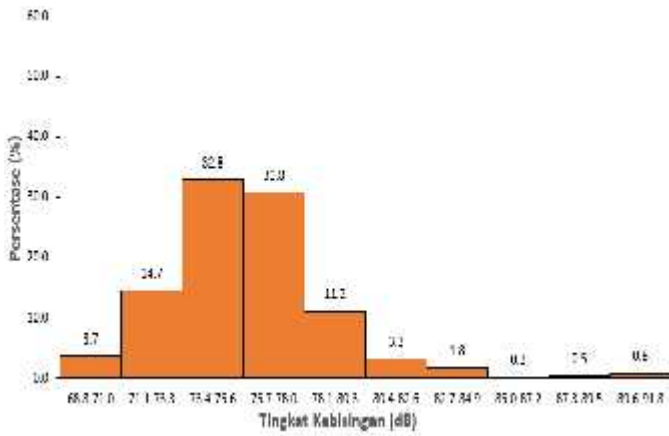
Pukul 07.00-08.00

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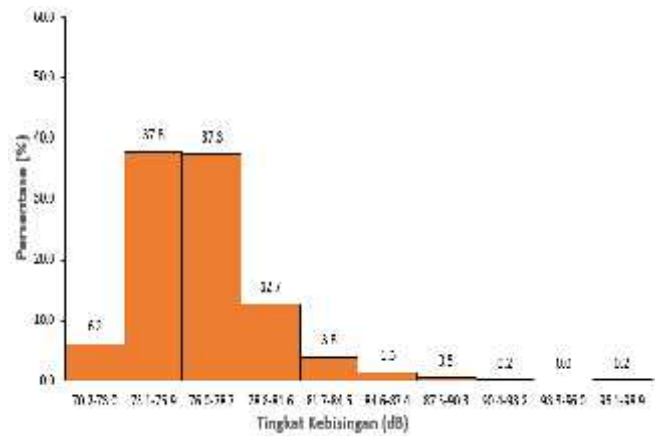
Pukul 08.00-09.00



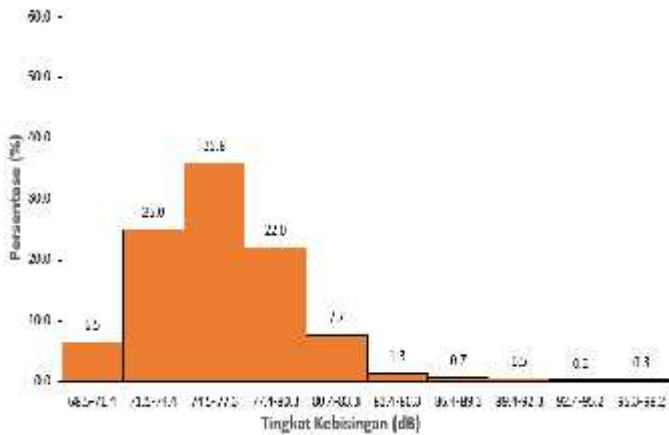
Pukul 09.00-10.00



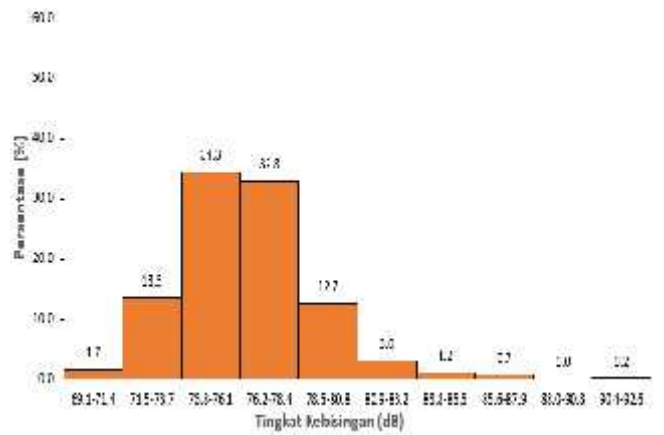
Pukul 10.00-11.00



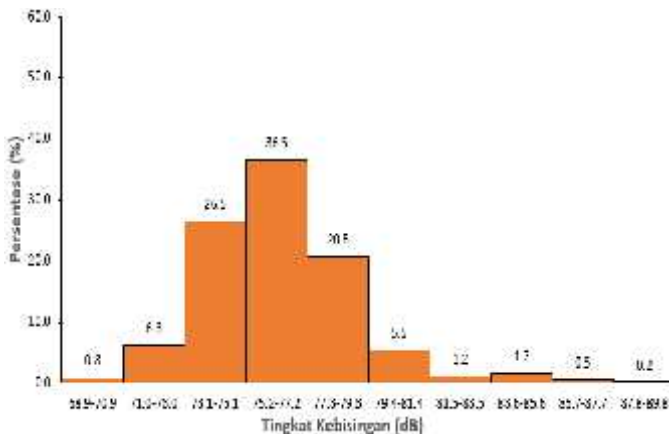
Pukul 11.00-12.00



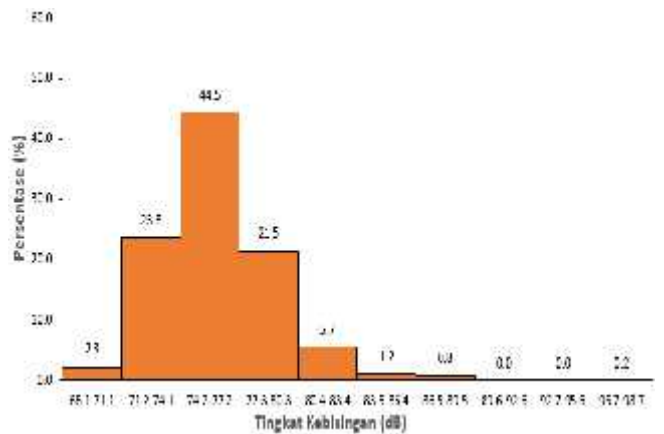
Pukul 12.00-13.00



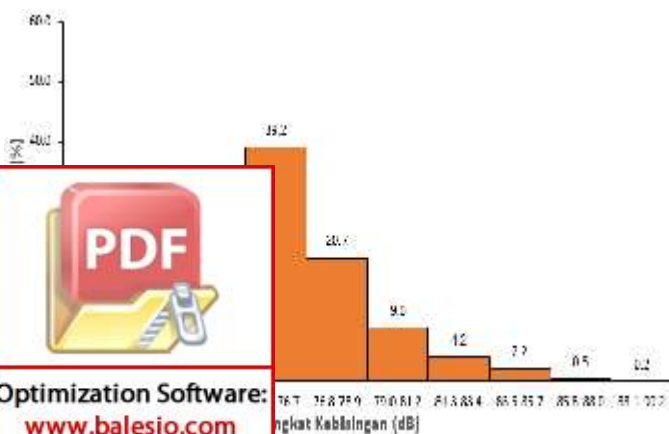
Pukul 13.00-14.00



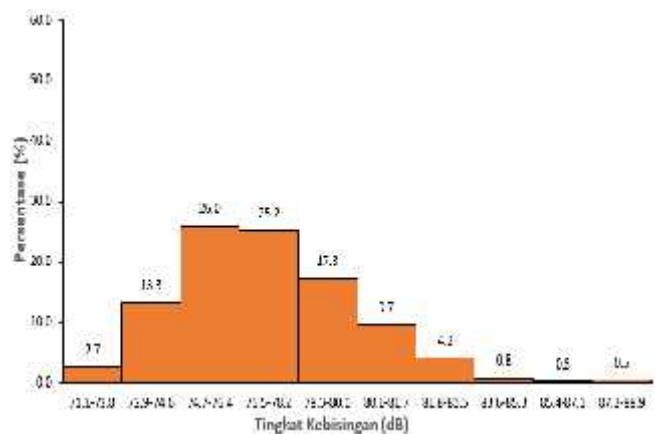
Pukul 14.00-15.00



Pukul 15.00-16.00



Pukul 16.00-17.00

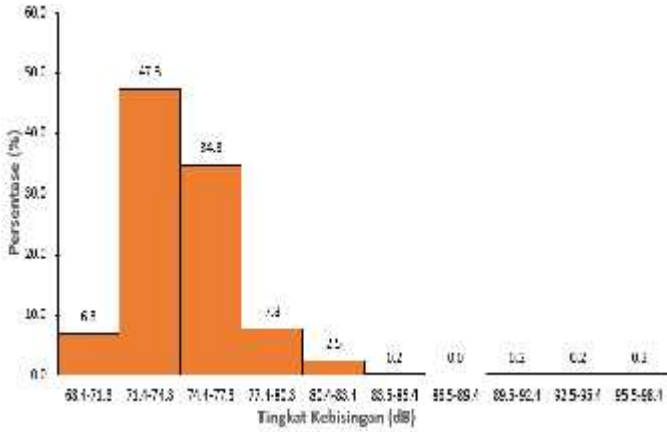


Pukul 17.00-18.00

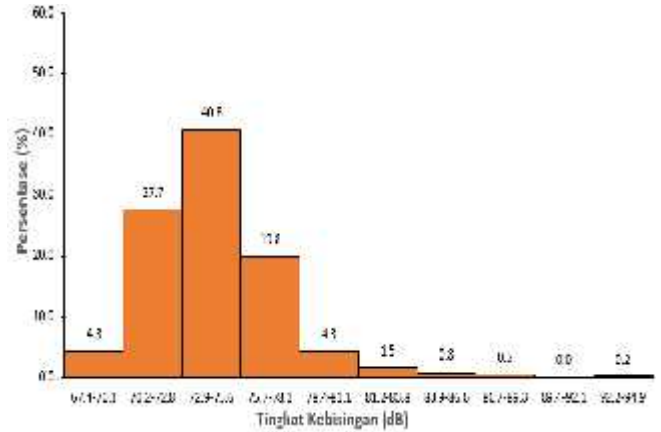


Optimization Software:
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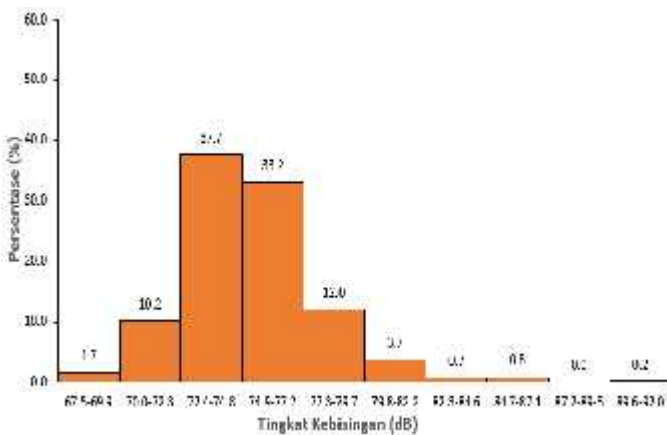
I. Titik R09



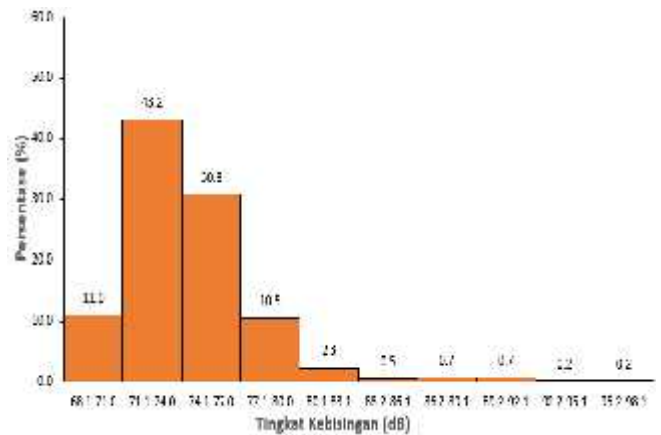
Pukul 07.00-08.00



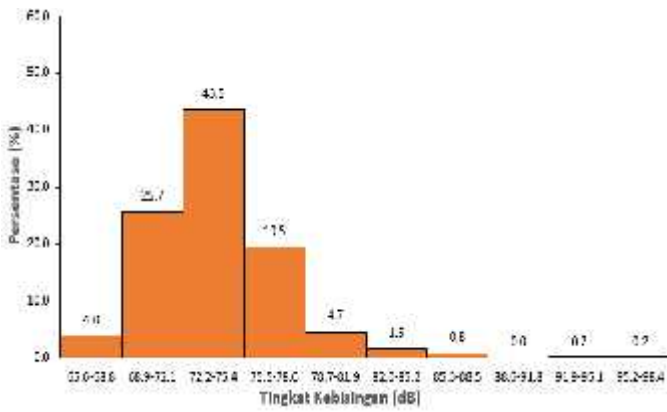
Pukul 08.00-09.00



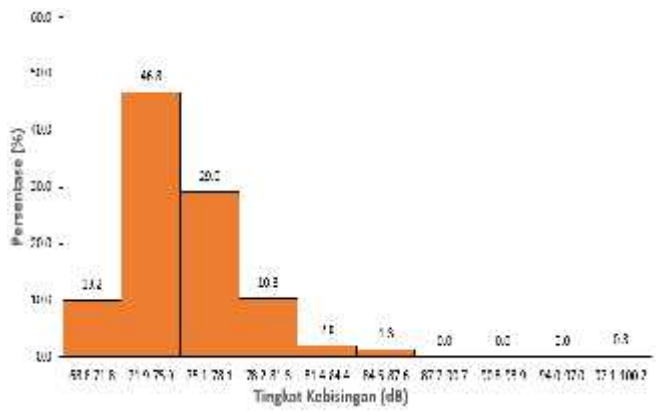
Pukul 09.00-10.00



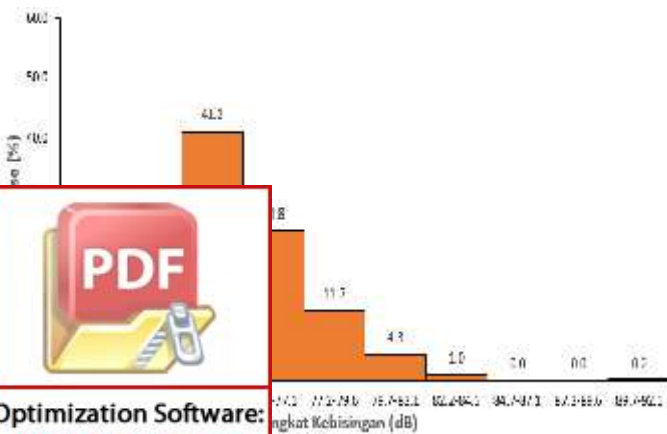
Pukul 10.00-11.00



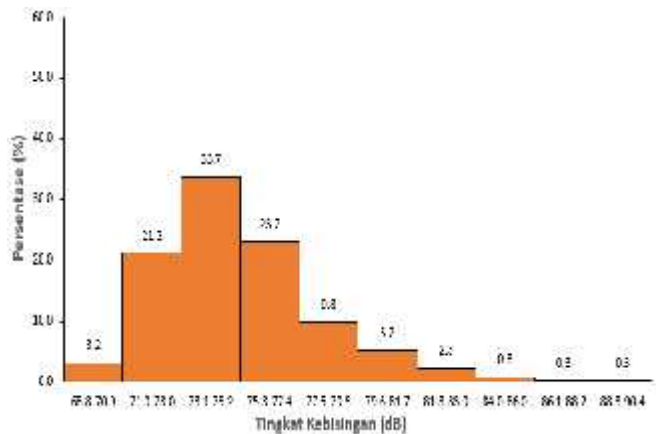
Pukul 11.00-12.00



Pukul 12.00-13.00

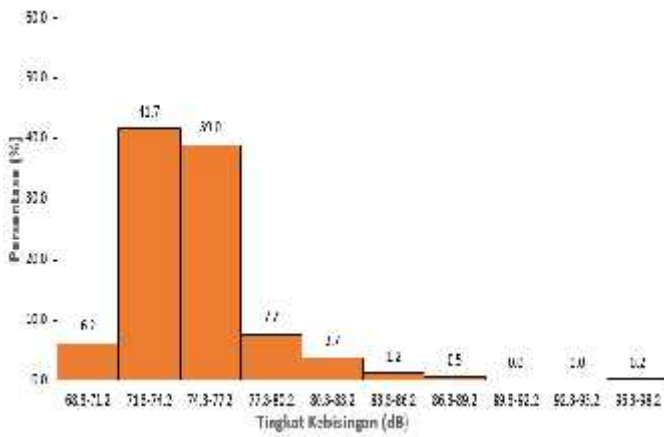


Pukul 13.00-14.00

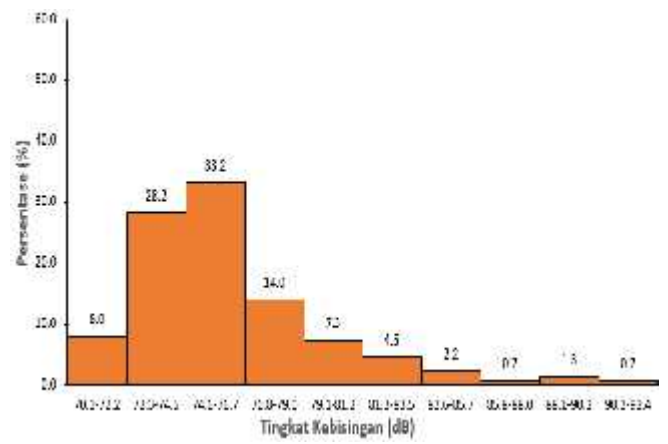


Pukul 14.00-15.00

Optimization Software:
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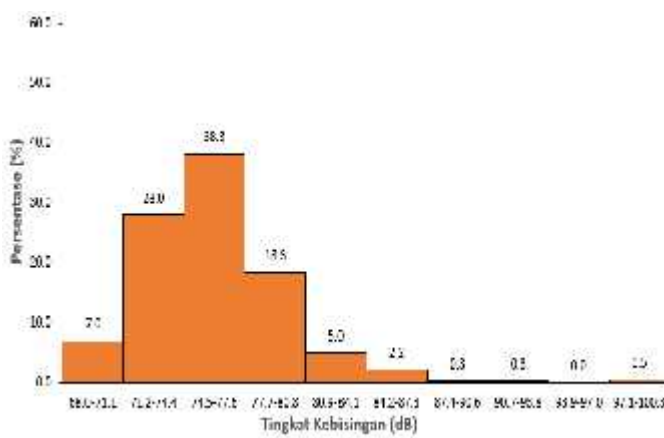


Pukul 15.00-16.00

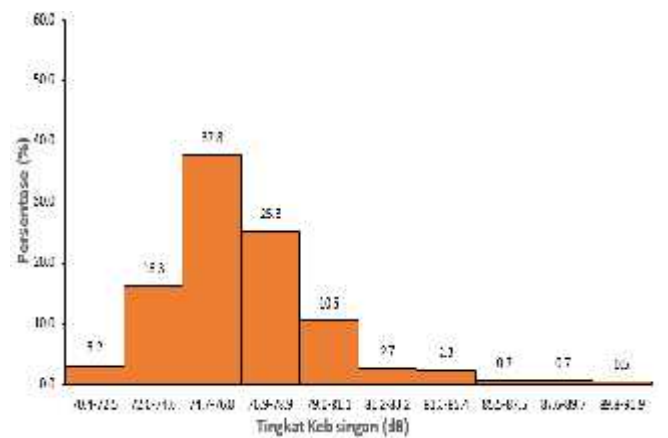


Pukul 16.00-17.00

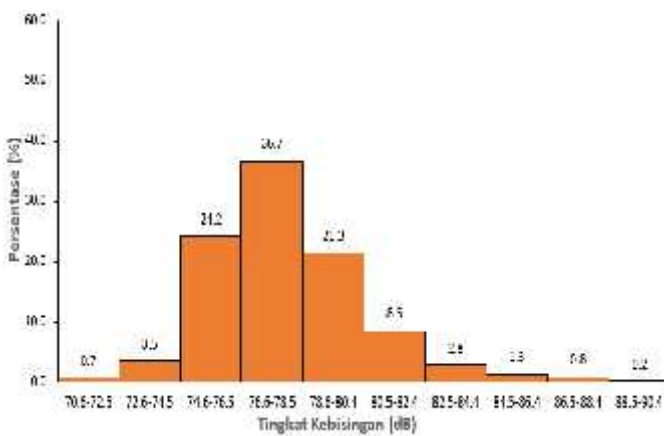
J. Titik R10



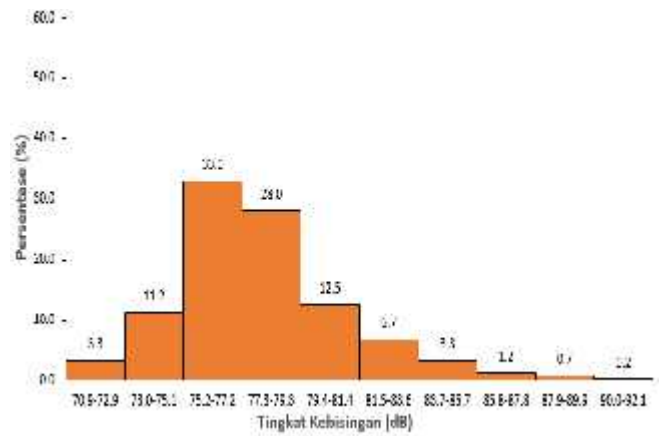
Pukul 17.00-18.00



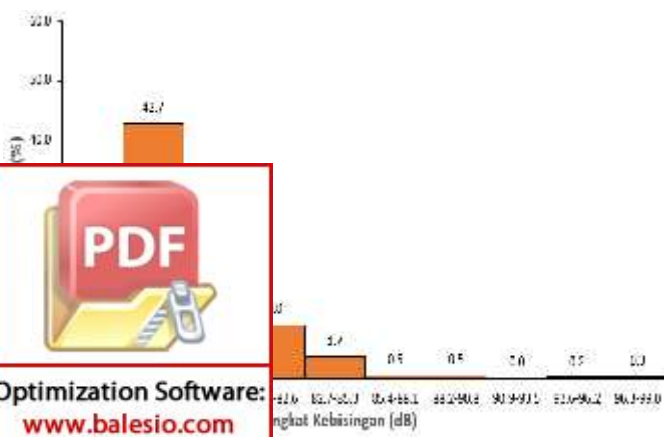
Pukul 07.00-08.00



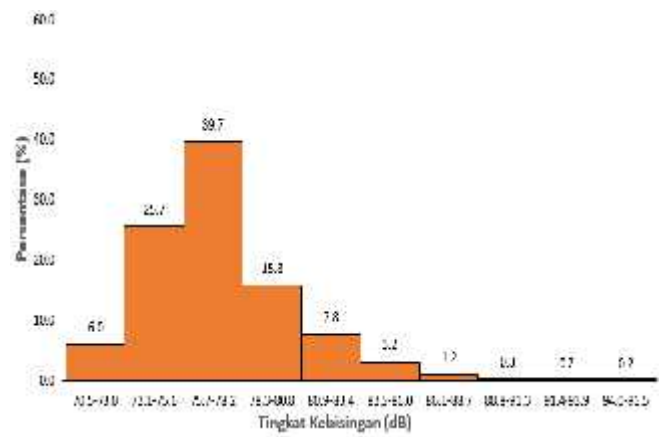
Pukul 08.00-09.00



Pukul 09.00-10.00

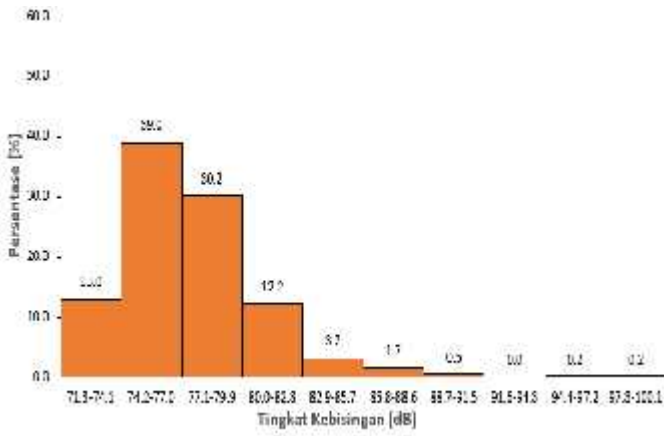


Pukul 10.00-11.00

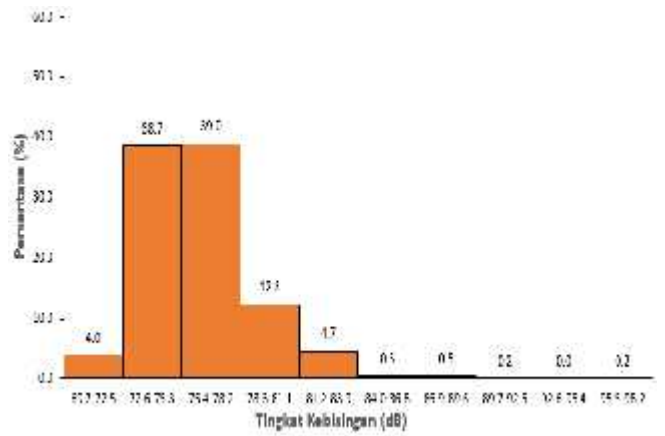


Pukul 11.00-12.00

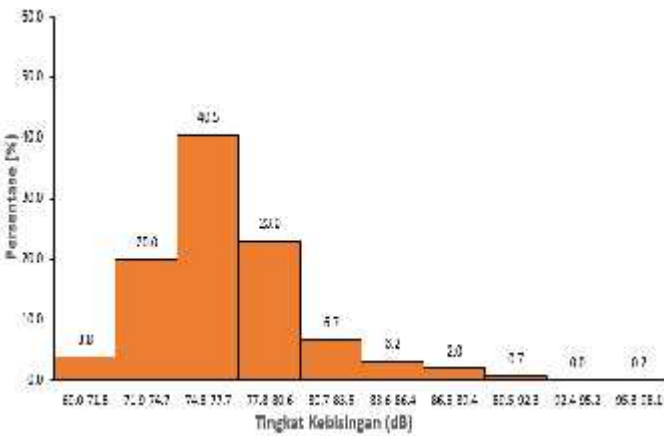
Optimization Software:
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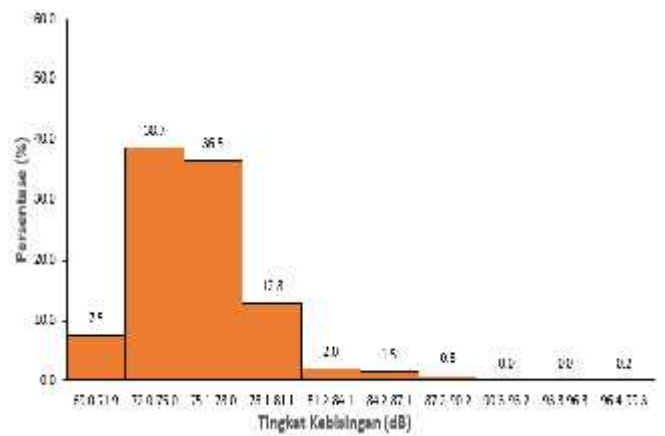
Pukul 12.00-13.00



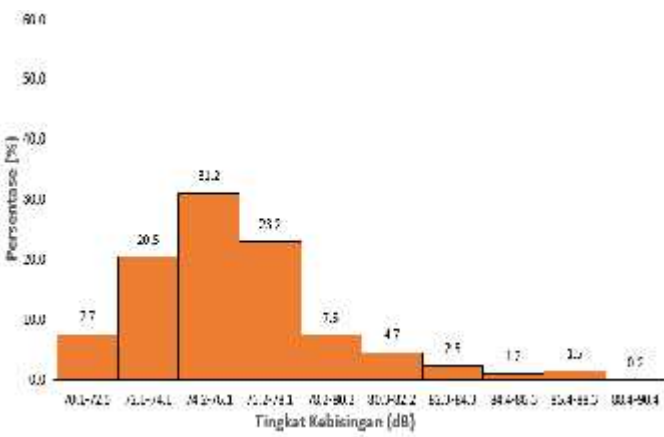
Pukul 13.00-14.00



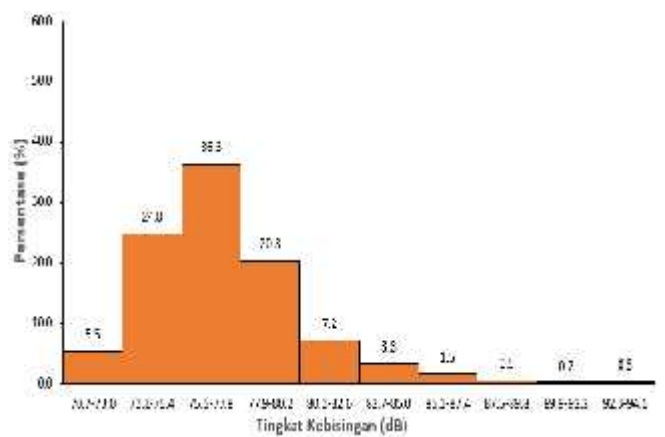
Pukul 14.00-15.00



Pukul 15.00-16.00

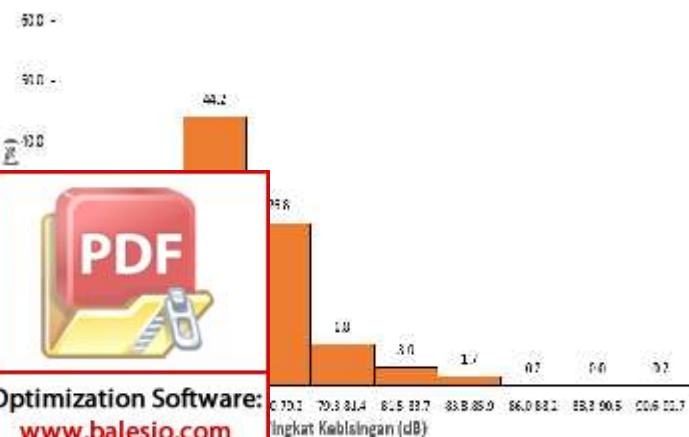


Pukul 16.00-17.00

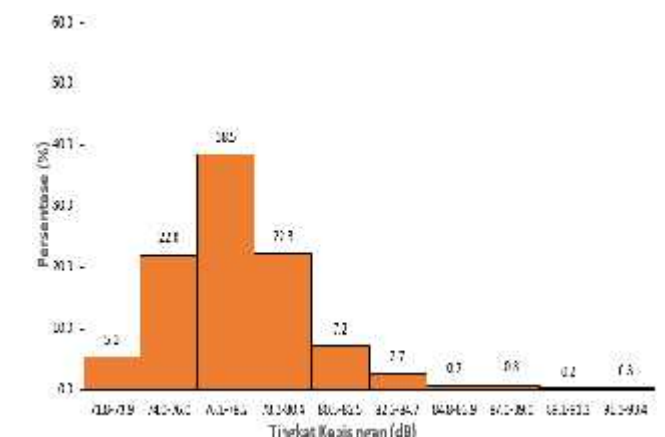


Pukul 17.00-18.00

K. Titik R11

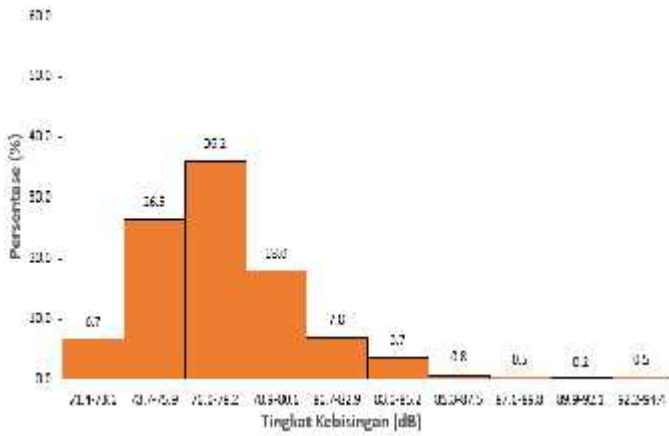


Pukul 07.00-08.00

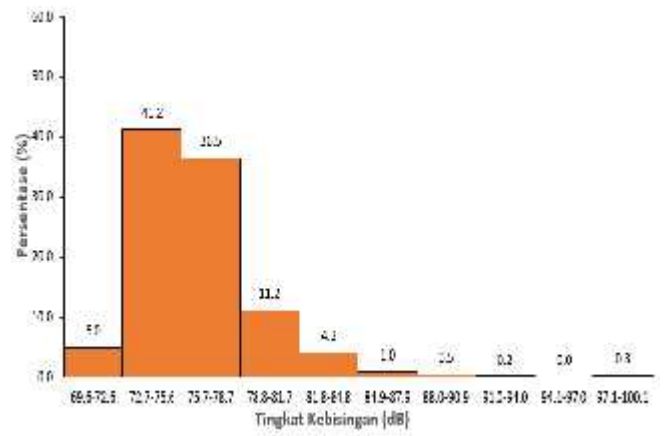


Pukul 08.00-09.00

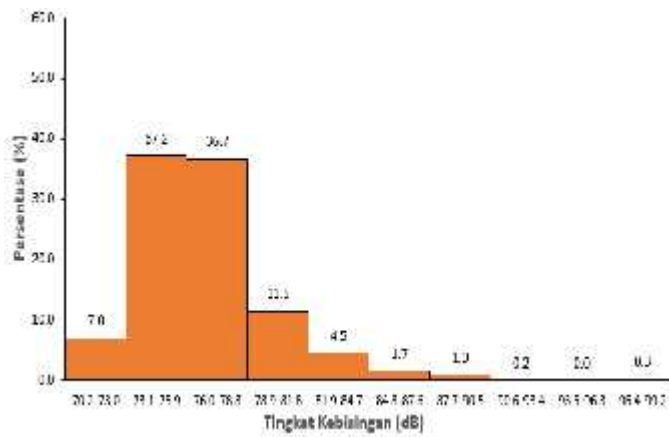
Optimization Software:
www.balesio.com



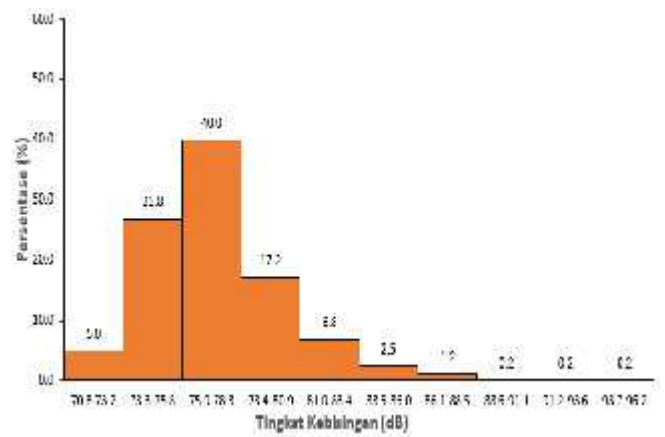
Pukul 09.00-10.00



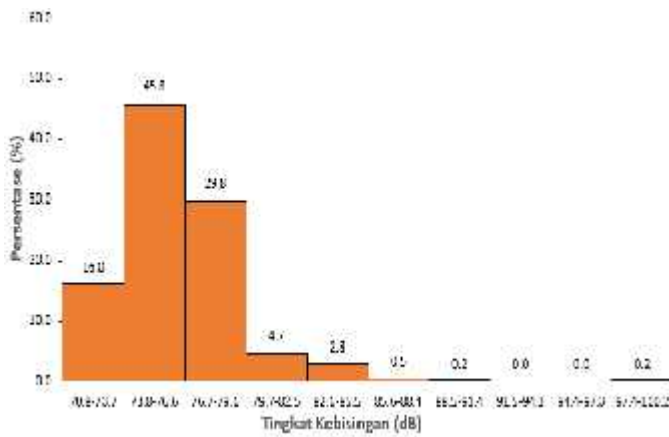
Pukul 10.00-11.00



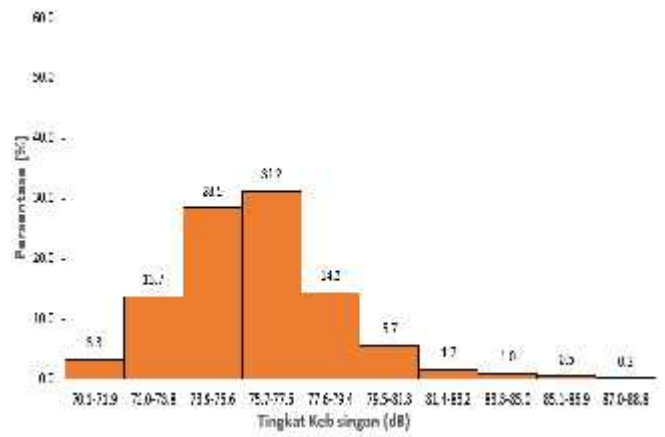
Pukul 11.00-12.00



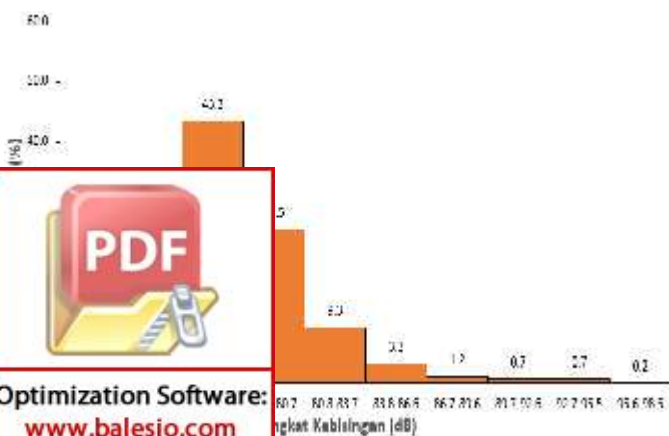
Pukul 12.00-13.00



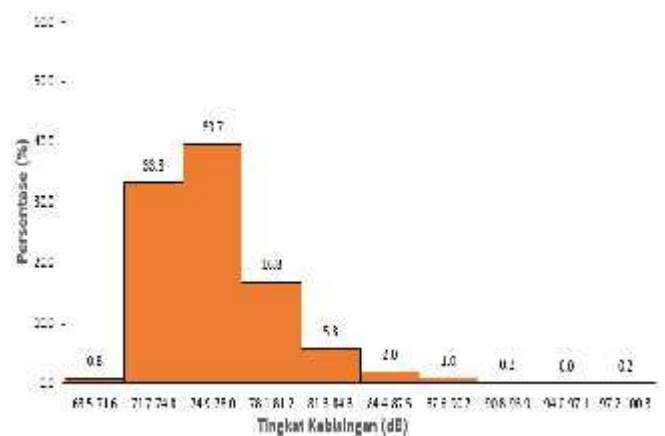
Pukul 13.00-14.00



Pukul 14.00-15.00



Pukul 15.00-16.00

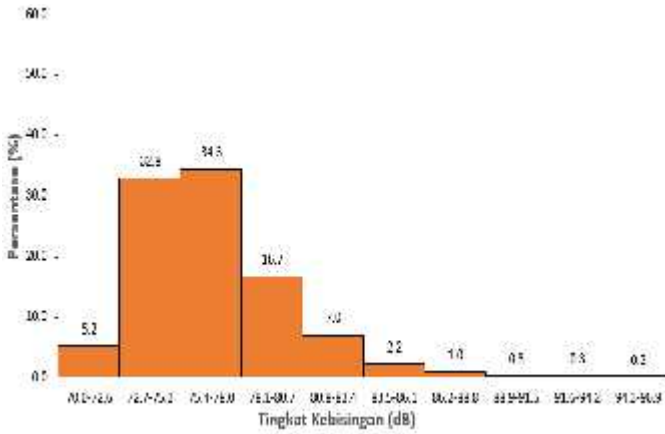


Pukul 16.00-17.00

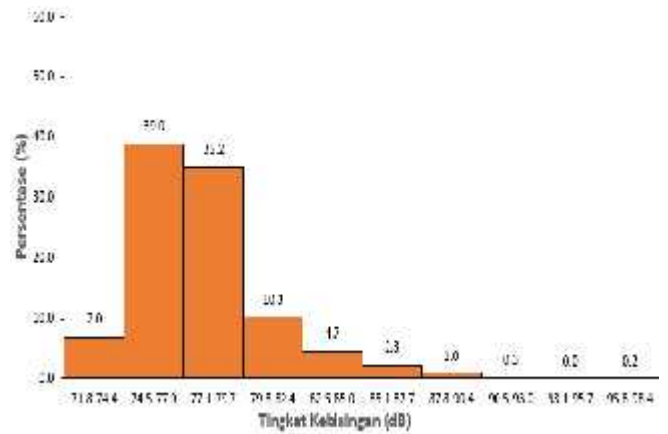


Optimization Software:
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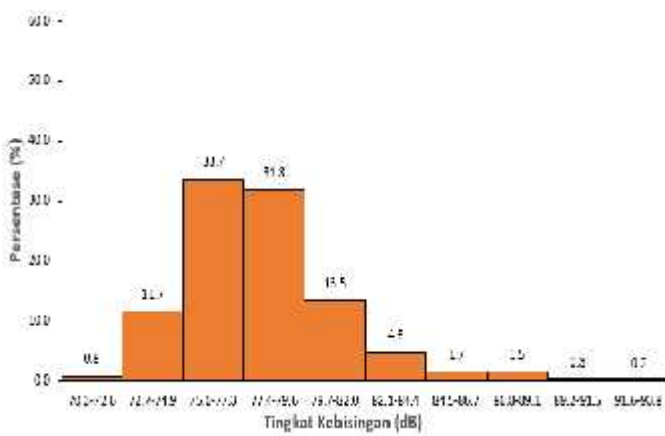
L. Titik R12



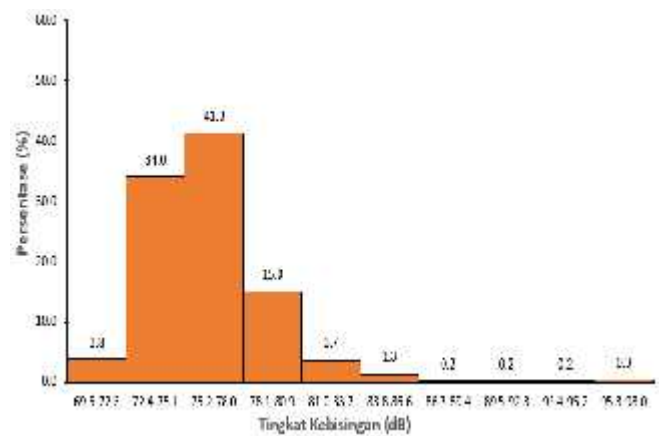
Pukul 17.00-18.00



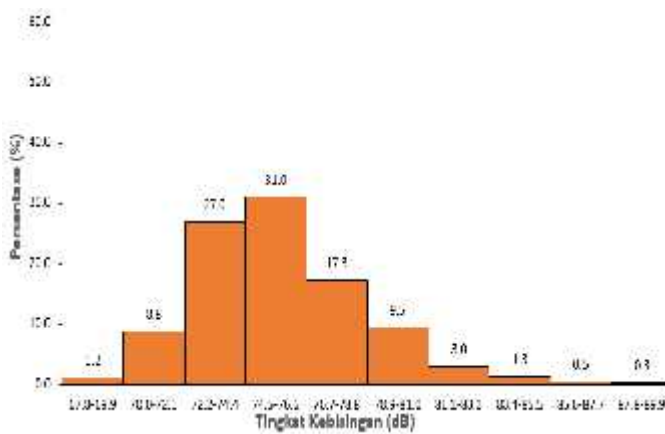
Pukul 07.00-08.00



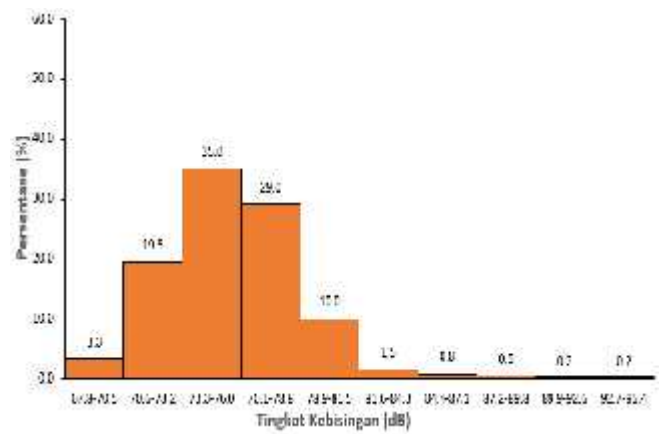
Pukul 08.00-09.00



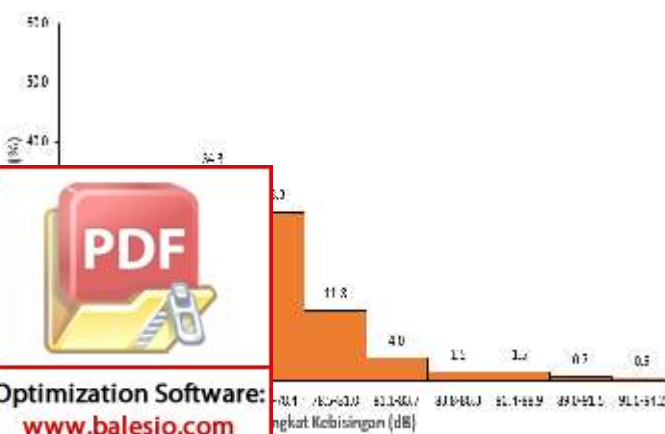
Pukul 09.00-10.00



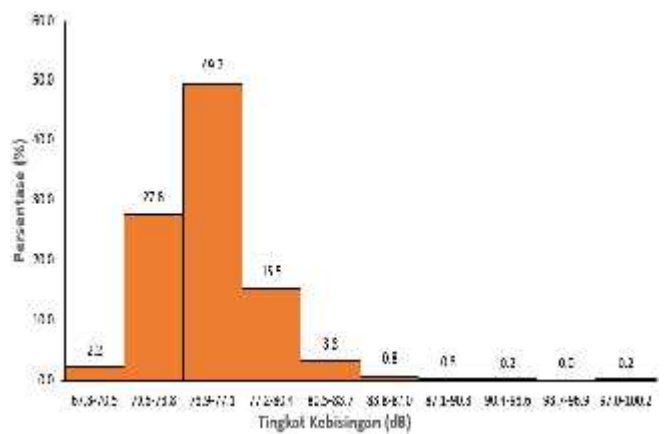
Pukul 10.00-11.00



Pukul 11.00-12.00



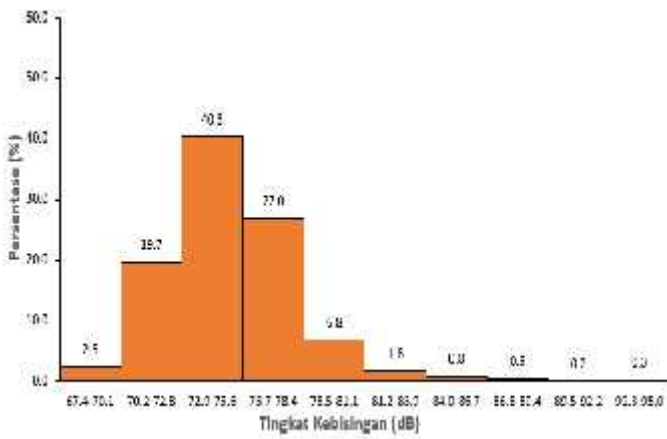
Pukul 12.00-13.00



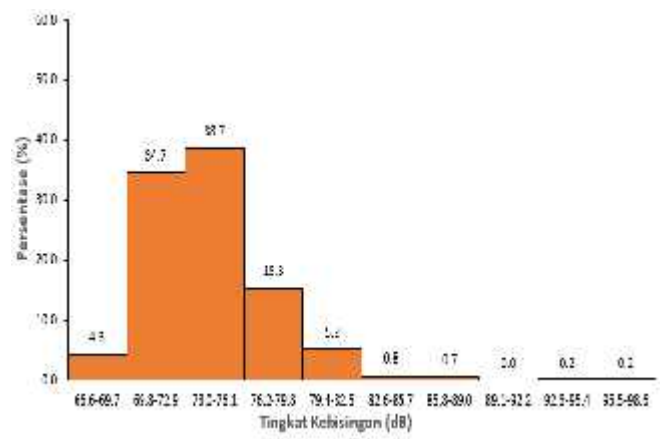
Pukul 13.00-14.00



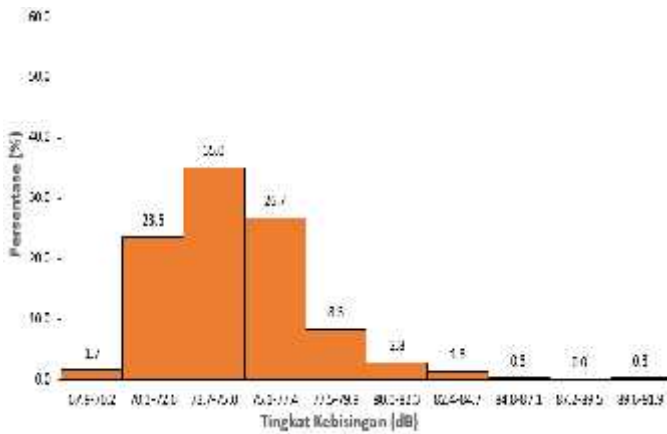
Optimization Software:
www.balesio.com



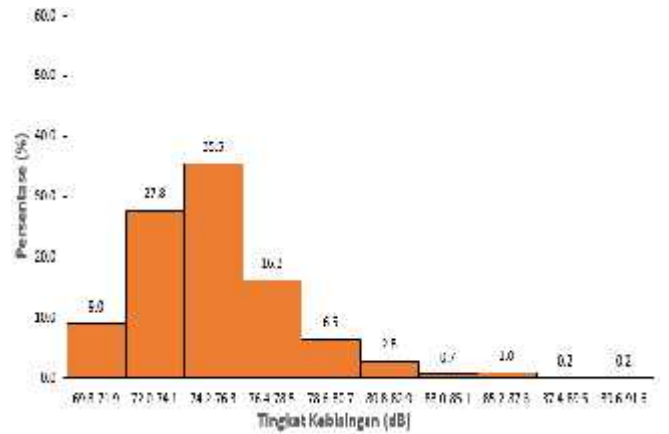
Pukul 14.00-15.00



Pukul 15.00-16.00

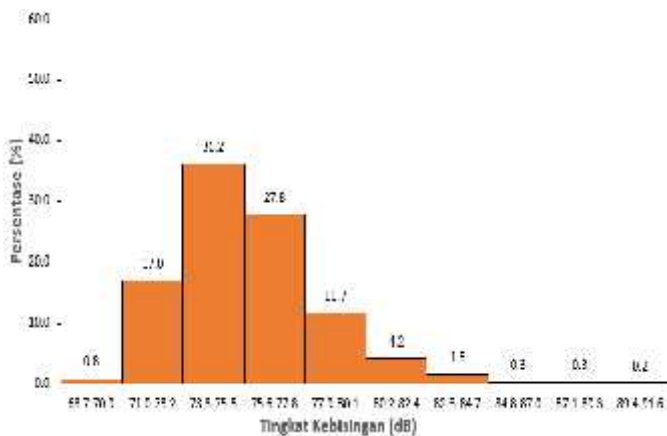


Pukul 16.00-17.00

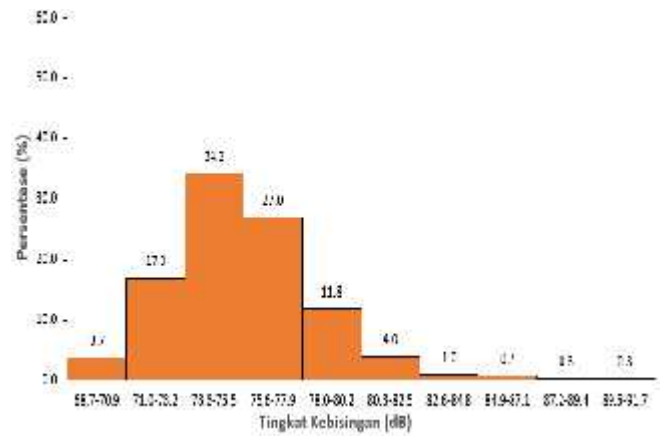


Pukul 17.00-18.00

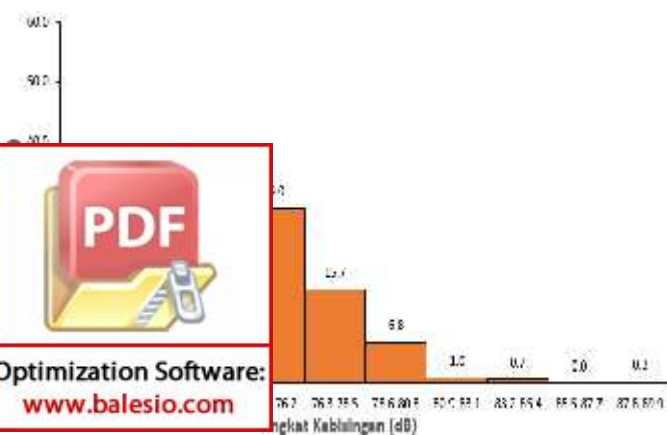
M. Titik R13



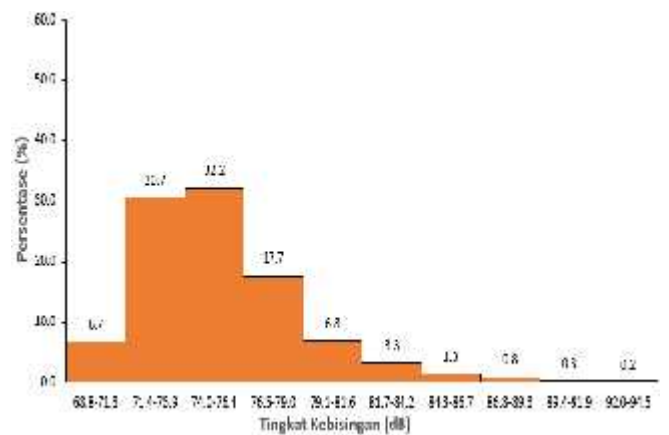
Pukul 07.00-08.00



Pukul 08.00-09.00

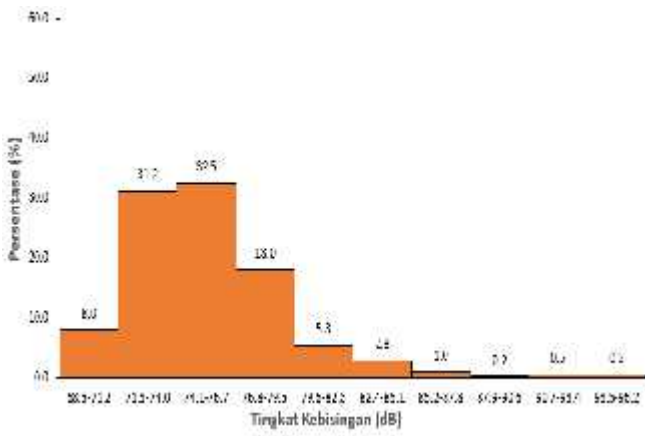


Pukul 09.00-10.00

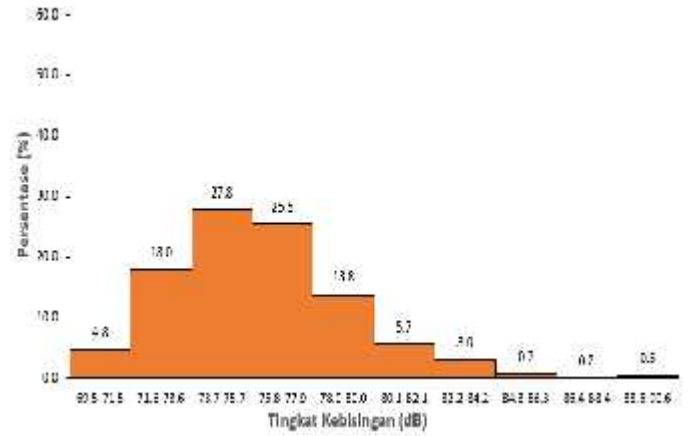


Pukul 10.00-11.00

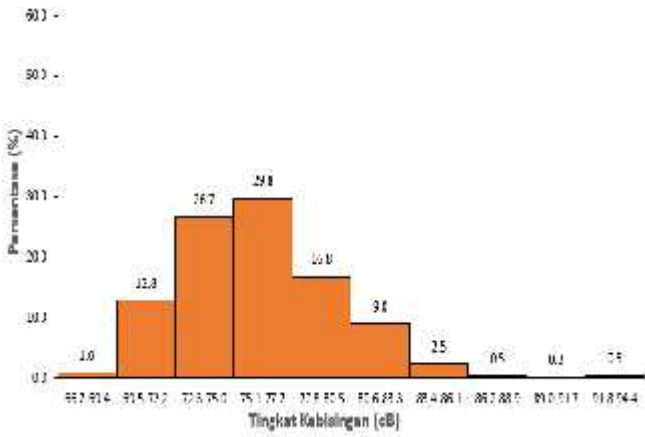
Optimization Software:
www.balesio.com



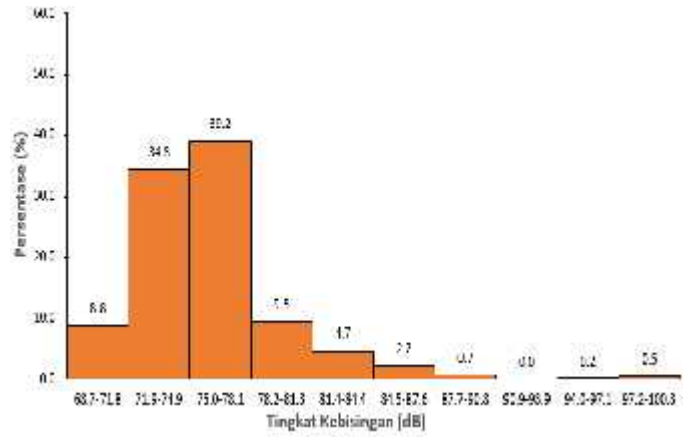
Pukul 11.00-12.00



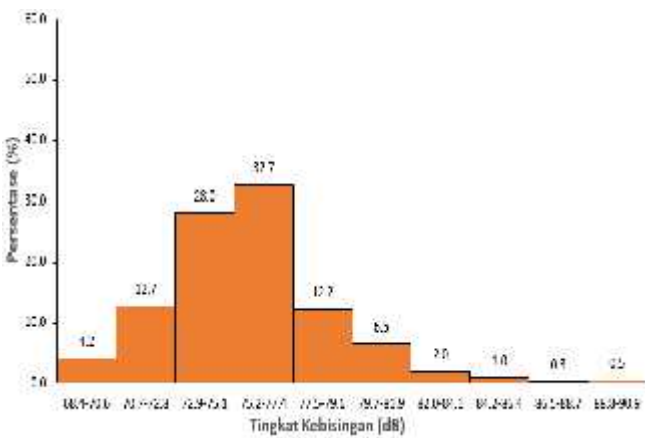
Pukul 12.00-13.00



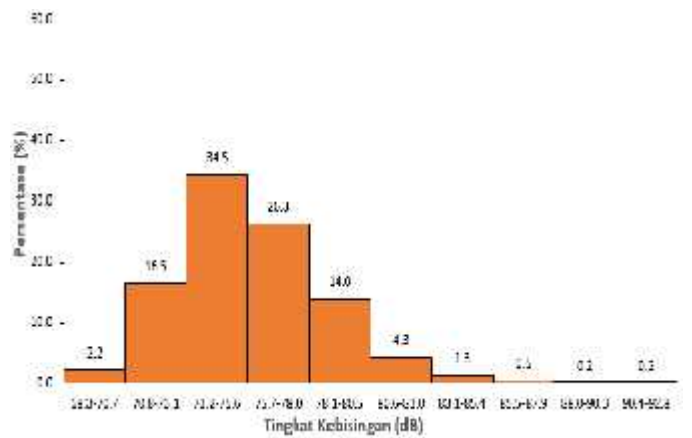
Pukul 13.00-14.00



Pukul 14.00-15.00

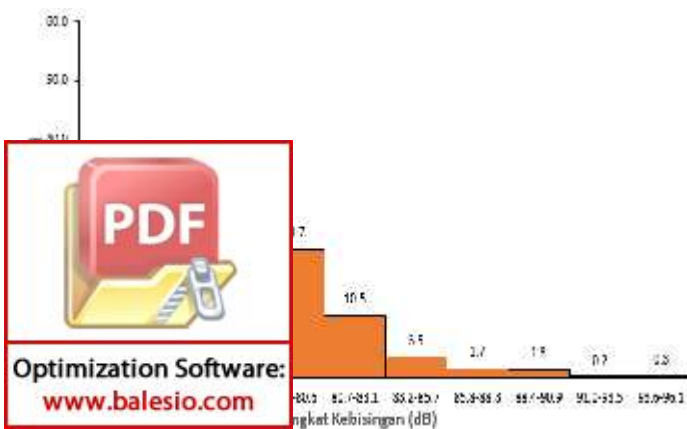


Pukul 15.00-16.00

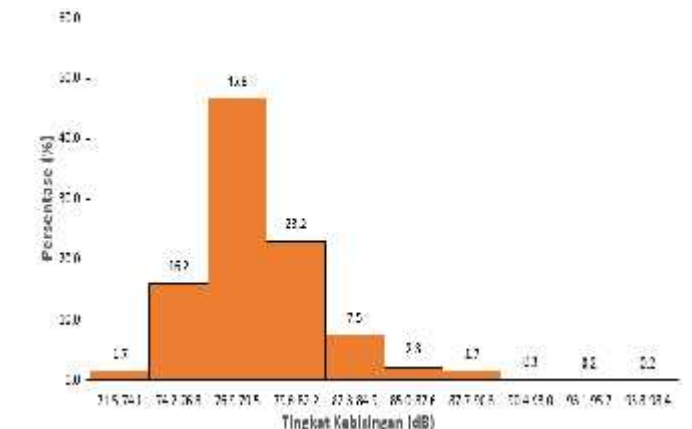


Pukul 16.00-17.00

N. Titik R14

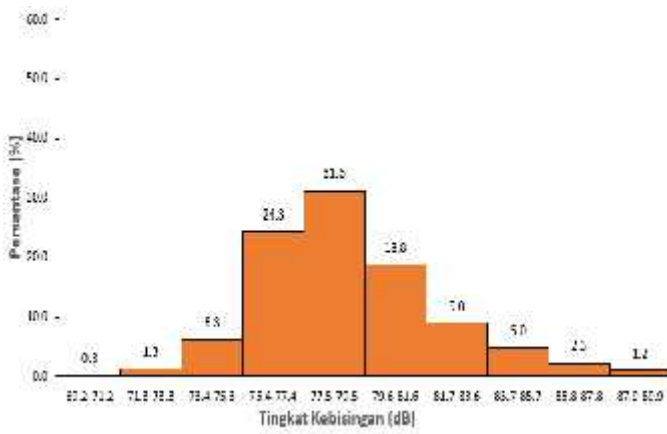


Pukul 17.00-18.00

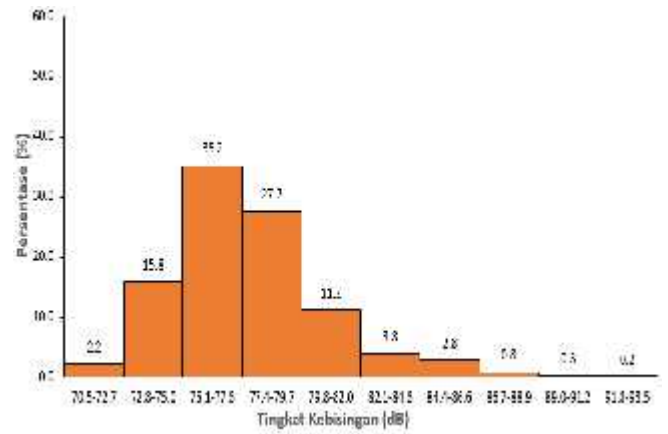


Pukul 07.00-08.00

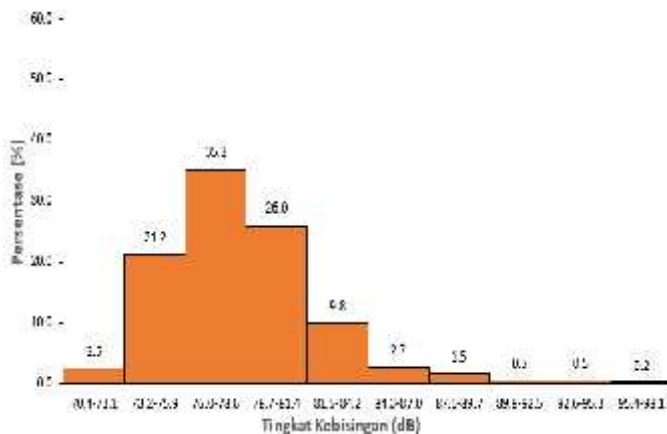
Optimization Software:
www.balesio.com



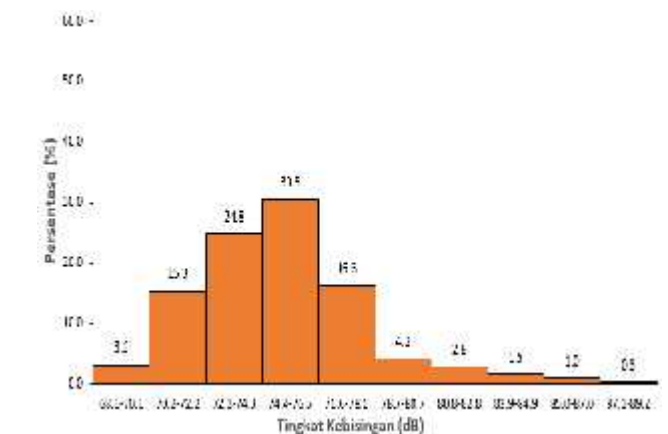
Pukul 08.00-09.00



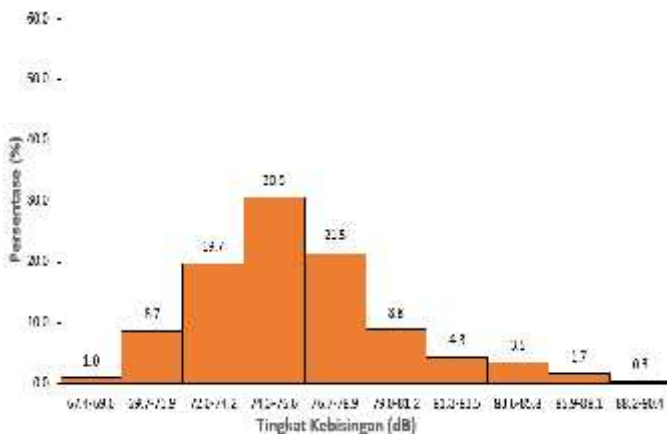
Pukul 09.00-10.00



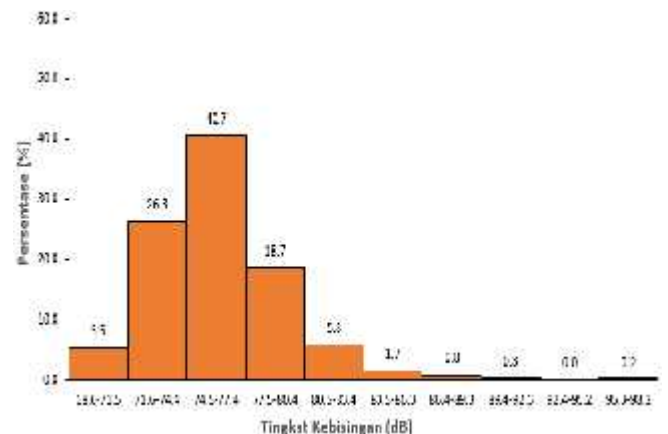
Pukul 10.00-11.00



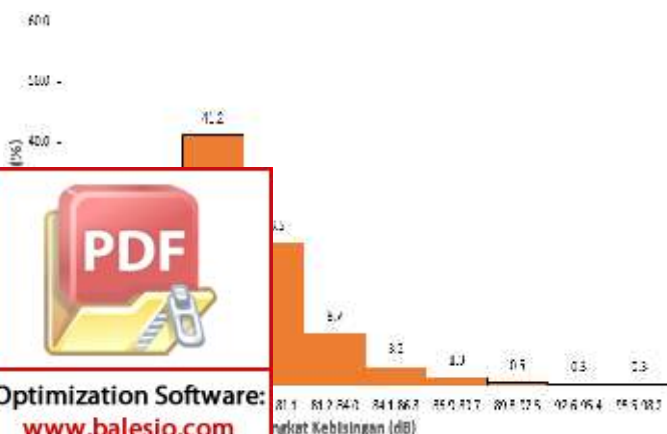
Pukul 11.00-12.00



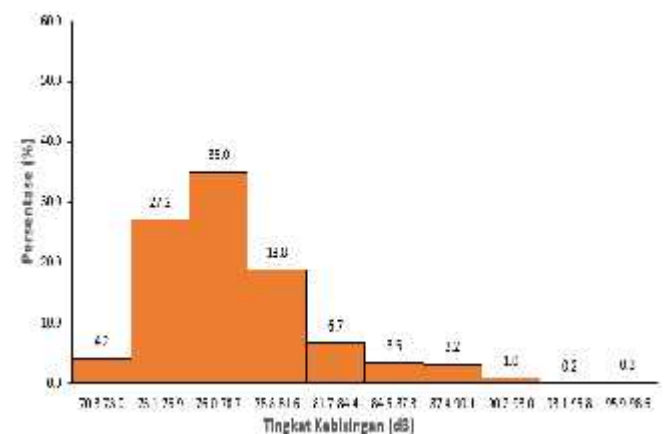
Pukul 12.00-13.00



Pukul 13.00-14.00



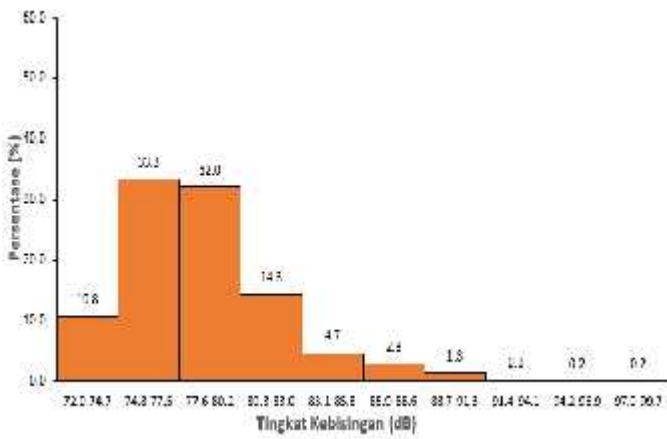
Pukul 14.00-15.00



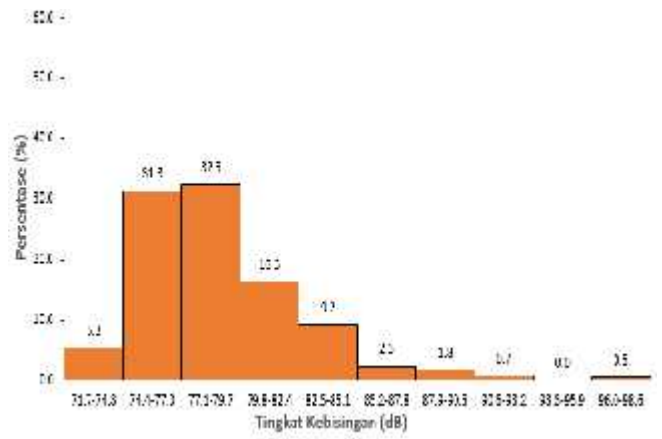
Pukul 15.00-16.00



Optimization Software:
www.balesio.com

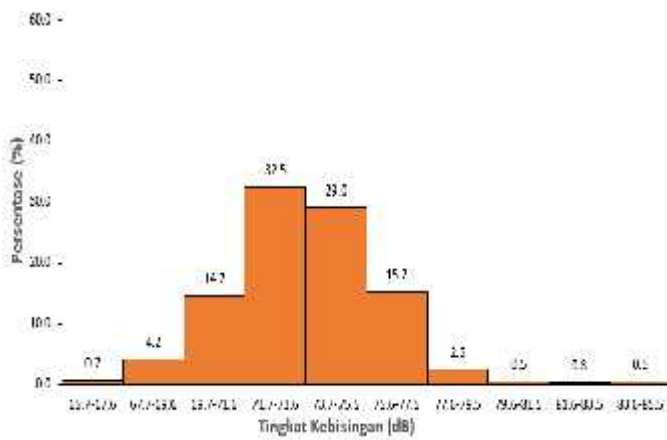


Pukul 16.00-17.00

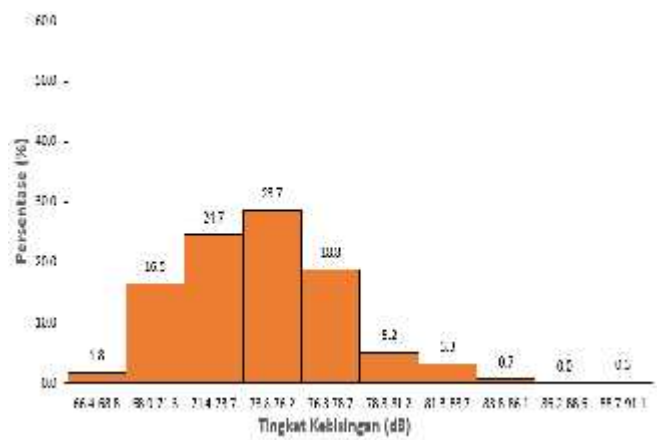


Pukul 17.00-18.00

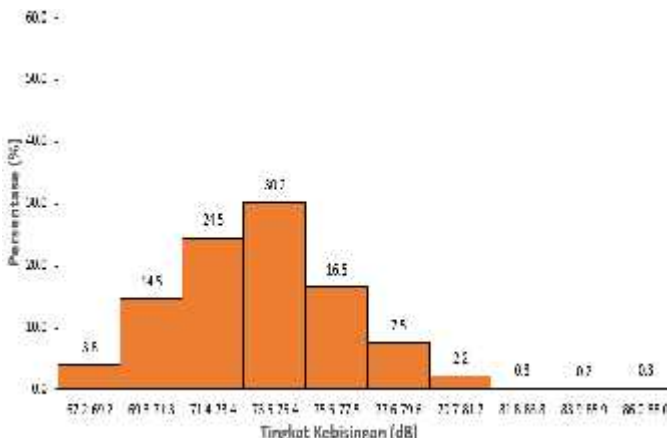
O. Titik R15



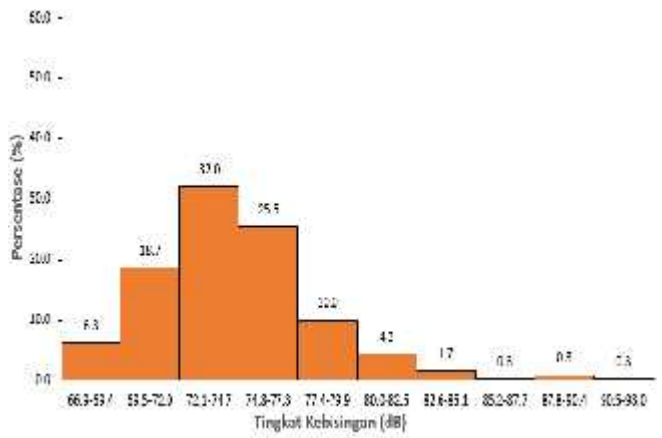
Pukul 07.00-08.00



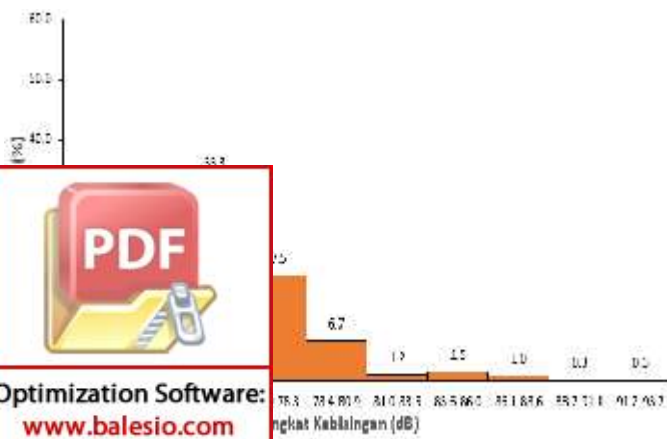
Pukul 08.00-09.00



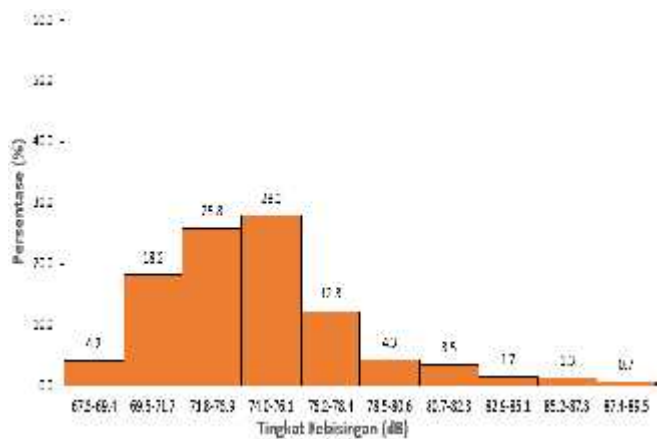
Pukul 09.00-10.00



Pukul 10.00-11.00

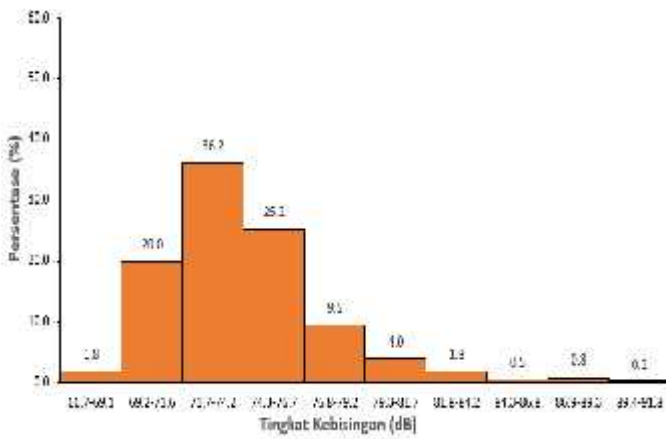


Pukul 11.00-12.00

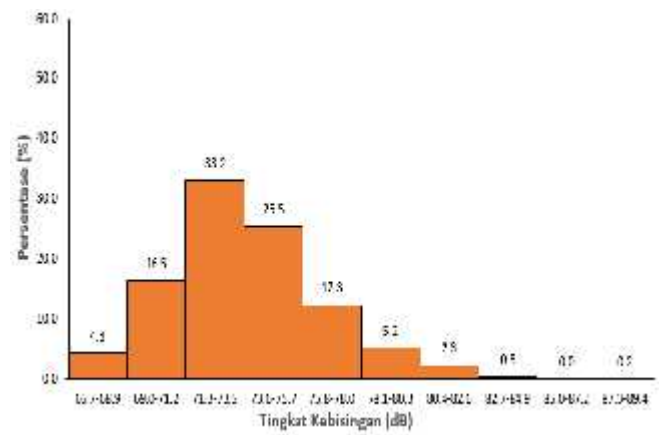


Pukul 12.00-13.00

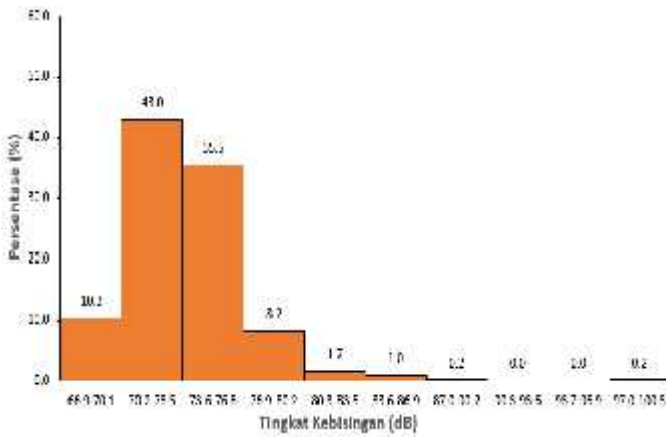
Optimization Software:
www.balesio.com



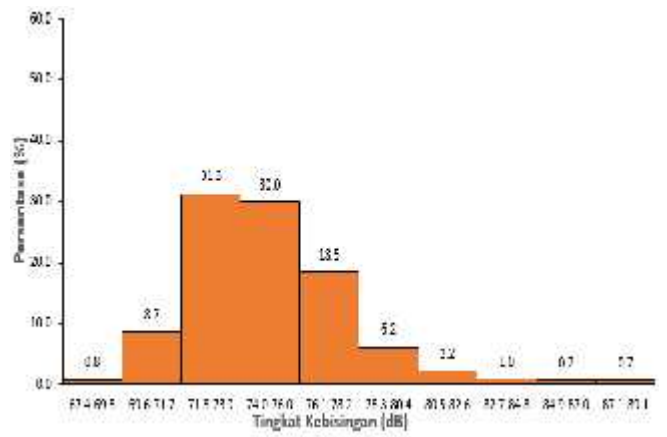
Pukul 13.00-14.00



Pukul 14.00-15.00

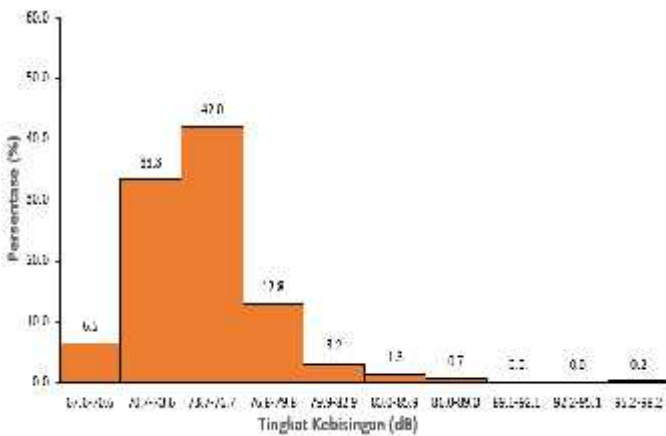


Pukul 15.00-16.00

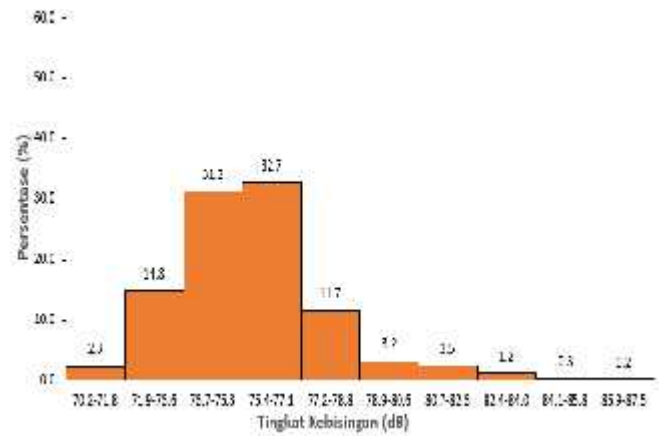


Pukul 16.00-17.00

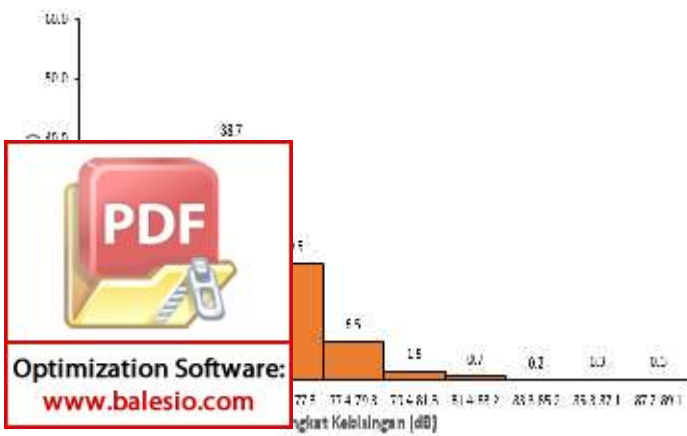
P. Titik R16



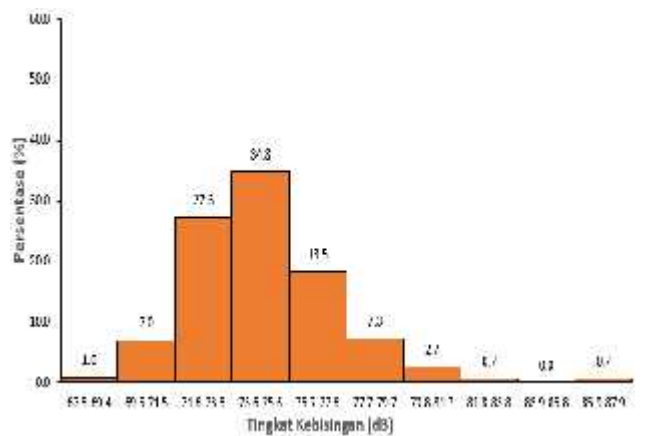
Pukul 17.00-18.00



Pukul 07.00-08.00

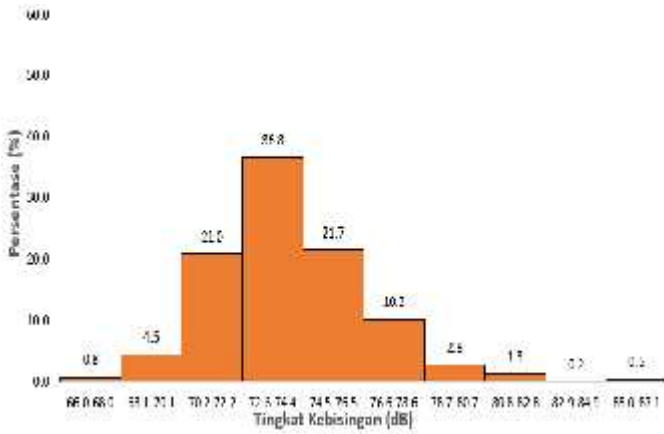


Pukul 08.00-09.00

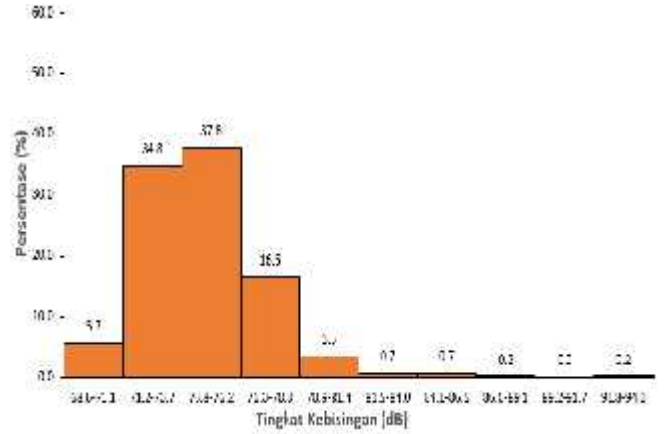


Pukul 09.00-10.00

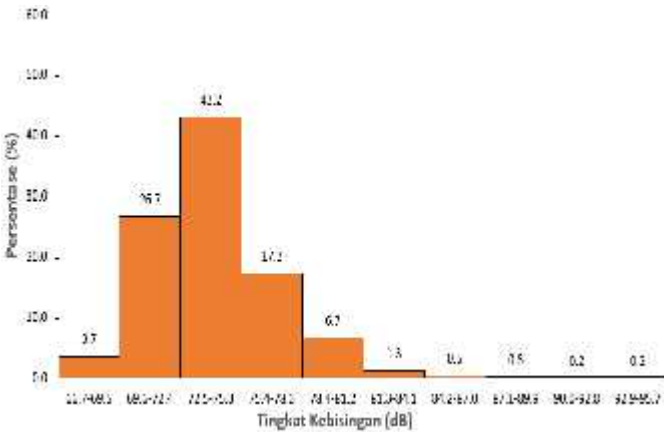
Optimization Software:
www.balesio.com



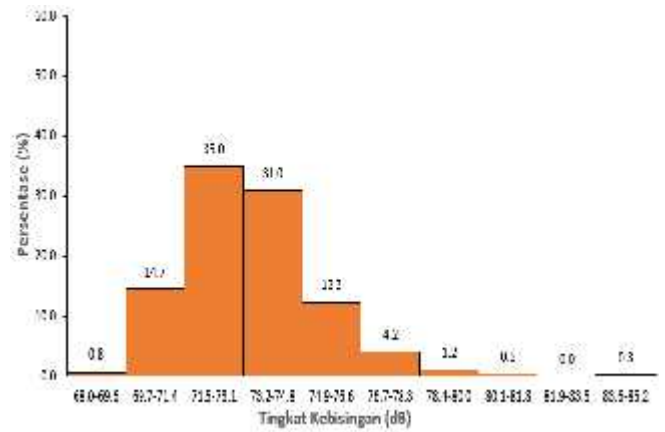
Pukul 10.00-11.00



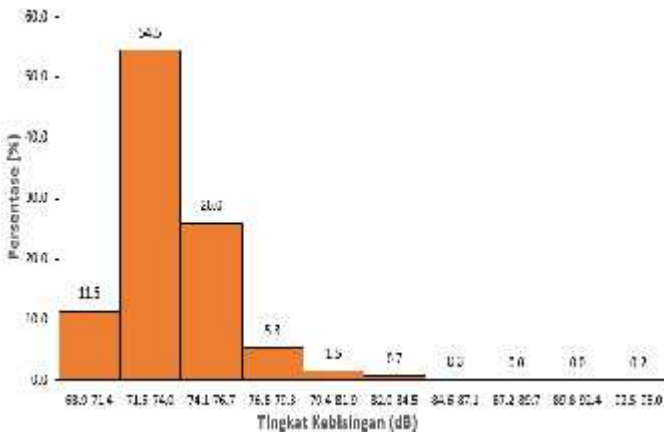
Pukul 11.00-12.00



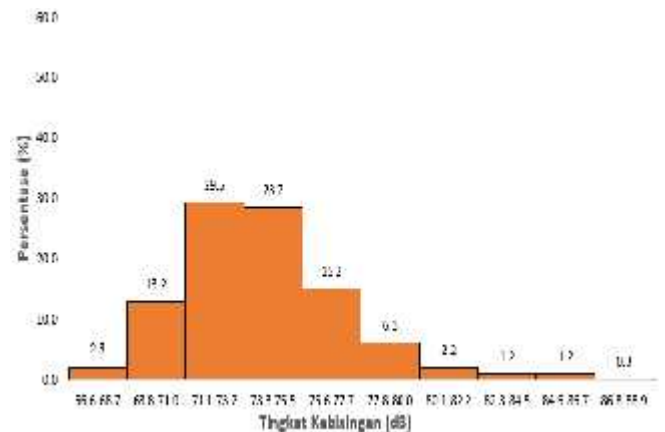
Pukul 12.00-13.00



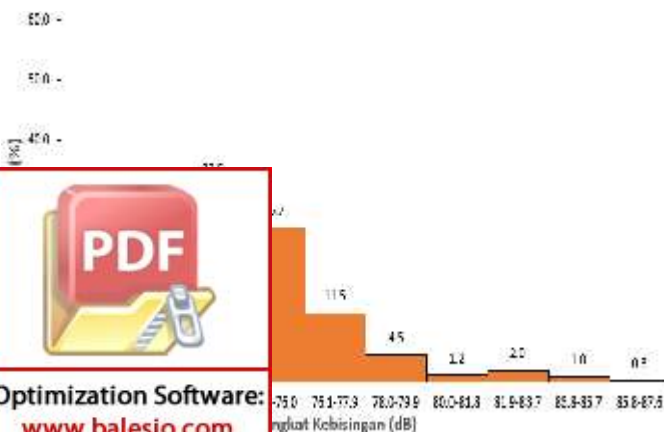
Pukul 13.00-14.00



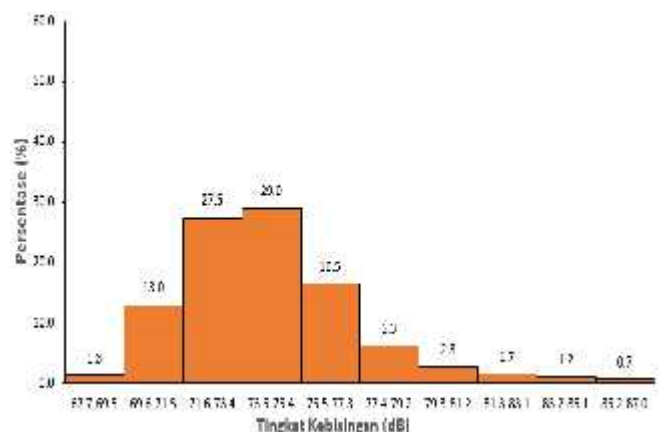
Pukul 14.00-15.00



Pukul 15.00-16.00



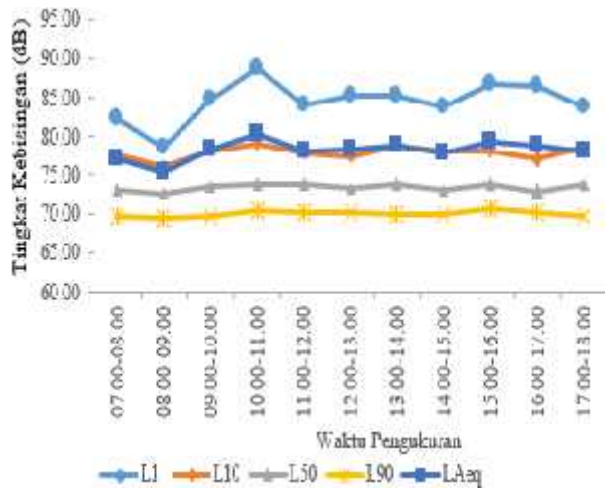
Pukul 16.00-17.00



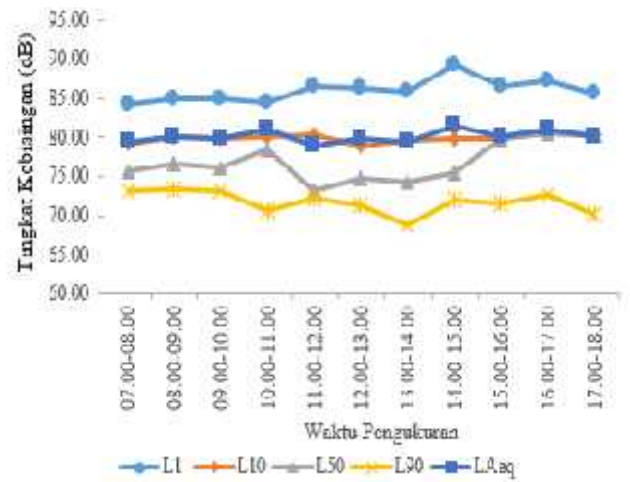
Pukul 17.00-18.00

Optimization Software:
www.balesio.com

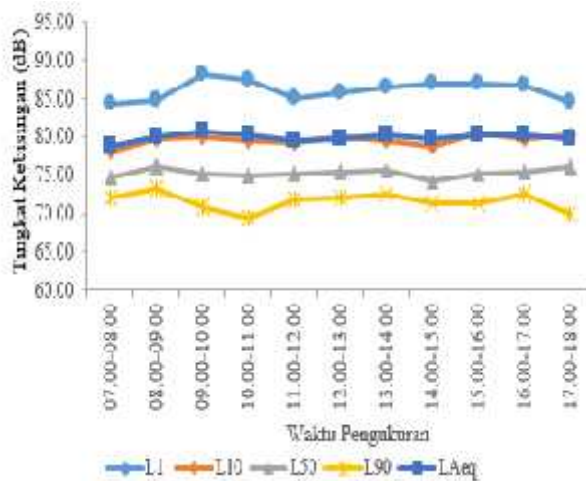
Lampiran 4 Tingkat Kebisingan Jalan



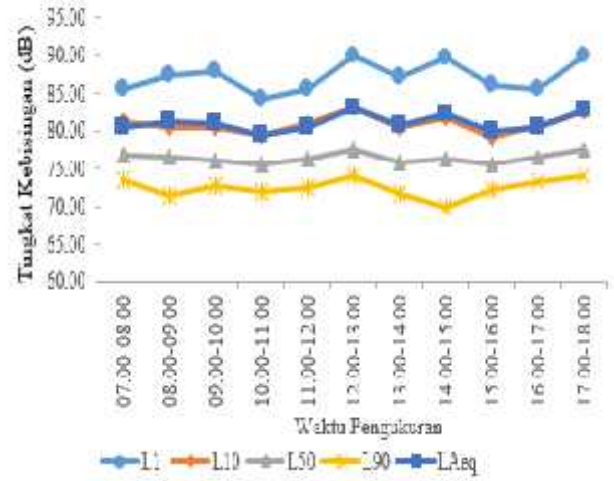
Titik Pengamatan R01



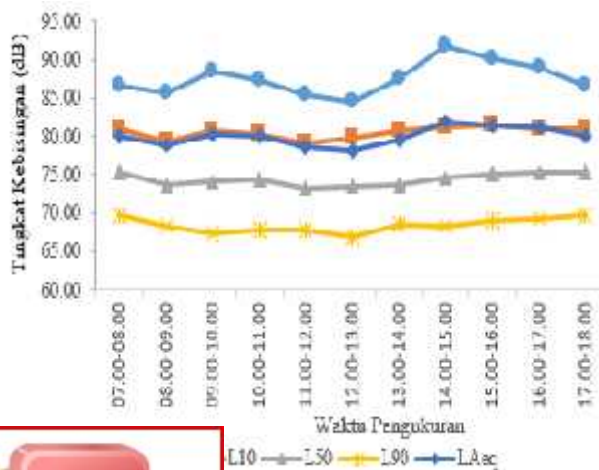
Titik Pengamatan R02



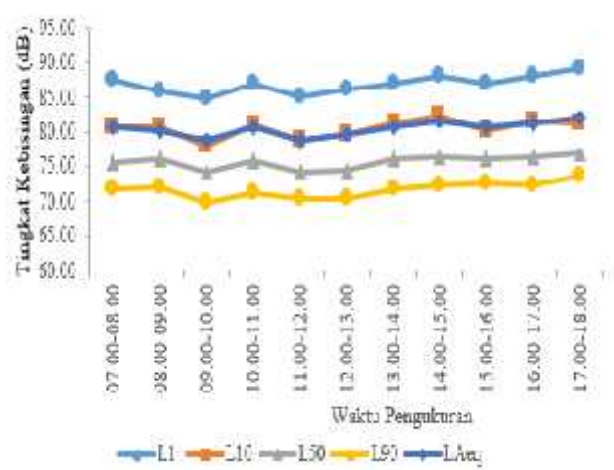
Titik Pengamatan R03



Titik Pengamatan R04

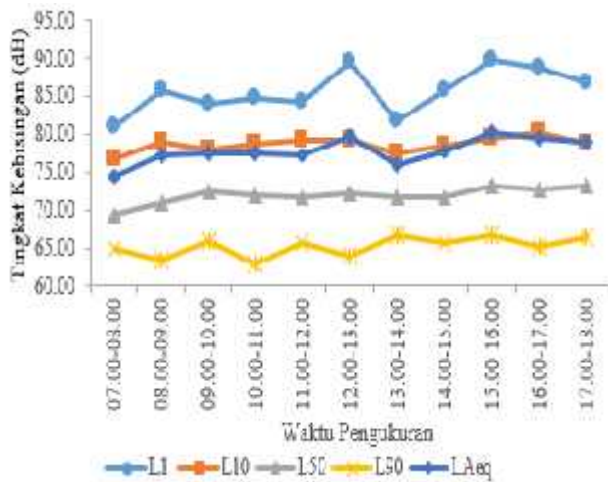


Titik Pengamatan R05

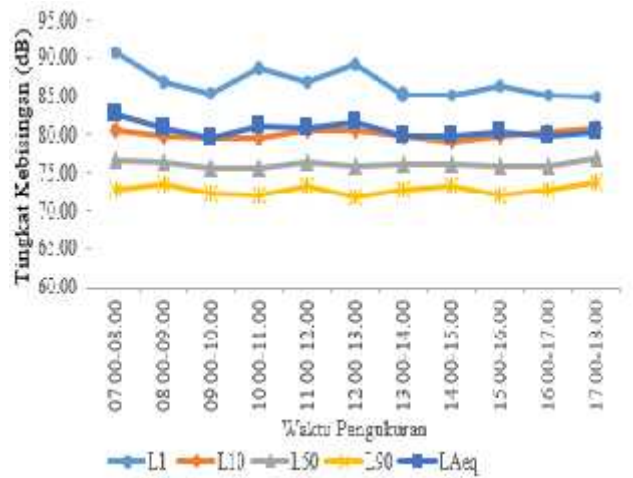


Titik Pengamatan R06

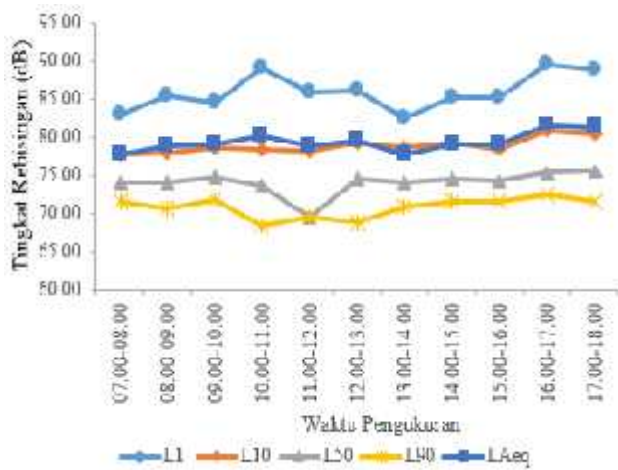




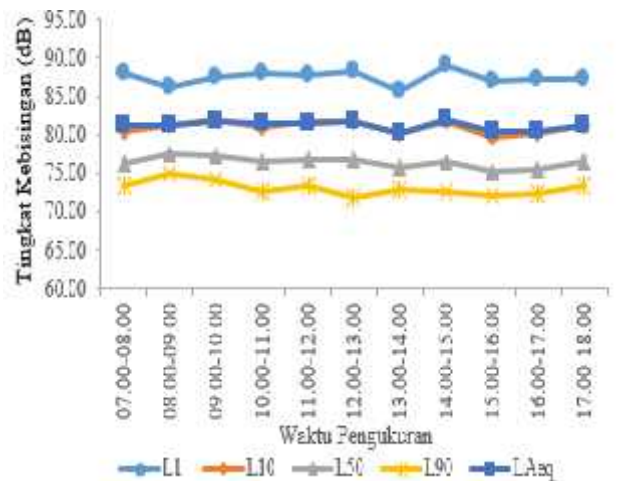
Titik Pengamatan R07



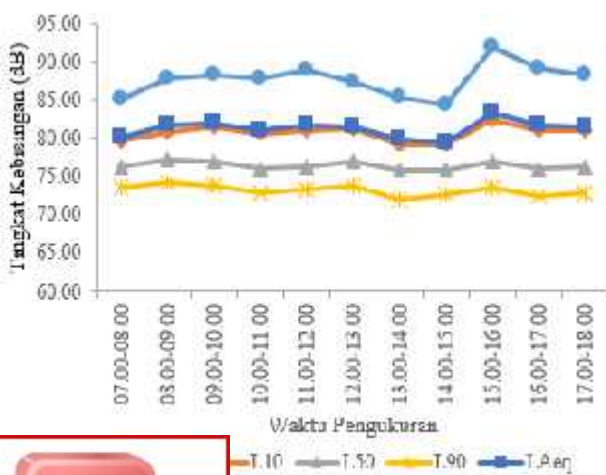
Titik Pengamatan R08



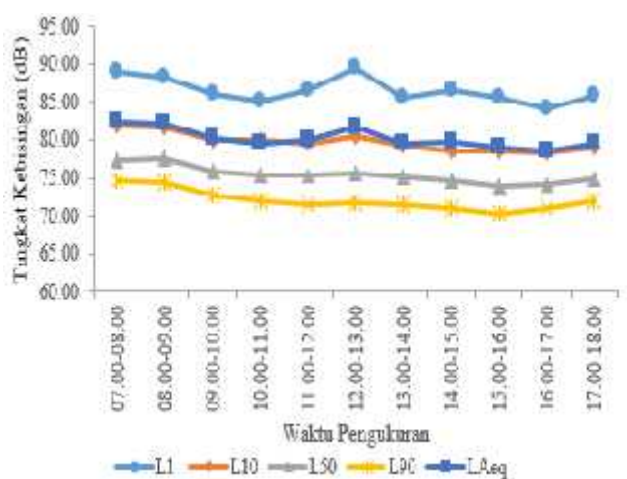
Titik Pengamatan R09



Titik Pengamatan R10

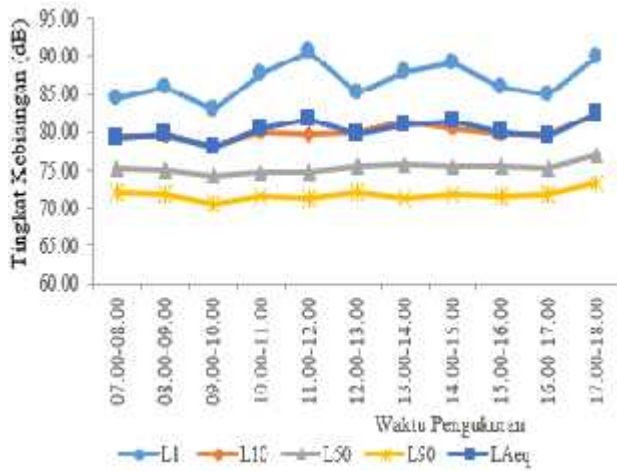


Titik Pengamatan R11

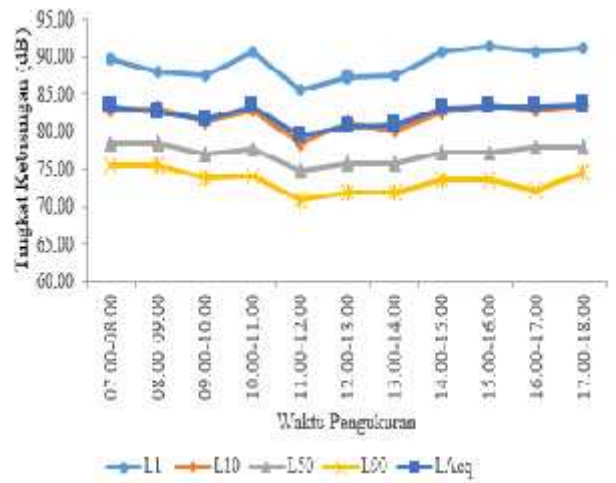


Titik Pengamatan R12

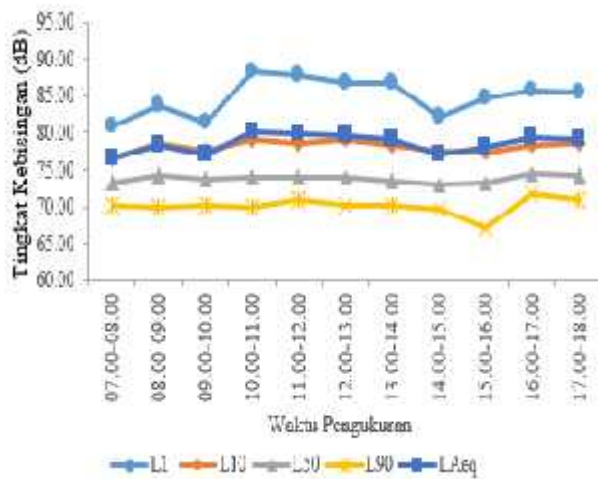




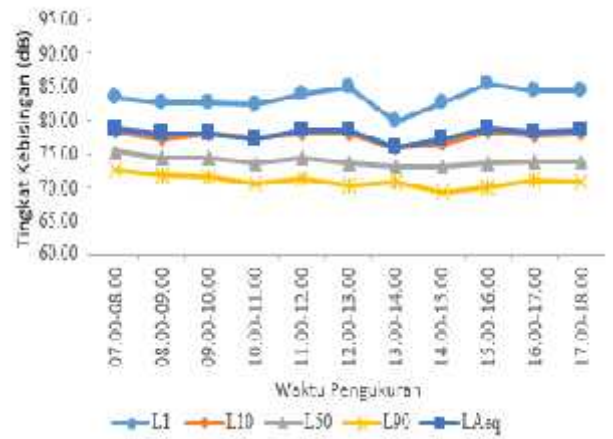
Titik Pengamatan R13



Titik Pengamatan R14



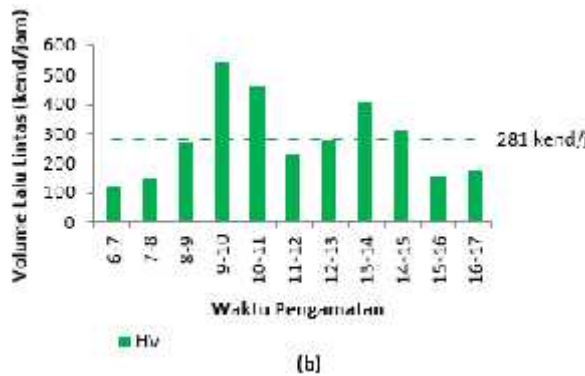
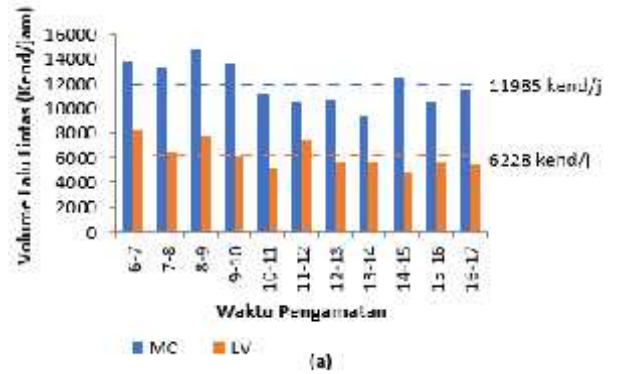
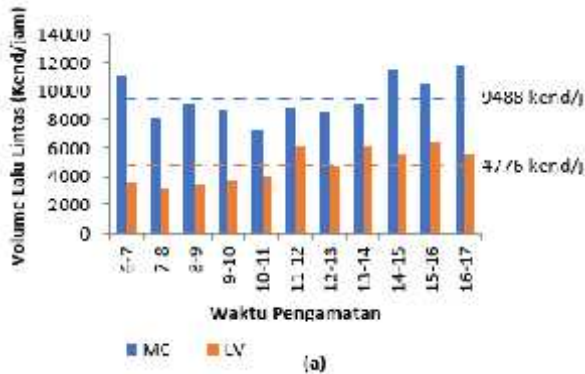
Titik Pengamatan R15



Titik Pengamatan R16

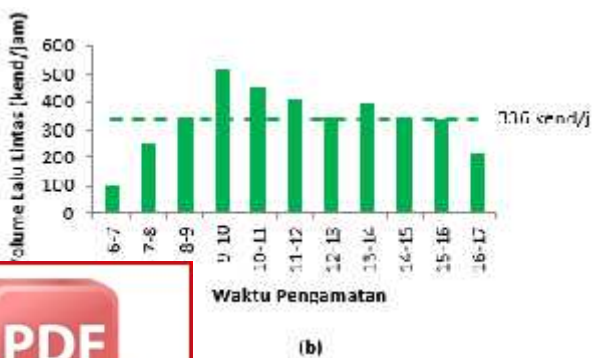
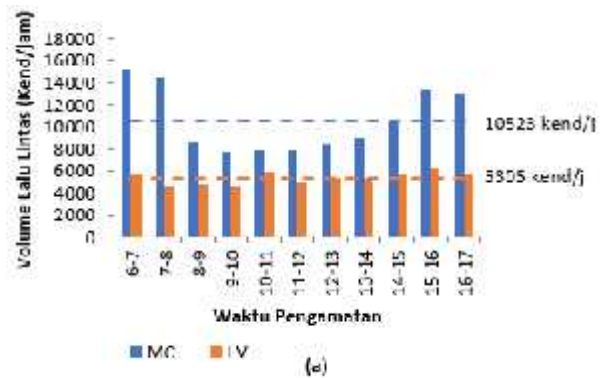
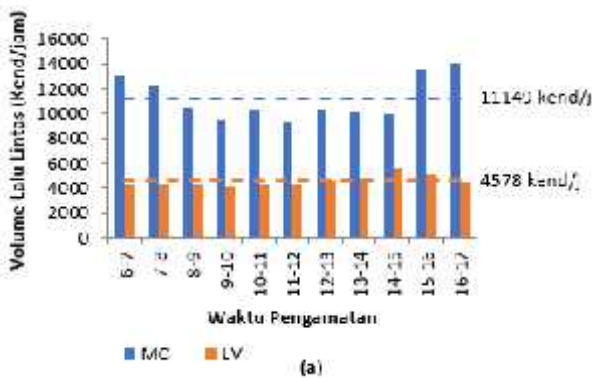


Lampiran 5 Data Volume Kendaraan



Titik R01 dan R09

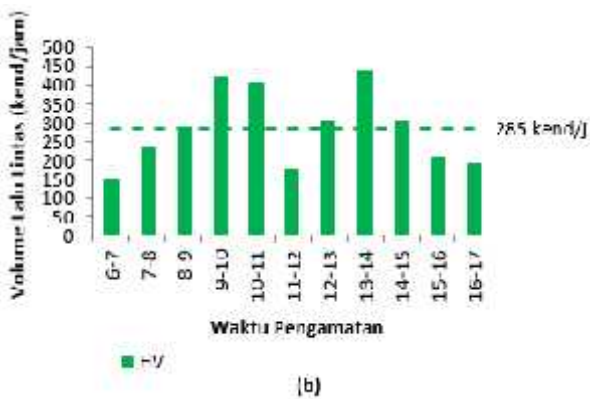
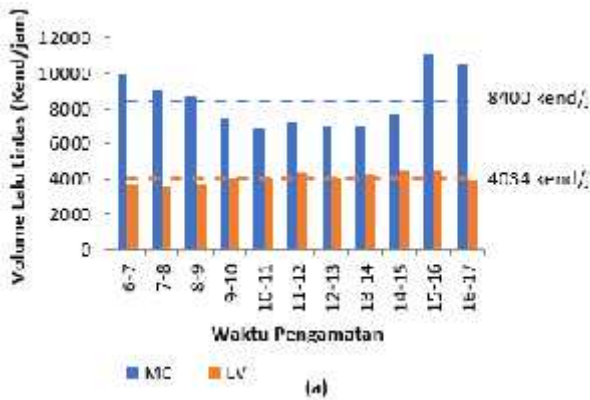
Titik R02 dan R10



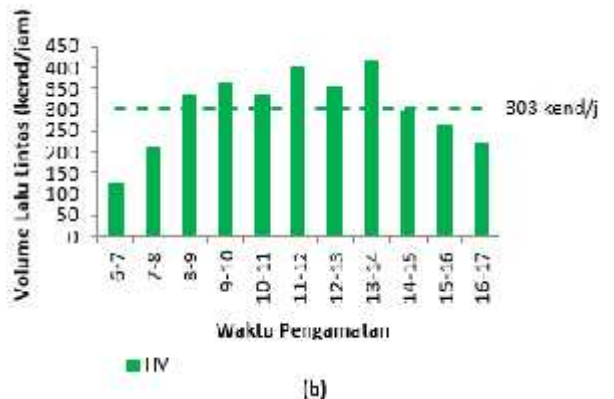
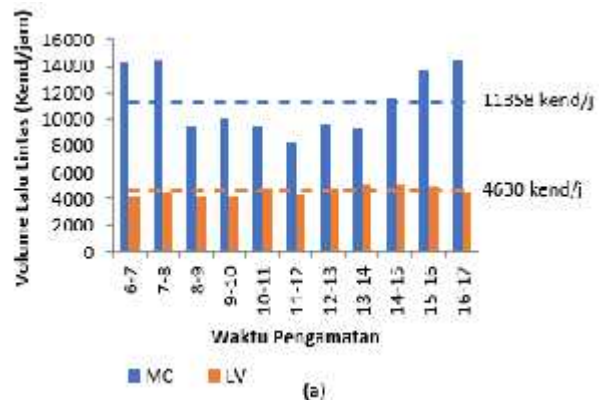
Titik R03 dan R11

Titik R04 dan R12

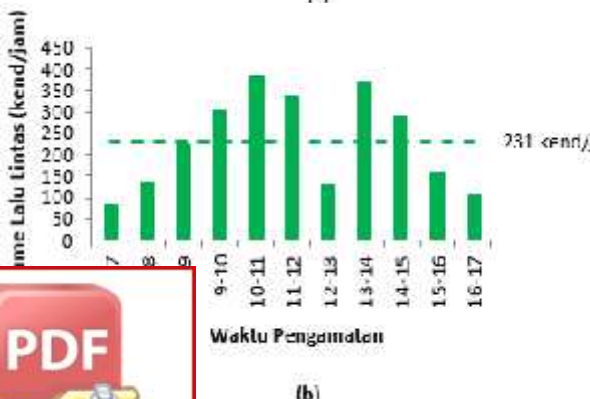
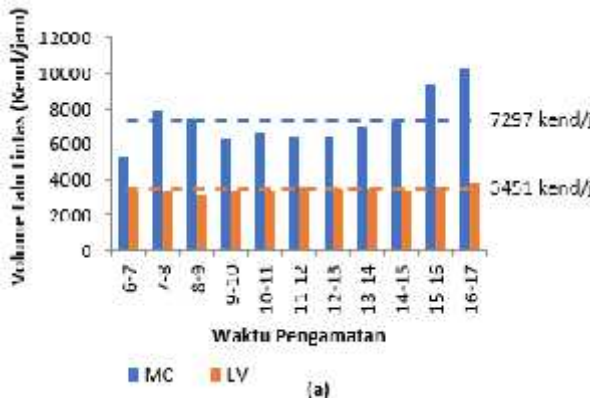




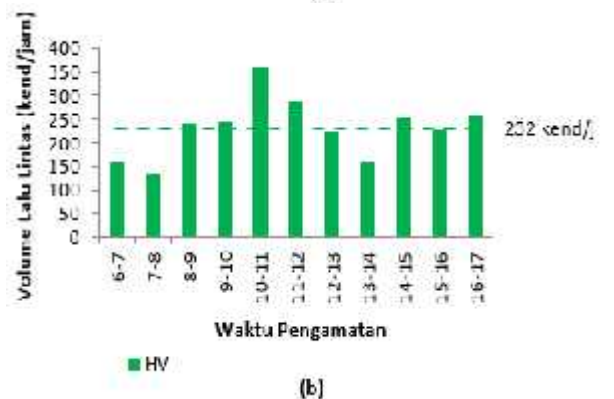
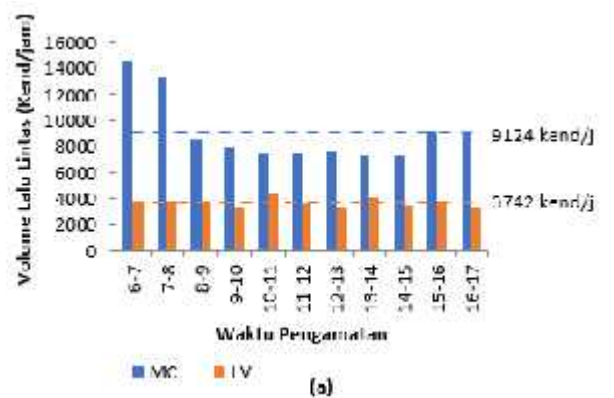
Titik R05 dan R13



Titik R06 dan R14



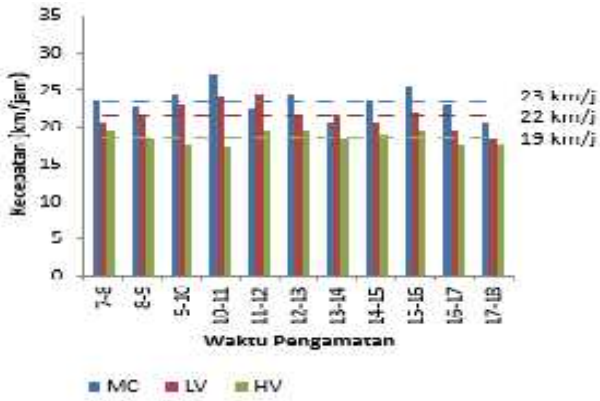
Titik R07 dan R15



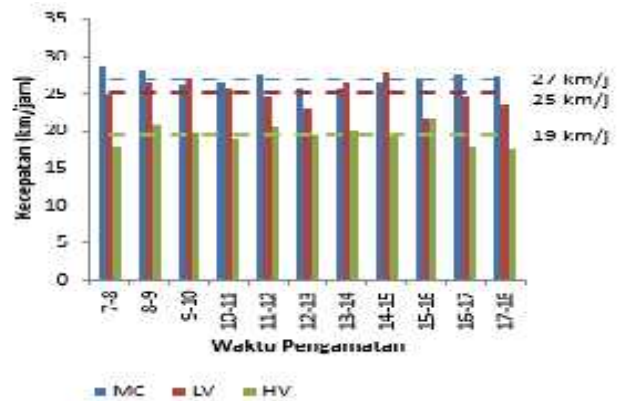
Titik R08 dan R16



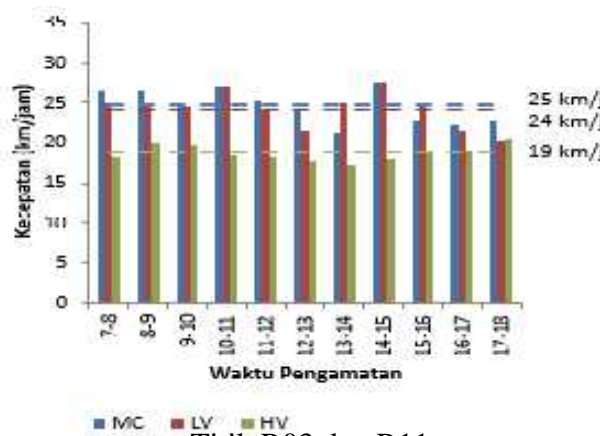
Lampiran 6 Kecepatan Kendaraan



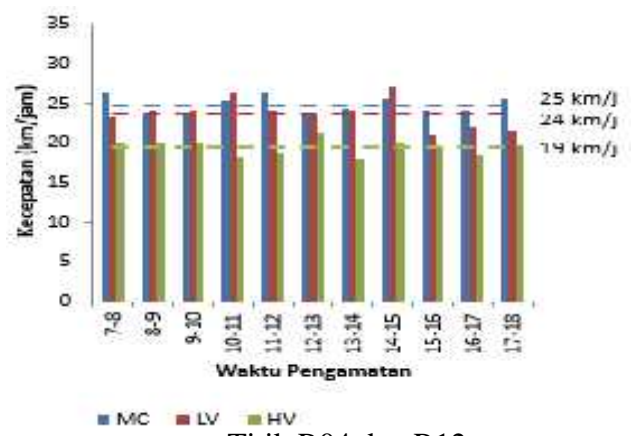
Titik R01 dan R09



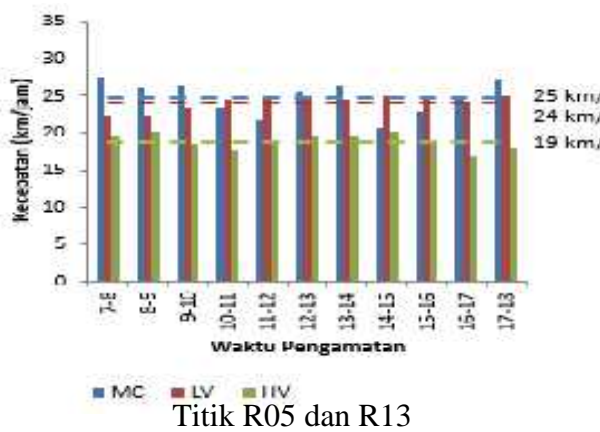
Titik R02 dan R10



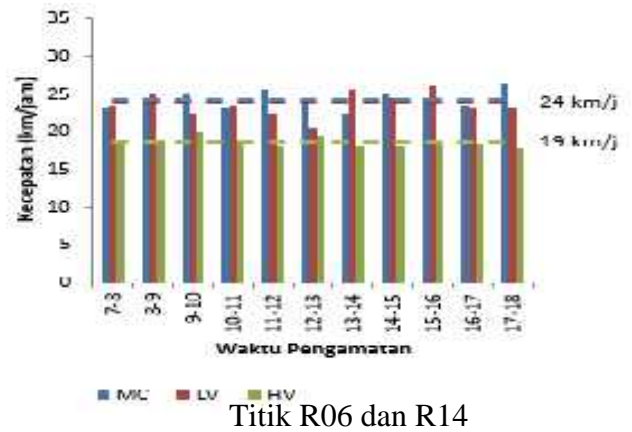
Titik R03 dan R11



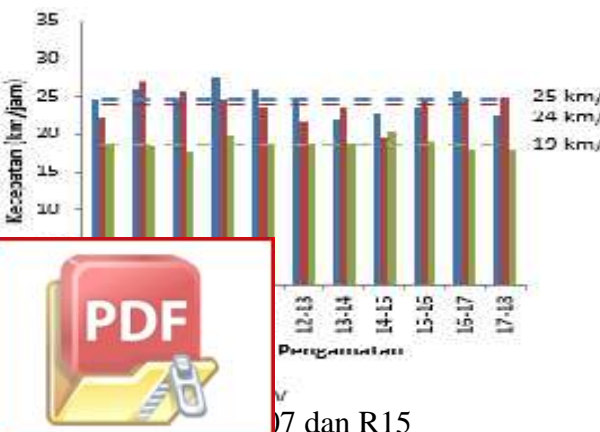
Titik R04 dan R12



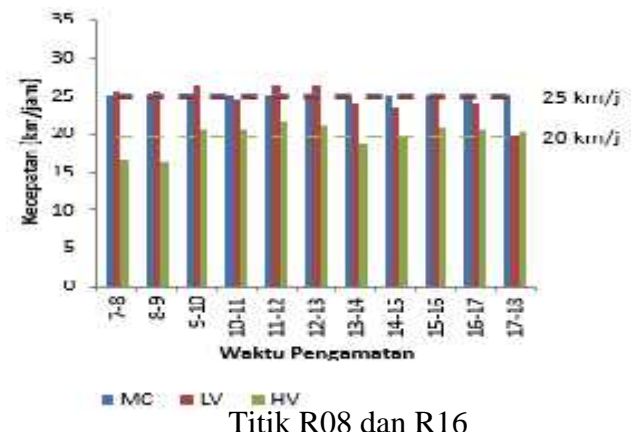
Titik R05 dan R13



Titik R06 dan R14



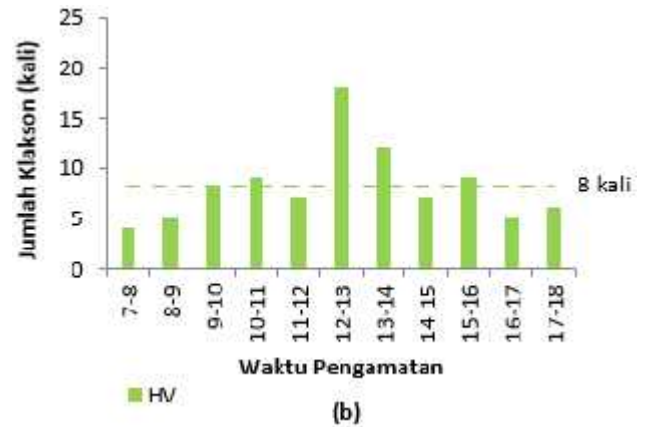
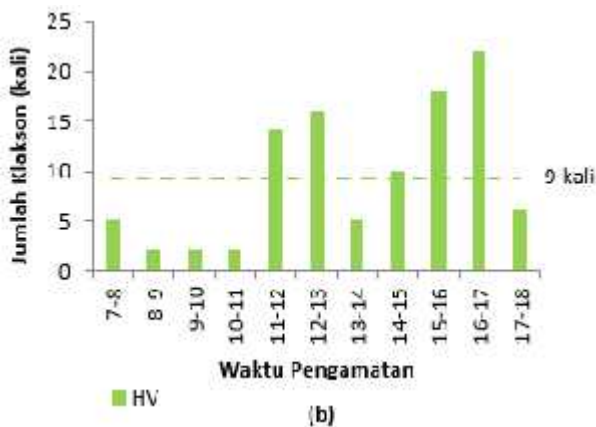
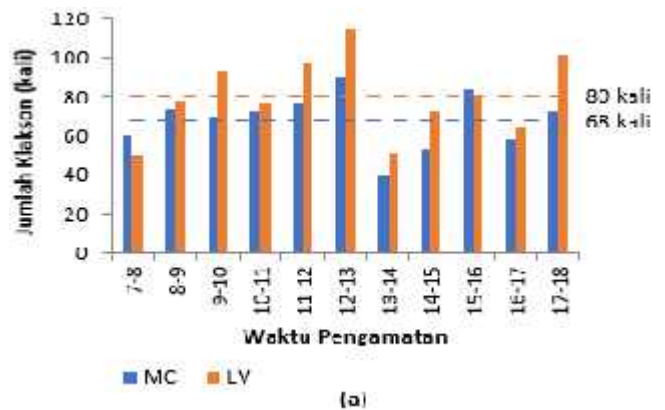
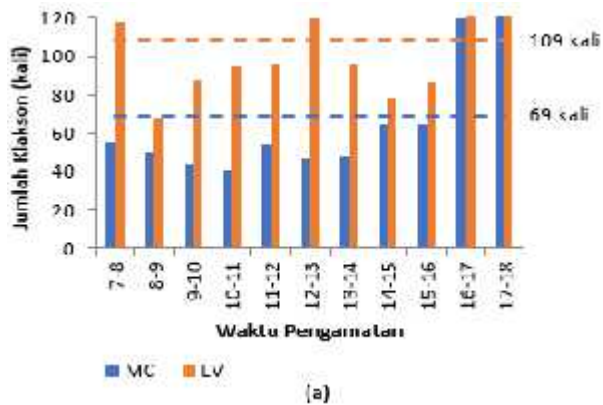
Titik R07 dan R15



Titik R08 dan R16

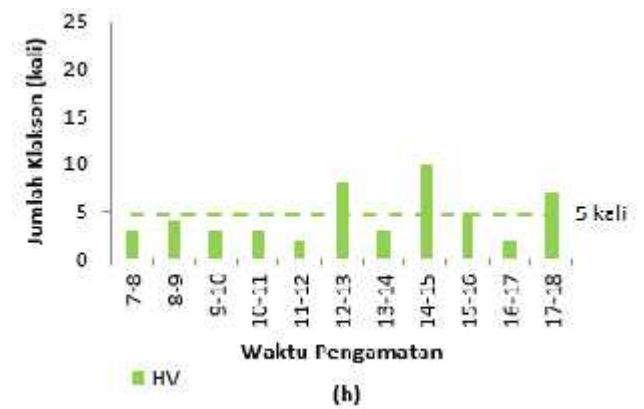
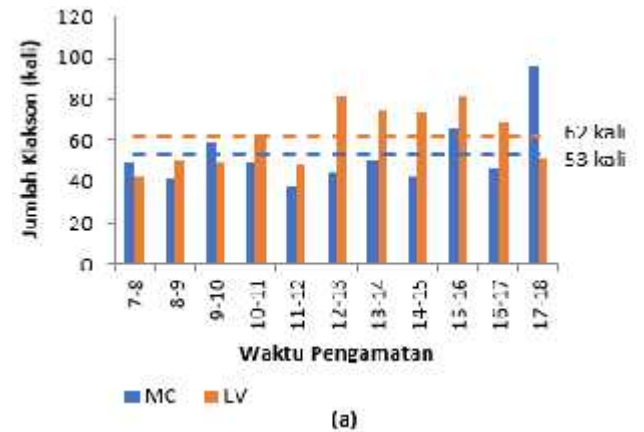
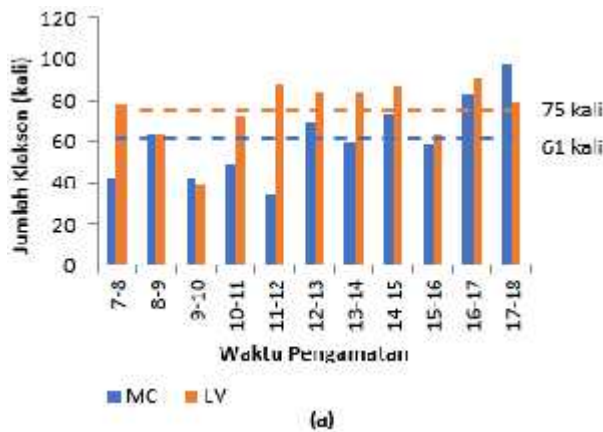


Lampiran 7 Jumlah Bunyi Klakson Kendaraan



Titik R01 dan R09

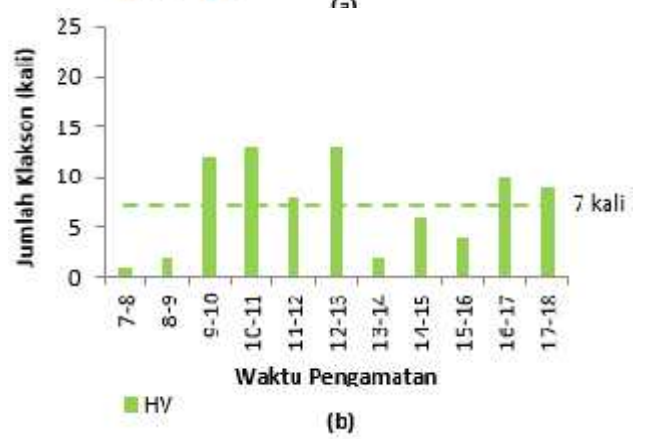
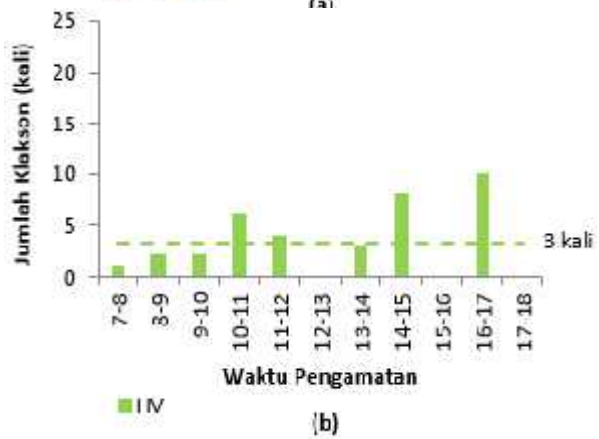
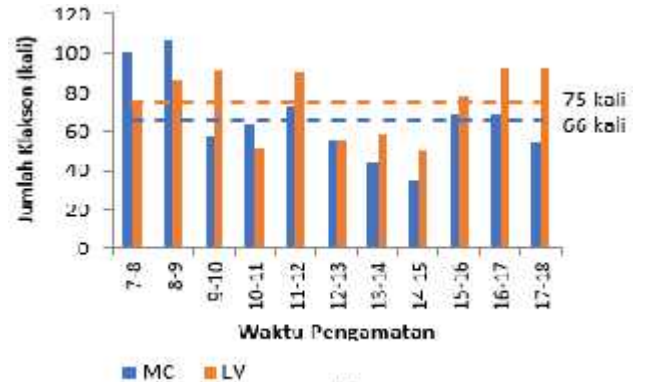
Titik R02 dan R10



03 dan R11

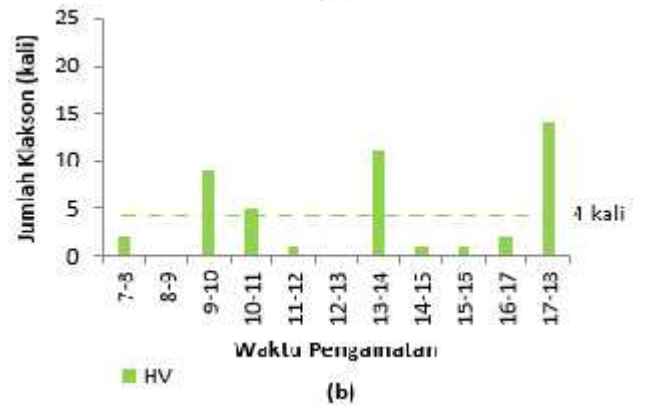
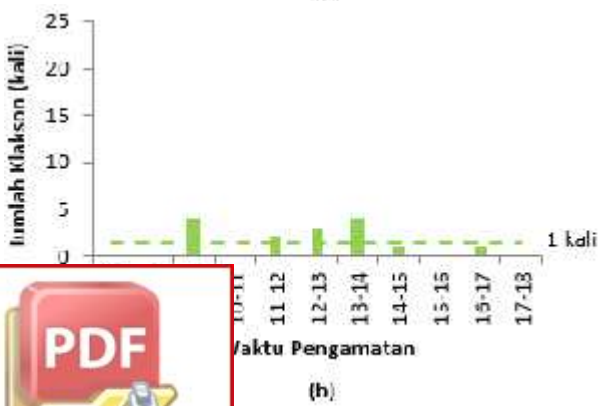
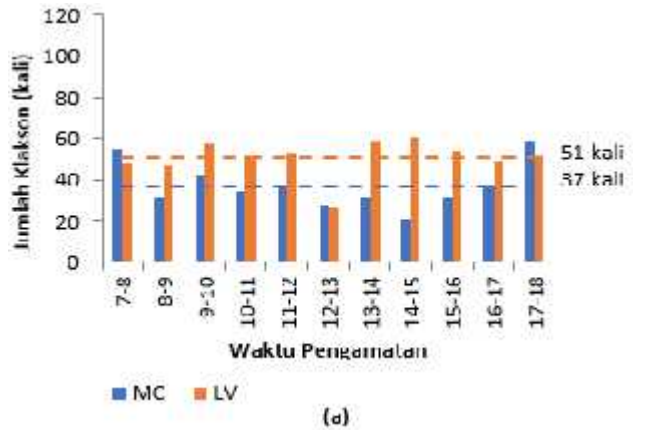
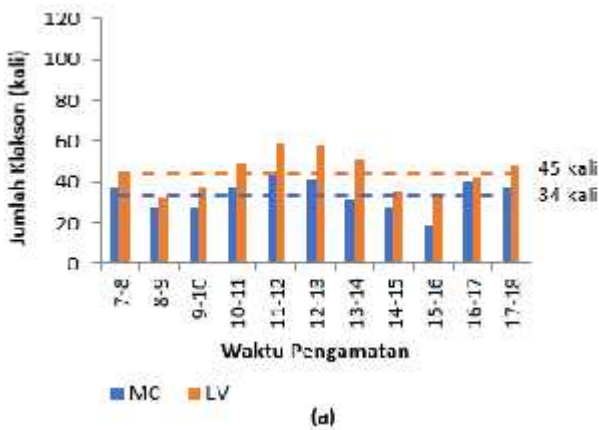
Titik R04 dan R12





Titik R05 dan R13

Titik R06 dan R14



Titik R07 dan R15

Titik R08 dan R16



Lampiran 8 Pengujian Validasi Hasil Prediksi

❖ Perbandingan nilai kebisingan hasil pengukuran dan kebisingan hasil prediksi ASJ-RTN 2008 pada jalan A.P. Pettarani

a) Tanpa Klakson

No	Titik Pengamatan	Pengukuran Langsung (dB)	Prediksi (dB)	X ²	Y ²	XY	(X-Y)	(X-Y) ²
1	R01	78.4	78.6	6146.56	6178.0	6162.2	-0.2	0.0
2	R02	80.1	80.9	6416.0	6544.8	6480.1	-0.8	0.6
3	R03	80.0	80.4	6400.0	6464.2	6432.0	-0.4	0.2
4	R04	81.2	80.1	6593.4	6416.0	6504.1	1.1	1.2
5	R05	80.1	79.8	6416.0	6368.0	6392.0	0.3	0.1
6	R06	80.6	79.7	6496.4	6352.1	6423.8	0.9	0.8
7	R07	78.1	78.0	6099.6	6084.0	6091.8	0.1	0.0
8	R08	80.7	79.6	6512.5	6336.2	6423.7	1.1	1.2
9	R09	79.5	80.3	6320.3	6448.1	6383.9	-0.8	0.6
10	R10	81.2	81.3	6593.4	6609.7	6601.6	-0.1	0.0
11	R11	81.3	79.9	6609.7	6384.0	6495.9	1.4	2.0
12	R12	80.4	78.5	6464.2	6162.3	6311.4	1.9	3.6
13	R13	80.5	77.3	6480.3	5975.3	6222.7	3.2	10.2
14	R14	82.5	79.3	6806.3	6288.5	6542.3	3.2	10.2
15	R15	78.7	76.9	6193.7	5913.6	6052.0	1.8	3.2
16	R16	78.0	79.0	6084.0	6241.0	6162.0	-1.0	1.0
Jumlah		1281.3	1269.6	102632.2	100765.7	101681.4	11.7	35.1

Korelasi Pearson

$$\begin{aligned}
 r &= \frac{n \cdot XY - X \cdot Y}{\sqrt{\{n \cdot X^2 - (X)^2\} \cdot \{n \cdot Y^2 - (Y)^2\}}} \\
 &= \frac{1626902.08 - 1281.3 \cdot 1269.6}{\sqrt{385.67 \cdot 366.4}} \\
 &= \frac{163.6}{\sqrt{141309.488}} \\
 &= \frac{163.6}{375.9115428} \\
 &= 0.4
 \end{aligned}$$

$$\begin{aligned}
 \text{RMSE} &= \sqrt{\frac{\sum (X-Y)^2}{n}} \\
 &= \sqrt{\frac{35.1}{16}} \\
 &= \sqrt{2.19375} \\
 &= 1.5
 \end{aligned}$$



b) Pakai Klakson

No	Titik Pengamatan	Pengukuran Langsung (dB)	Prediksi (dB)	X ²	Y ²	XY	(X-Y)	(X-Y) ²
1	R01	78.4	78.7	6146.56	6193.7	6170.1	-0.3	0.1
2	R02	80.1	80.9	6416.0	6544.8	6480.1	-0.8	0.6
3	R03	80.0	80.4	6400.0	6464.2	6432.0	-0.4	0.2
4	R04	81.2	80.1	6593.4	6416.0	6504.1	1.1	1.2
5	R05	80.1	79.9	6416.0	6384.0	6400.0	0.2	0.0
6	R06	80.6	79.7	6496.4	6352.1	6423.8	0.9	0.8
7	R07	78.1	78.1	6099.6	6099.6	6099.6	0.0	0.0
8	R08	80.7	79.7	6512.5	6352.1	6431.8	1.0	1.0
9	R09	79.5	80.4	6320.3	6464.2	6391.8	-0.9	0.8
10	R10	81.2	81.3	6593.4	6609.7	6601.6	-0.1	0.0
11	R11	81.3	79.9	6609.7	6384.0	6495.9	1.4	2.0
12	R12	80.4	78.5	6464.2	6162.3	6311.4	1.9	3.6
13	R13	80.5	77.7	6480.3	6037.3	6254.9	2.8	7.8
14	R14	82.5	79.3	6806.3	6288.5	6542.3	3.2	10.2
15	R15	78.7	77.0	6193.7	5929.0	6059.9	1.7	2.9
16	R16	78.0	79.1	6084.0	6256.8	6169.8	-1.1	1.2
Jumlah		1281.3	1270.7	102632.2	100938.2	101768.9	10.6	32.5

Korelasi Pearson

$$\begin{aligned}
 r &= \frac{n \cdot XY - X \cdot Y}{\sqrt{\{n \cdot X^2 - (X)^2\} \cdot \{n \cdot Y^2 - (Y)^2\}}} \\
 &= \frac{1628302.88}{385.67} \quad - \quad \frac{162814}{8} \\
 &= \frac{154.97}{128131.1441} \quad \times \quad 332.23 \\
 &= \frac{154.97}{357.9541089} \\
 &= 0.4
 \end{aligned}$$

$$\begin{aligned}
 RMSE &= \frac{(X-Y)^2}{n} \\
 &= \frac{32.5}{16} \\
 &= 2.0325 \\
 &= 1.4
 \end{aligned}$$



Lampiran 9 Data Hasil Uji t

- Uji t Hasil Pengukuran

Tabel Nilai Tingkat Kebisingan Hasil Pengukuran Jalan A.P. Pettarani Makassar

Titik Pengamatan	LAeq Arah Fly Over ke Alauddin (dB)	Titik Pengamatan	LAeq Arah Alauddin ke Fly Over (dB)
R01	78.4	R09	79.5
R02	80.1	R10	81.2
R03	80.0	R11	81.4
R04	81.2	R12	80.4
R05	80.1	R13	80.4
R06	80.6	R14	82.5
R07	78.1	R15	78.7
R08	80.8	R16	78.0

Uji t

Ho LAeq Arah Fly Over ke Alauddin = LAeq Arah Alauddin ke Fly Over

Ha LAeq Arah Fly Over ke Alauddin LAeq Arah Alauddin ke Fly Over

Hasil :

t hitung = -0.69

t tabel = 2.36

t hitung < t tabel

Kesimpulan : Ho diterima

Arah Fly Over ke Alauddin dan Arah Alauddin ke Fly over

	LAeq Arah Fly Over ke Alauddin	LAeq Arah Alauddin ke Fly Over
Mean	79.8975	80.2675
Variance	1.217479	2.163907
Observations	8	8
Pearson Correlation	0.34663	
Hypothesized Mean Difference	0	
df	7	
t Stat	-0.69673	
P(T<=t) one-tail	0.254221	
t Critical one-tail	1.894579	
P(T<=t) two-tail	0.508442	
t Critical two-tail	2.364624	



Lampiran 11 Skenario Volume Kendaraan

Skenario 1

Kode Titik	Volume Kendaraan Jalan Tol Layang 25%			Volume Kendaraan Jalan A.P Pettarani 75%			Volume Kendaraan Jalan A.P Pettarani 80%			Volume Kendaraan Jalan A.P Pettarani 85%			Volume Kendaraan Jalan A.P Pettarani 95%		
	1 LV	2 HV	3 MC	1 LV	2 HV	3 MC	1 LV	2 HV	3 MC	1 LV	2 HV	3 MC	1 LV	2 HV	3 MC
	R01	2189	129	0	6567	387	17394	7005	413	17394	7443	439	17394	7880	464
R02	2855	116	0	8564	347	21973	9134	370	25157	9705	393	25157	10276	416	25157
R03	2098	154	0	6295	462	20439	6714	493	23401	7134	524	23401	7554	554	23401
R04	2431	135	0	7294	404	19292	7780	430	22087	8266	457	22087	8753	484	22087
R05	1849	131	0	5546	392	15400	5916	418	17631	6286	445	17631	6656	471	17631
R06	2122	139	0	6366	417	20823	6790	445	23840	7215	473	23840	7639	500	23840
R07	1582	106	0	4745	318	13377	5061	339	15315	5377	360	15315	5693	382	15315
R08	1715	107	0	5145	320	16728	5488	341	19152	5831	362	19152	6174	383	19152
R09	2189	129	0	6567	387	17394	7005	413	19914	7443	439	19914	7880	464	19914
R10	2855	116	0	8564	347	21973	9134	370	25157	9705	393	25157	10276	416	25157
R11	2098	154	0	6295	462	20439	6714	493	23401	7134	524	23401	7554	554	23401
R12	2431	135	0	7294	404	19292	7780	430	22087	8266	457	22087	8753	484	22087
R13	1849	131	0	5546	392	15400	5916	418	17631	6286	445	17631	6656	471	17631
R14	2122	139	0	6366	417	20823	6790	445	23840	7215	473	23840	7639	500	23840
R15	1582	106	0	4745	318	13377	5061	339	15315	5377	360	15315	5693	382	15315
R16	1715	107	0	5145	320	16728	5488	341	19152	5831	362	19152	6174	383	19152

Skenario 2

Kode Titik	Volume Kendaraan Jalan Tol Layang 50%			Volume Kendaraan Jalan A.P Pettarani 50%			Volume Kendaraan Jalan A.P Pettarani 75%			Volume Kendaraan Jalan A.P Pettarani 80%			Volume Kendaraan Jalan A.P Pettarani 85%			Volume Kendaraan Jalan A.P Pettarani 95%		
	1 LV	2 HV	3 MC	1 LV	2 HV	3 MC	1 LV	2 HV	3 MC	1 LV	2 HV	3 MC	1 LV	2 HV	3 MC	1 LV	2 HV	3 MC
	R01	4378	258	0	1751	103	17394	8984	550	18612	8984	550	18612	8984	550	18612	8984	550
R02	5709	231	0	2284	92	21973	11737	491	23511	11737	491	23511	11737	491	23511	11737	491	23511
R03	4197	308	0	1679	123	20439	8709	653	21870	8709	653	21870	8709	653	21870	8709	653	21870
R04	4863	269	0	1945	108	19292	10161	565	20642	10161	565	20642	10161	565	20642	10161	565	20642
R05	3698	262	0	1479	105	15400	7612	557	16478	7612	557	16478	7612	557	16478	7612	557	16478
R06	4244	278	0	1698	111	20823	8752	587	22281	8752	587	22281	8752	587	22281	8752	587	22281
R07	3163	212	0	1265	85	13377	6478	446	14313	6478	446	14313	6478	446	14313	6478	446	14313
	13	0	0	1372	85	16728	6958	443	17899	6958	443	17899	6958	443	17899	6958	443	17899
	58	0	0	1751	103	17394	8984	550	18612	8984	550	18612	8984	550	18612	8984	550	18612
	31	0	0	2284	92	21973	11737	491	23511	11737	491	23511	11737	491	23511	11737	491	23511
	08	0	0	1679	123	20439	8709	653	21870	8709	653	21870	8709	653	21870	8709	653	21870
	69	0	0	1945	108	19292	10161	565	20642	10161	565	20642	10161	565	20642	10161	565	20642
	62	0	0	1479	105	15400	7612	557	16478	7612	557	16478	7612	557	16478	7612	557	16478
	78	0	0	1698	111	20823	8752	587	22281	8752	587	22281	8752	587	22281	8752	587	22281
	12	0	0	1265	85	13377	6478	446	14313	6478	446	14313	6478	446	14313	6478	446	14313
	13	0	0	1372	85	16728	6958	443	17899	6958	443	17899	6958	443	17899	6958	443	17899



Skenario 3

Kode Titik	Volume Kendaraan Jalan Tol Layang 75%			Volume Kendaraan Jalan A.P Pettarani 25%			Volume Kendaraan Jalan A.P Pettarani 40%			Volume Kendaraan Jalan A.P Pettarani 50%			Volume Kendaraan Jalan A.P Pettarani 75%			Volume Kendaraan Jalan A.P Pettarani 80%		
	1 LV	2 HV	3 MC	1 LV	2 HV	3 MC	1 LV	2 HV	3 MC	1 LV	2 HV	3 MC	1 LV	2 HV	3 MC	1 LV	2 HV	3 MC
	R01	6567	387	0	2189	129	17394	1642	97	17394	1751	103	17394	6567	387	17394	7005	413
R02	8564	347	0	2855	116	21973	2141	87	21973	2284	92	21973	8564	347	21973	9134	370	21973
R03	6295	462	0	2098	154	20439	1574	116	20439	1679	123	20439	6295	462	20439	6714	493	20439
R04	7294	404	0	2431	135	19292	1823	101	19292	1945	108	19292	7294	404	19292	7780	430	19292
R05	5546	392	0	1849	131	15400	1387	98	15400	1479	105	15400	5546	392	15400	5916	418	15400
R06	6366	417	0	2122	139	20823	1592	104	20823	1698	111	20823	6366	417	20823	6790	445	20823
R07	4745	318	0	1582	106	13377	1186	80	13377	1265	85	13377	4745	318	13377	5061	339	13377
R08	5145	320	0	1715	107	16728	1286	80	16728	1372	85	16728	5145	320	16728	5488	341	16728
R09	6567	387	0	2189	129	17394	1642	97	17394	1751	103	17394	6567	387	17394	7005	413	17394
R10	8564	347	0	2855	116	21973	2141	87	21973	2284	92	21973	8564	347	21973	9134	370	21973
R11	6295	462	0	2098	154	20439	1574	116	20439	1679	123	20439	6295	462	20439	6714	493	20439
R12	7294	404	0	2431	135	19292	1823	101	19292	1945	108	19292	7294	404	19292	7780	430	19292
R13	5546	392	0	1849	131	15400	1387	98	15400	1479	105	15400	5546	392	15400	5916	418	15400
R14	6366	417	0	2122	139	20823	1592	104	20823	1698	111	20823	6366	417	20823	6790	445	20823
R15	4745	318	0	1582	106	13377	1186	80	13377	1265	85	13377	4745	318	13377	5061	339	13377
R16	5145	320	0	1715	107	16728	1286	80	16728	1372	85	16728	5145	320	16728	5488	341	16728

Volume Kendaraan Jalan A.P Pettarani 85%			Volume Kendaraan Jalan A.P Pettarani 95%		
1 LV	2 HV	3 MC	1 LV	2 HV	3 MC
7443	439	17394	7880	464	17394
9705	393	21973	10276	416	21973
7134	524	20439	7554	554	20439
8266	457	19292	8753	484	19292
6286	445	15400	6656	471	15400
7215	473	20823	7639	500	20823
5377	360	13377	5693	382	13377
5831	362	16728	6174	383	16728
7443	439	17394	7880	464	17394
9705	393	21973	10276	416	21973
7134	524	20439	7554	554	20439
8266	457	19292	8753	484	19292
6286	445	15400	6656	471	15400
7215	473	20823	7639	500	20823
5377	360	13377	5693	382	13377
5831	362	16728	6174	383	16728



Optimization Software:
www.balesio.com

Lampiran 12 Rekapitulasi Skenario Model V-S-D Jalan AP Pettarani

REKAPITULASI MODEL V-S-D volume 25%

Kode Ruas	Model VSD						R ²	Model yang digunakan			
	S-D			V-D							
R01	S =	25.83	$e^{(D - 0.0011)}$	V =	25.83	$D \cdot e^{(D - 0.0011)}$	V =	871.37	$S \cdot \ln(25.833 / S)$	0.955	Model Underwood
R02	S =	25.51	$e^{(D - 0.0004)}$	V =	25.51	$D \cdot e^{(D - 0.0004)}$	V =	2570.39	$S \cdot \ln(25.510 / S)$	0.936	Model Underwood
R03	S =	29.69	$e^{(D - 0.0015)}$	V =	29.69	$D \cdot e^{(D - 0.0015)}$	V =	647.61	$S \cdot \ln(29.687 / S)$	0.920	Model Underwood
R04	S =	24.70	$e^{(D - 0.0005)}$	V =	24.70	$D \cdot e^{(D - 0.0005)}$	V =	2063.40	$S \cdot \ln(24.701 / S)$	0.985	Model Underwood
R05	S =	24.19	$e^{(D - 0.0005)}$	V =	24.19	$D \cdot e^{(D - 0.0005)}$	V =	2069.53	$S \cdot \ln(24.186 / S)$	0.968	Model Underwood
R06	S =	21.69	$e^{(D + 0.0001)}$	V =	21.69	$D \cdot e^{(D + 0.0001)}$	V =	-8134.50	$S \cdot \ln(21.694 / S)$	0.989	Model Underwood
R07	S =	23.94	$e^{(D - 0.0006)}$	V =	23.94	$D \cdot e^{(D - 0.0006)}$	V =	1756.41	$S \cdot \ln(23.936 / S)$	0.959	Model Underwood
R08	S =	26.85	$e^{(D - 0.0011)}$	V =	26.85	$D \cdot e^{(D - 0.0011)}$	V =	940.03	$S \cdot \ln(26.848 / S)$	0.989	Model Underwood
R09	S =	25.83	$e^{(D - 0.0011)}$	V =	25.83	$D \cdot e^{(D - 0.0011)}$	V =	871.37	$S \cdot \ln(25.833 / S)$	0.955	Model Underwood
R10	S =	24.43	$e^{(D - 0.0001)}$	V =	24.43	$D \cdot e^{(D - 0.0001)}$	V =	7610.92	$S \cdot \ln(24.435 / S)$	0.973	Model Underwood
R11	S =	29.69	$e^{(D - 0.0015)}$	V =	29.69	$D \cdot e^{(D - 0.0015)}$	V =	647.61	$S \cdot \ln(29.687 / S)$	0.920	Model Underwood
R12	S =	24.70	$e^{(D - 0.0005)}$	V =	24.70	$D \cdot e^{(D - 0.0005)}$	V =	2063.40	$S \cdot \ln(24.701 / S)$	0.985	Model Underwood
R13	S =	24.19	$e^{(D - 0.0005)}$	V =	24.19	$D \cdot e^{(D - 0.0005)}$	V =	2069.53	$S \cdot \ln(24.186 / S)$	0.968	Model Underwood
R14	S =	21.69	$e^{(D + 0.0001)}$	V =	21.69	$D \cdot e^{(D + 0.0001)}$	V =	-8134.50	$S \cdot \ln(21.694 / S)$	0.989	Model Underwood
R15	S =	26.13	$e^{(D - 0.0012)}$	V =	26.13	$D \cdot e^{(D - 0.0012)}$	V =	807.68	$S \cdot \ln(26.134 / S)$	0.870	Model Underwood
R16	S =	25.74	$e^{(D - 0.0008)}$	V =	25.74	$D \cdot e^{(D - 0.0008)}$	V =	1289.99	$S \cdot \ln(25.739 / S)$	0.976	Model Underwood



REKAPITULASI MODEL V-S-D volume 40%

Kode Ruas	Model VSD									R ²	Model yang digunakan
	S-D			V-D			V-S				
R01	S =	25.54	*e ^(D -0.0009)	V =	25.54	*D*e ^(D -0.0009)	V =	1117.74	*S*Ln(25.544 /S)	0.957	Model Underwood
R02	S =	25.41	*e ^(D -0.0003)	V =	25.41	*D*e ^(D -0.0003)	V =	3277.69	*S*Ln(25.413 /S)	0.938	Model Underwood
R03	S =	31.09	*e ^(D -0.0015)	V =	31.09	*D*e ^(D -0.0015)	V =	658.04	*S*Ln(31.091 /S)	0.904	Model Underwood
R04	S =	25.23	*e ^(D -0.0005)	V =	25.23	*D*e ^(D -0.0005)	V =	2004.15	*S*Ln(25.232 /S)	0.980	Model Underwood
R05	S =	25.46	*e ^(D -0.0007)	V =	25.46	*D*e ^(D -0.0007)	V =	1426.61	*S*Ln(25.457 /S)	0.955	Model Underwood
R06	S =	21.63	*e ^(D 0.0001)	V =	21.63	*D*e ^(D 0.0001)	V =	-8464.83	*S*Ln(21.627 /S)	0.984	Model Underwood
R07	S =	24.68	*e ^(D -0.0007)	V =	24.68	*D*e ^(D -0.0007)	V =	1474.65	*S*Ln(24.677 /S)	0.946	Model Underwood
R08	S =	27.40	*e ^(D -0.0010)	V =	27.40	*D*e ^(D -0.0010)	V =	981.05	*S*Ln(27.398 /S)	0.983	Model Underwood
R09	S =	25.54	*e ^(D -0.0009)	V =	25.54	*D*e ^(D -0.0009)	V =	1117.74	*S*Ln(25.544 /S)	0.957	Model Underwood
R10	S =	24.52	*e ^(D -0.0001)	V =	24.52	*D*e ^(D -0.0001)	V =	8090.09	*S*Ln(24.522 /S)	0.973	Model Underwood
R11	S =	31.09	*e ^(D -0.0015)	V =	31.09	*D*e ^(D -0.0015)	V =	658.04	*S*Ln(31.091 /S)	0.904	Model Underwood
R12	S =	25.23	*e ^(D -0.0005)	V =	25.23	*D*e ^(D -0.0005)	V =	2004.15	*S*Ln(25.232 /S)	0.980	Model Underwood
R13	S =	25.46	*e ^(D -0.0007)	V =	25.46	*D*e ^(D -0.0007)	V =	1426.61	*S*Ln(25.457 /S)	0.955	Model Underwood
R14	S =	21.63	*e ^(D 0.0001)	V =	21.63	*D*e ^(D 0.0001)	V =	-8464.83	*S*Ln(21.627 /S)	0.984	Model Underwood
R15	S =	26.13	*e ^(D -0.0012)	V =	26.13	*D*e ^(D -0.0012)	V =	807.68	*S*Ln(26.134 /S)	0.870	Model Underwood
R16	S =	25.74	*e ^(D -0.0008)	V =	25.74	*D*e ^(D -0.0008)	V =	1289.99	*S*Ln(25.739 /S)	0.976	Model Underwood



REKAPITULASI MODEL V-S-D volume 50%

Kode Ruas	Model VSD									R ²	Model yang digunakan
	S-D			V-D			V-S				
R01	S =	25.35	*e^(D -0.0008)	V =	25.35	*D*e^(D -0.0008)	V =	1299.16	*S*Ln(25.353 /S)	0.959	Model Underwood
R02	S =	25.34	*e^(D -0.0003)	V =	25.34	*D*e^(D -0.0003)	V =	3808.83	*S*Ln(25.341 /S)	0.940	Model Underwood
R03	S =	31.83	*e^(D -0.0015)	V =	31.83	*D*e^(D -0.0015)	V =	677.76	*S*Ln(31.825 /S)	0.896	Model Underwood
R04	S =	25.56	*e^(D -0.0005)	V =	25.56	*D*e^(D -0.0005)	V =	2000.35	*S*Ln(25.555 /S)	0.977	Model Underwood
R05	S =	26.31	*e^(D -0.0008)	V =	26.31	*D*e^(D -0.0008)	V =	1246.80	*S*Ln(26.306 /S)	0.949	Model Underwood
R06	S =	21.59	*e^(D 0.0001)	V =	21.59	*D*e^(D 0.0001)	V =	-8818.58	*S*Ln(21.594 /S)	0.980	Model Underwood
R07	S =	25.17	*e^(D -0.0007)	V =	25.17	*D*e^(D -0.0007)	V =	1369.80	*S*Ln(25.173 /S)	0.938	Model Underwood
R08	S =	27.73	*e^(D -0.0010)	V =	27.73	*D*e^(D -0.0010)	V =	1011.59	*S*Ln(27.729 /S)	0.978	Model Underwood
R09	S =	25.35	*e^(D -0.0008)	V =	25.35	*D*e^(D -0.0008)	V =	1299.16	*S*Ln(25.353 /S)	0.959	Model Underwood
R10	S =	24.55	*e^(D -0.0001)	V =	24.55	*D*e^(D -0.0001)	V =	8665.69	*S*Ln(24.552 /S)	0.974	Model Underwood
R11	S =	31.83	*e^(D -0.0015)	V =	31.83	*D*e^(D -0.0015)	V =	677.76	*S*Ln(31.825 /S)	0.896	Model Underwood
R12	S =	25.56	*e^(D -0.0005)	V =	25.56	*D*e^(D -0.0005)	V =	2000.35	*S*Ln(25.555 /S)	0.977	Model Underwood
R13	S =	26.31	*e^(D -0.0008)	V =	26.31	*D*e^(D -0.0008)	V =	1246.80	*S*Ln(26.306 /S)	0.949	Model Underwood
R14	S =	21.59	*e^(D 0.0001)	V =	21.59	*D*e^(D 0.0001)	V =	-8818.58	*S*Ln(21.594 /S)	0.980	Model Underwood
R15	S =	26.13	*e^(D -0.0012)	V =	26.13	*D*e^(D -0.0012)	V =	807.68	*S*Ln(26.134 /S)	0.870	Model Underwood
R16	S =	25.74	*e^(D -0.0008)	V =	25.74	*D*e^(D -0.0008)	V =	1289.99	*S*Ln(25.739 /S)	0.976	Model Underwood



REKAPITULASI MODEL V-S-D volume 75%

Kode Ruas	Model VSD						R ²	Model yang digunakan
	S-D		V-D		V-S			
R01	S =	25.01 *e^(D -0.0005)	V =	25.01 *D*e^(D -0.0005)	V =	1909.38 *S*Ln(25.009 /S)	0.962	Model Underwood
R02	S =	25.16 *e^(D -0.0002)	V =	25.16 *D*e^(D -0.0002)	V =	5760.01 *S*Ln(25.164 /S)	0.943	Model Underwood
R03	S =	33.13 *e^(D -0.0012)	V =	33.13 *D*e^(D -0.0012)	V =	807.81 *S*Ln(33.128 /S)	0.878	Model Underwood
R04	S =	26.07 *e^(D -0.0004)	V =	26.07 *D*e^(D -0.0004)	V =	2294.02 *S*Ln(26.066 /S)	0.973	Model Underwood
R05	S =	26.19 *e^(D -0.0005)	V =	26.19 *D*e^(D -0.0005)	V =	2149.62 *S*Ln(26.186 /S)	0.949	Model Underwood
R06	S =	21.57 *e^(D 0.0001)	V =	21.57 *D*e^(D 0.0001)	V =	-11173.75 *S*Ln(21.565 /S)	0.971	Model Underwood
R07	S =	25.10 *e^(D -0.0004)	V =	25.10 *D*e^(D -0.0004)	V =	2350.83 *S*Ln(25.099 /S)	0.939	Model Underwood
R08	S =	27.67 *e^(D -0.0006)	V =	27.67 *D*e^(D -0.0006)	V =	1717.52 *S*Ln(27.673 /S)	0.979	Model Underwood
R09	S =	23.70 *e^(D -0.0003)	V =	23.70 *D*e^(D -0.0003)	V =	3255.13 *S*Ln(23.699 /S)	0.943	Model Underwood
R10	S =	22.83 *e^(D 0.0001)	V =	22.83 *D*e^(D 0.0001)	V =	-9612.65 *S*Ln(22.828 /S)	0.986	Model Underwood
R11	S =	33.13 *e^(D -0.0012)	V =	33.13 *D*e^(D -0.0012)	V =	807.81 *S*Ln(33.128 /S)	0.878	Model Underwood
R12	S =	26.84 *e^(D -0.0005)	V =	26.84 *D*e^(D -0.0005)	V =	2108.84 *S*Ln(26.836 /S)	0.962	Model Underwood
R13	S =	26.19 *e^(D -0.0005)	V =	26.19 *D*e^(D -0.0005)	V =	2149.62 *S*Ln(26.186 /S)	0.949	Model Underwood
R14	S =	22.30 *e^(D 0.0000)	V =	22.30 *D*e^(D 0.0000)	V =	80299.99 *S*Ln(22.297 /S)	0.982	Model Underwood
R15	S =	25.99 *e^(D -0.0011)	V =	25.99 *D*e^(D -0.0011)	V =	894.89 *S*Ln(25.990 /S)	0.929	Model Underwood
R16	S =	25.74 *e^(D -0.0008)	V =	25.74 *D*e^(D -0.0008)	V =	1289.99 *S*Ln(25.739 /S)	0.976	Model Underwood



REKAPITULASI MODEL V-S-D volume 80%

Kode Ruas	Model VSD						R ²	Model yang digunakan
	S-D		V-D		V-S			
R01	S = 24.91	*e^(D -0.0005)	V = 24.91	*D*e^(D -0.0005)	V = 1889.55	*S*Ln(24.91 /S)	0.96	Model Underwood
R02	S = 25.16	*e^(D -0.0002)	V = 25.16	*D*e^(D -0.0002)	V = 5576.16	*S*Ln(25.16 /S)	0.94	Model Underwood
R03	S = 33.19	*e^(D -0.0013)	V = 33.19	*D*e^(D -0.0013)	V = 775.78	*S*Ln(33.19 /S)	0.88	Model Underwood
R04	S = 26.33	*e^(D -0.0005)	V = 26.33	*D*e^(D -0.0005)	V = 2099.81	*S*Ln(26.33 /S)	0.97	Model Underwood
R05	S = 28.28	*e^(D -0.0009)	V = 28.28	*D*e^(D -0.0009)	V = 1103.77	*S*Ln(28.28 /S)	0.94	Model Underwood
R06	S = 21.56	*e^(D 0.0001)	V = 21.56	*D*e^(D 0.0001)	V = -10722.78	*S*Ln(21.56 /S)	0.97	Model Underwood
R07	S = 26.57	*e^(D -0.0008)	V = 26.57	*D*e^(D -0.0008)	V = 1232.70	*S*Ln(26.57 /S)	0.92	Model Underwood
R08	S = 28.55	*e^(D -0.0009)	V = 28.55	*D*e^(D -0.0009)	V = 1118.16	*S*Ln(28.55 /S)	0.96	Model Underwood
R09	S = 24.91	*e^(D -0.0005)	V = 24.91	*D*e^(D -0.0005)	V = 1889.55	*S*Ln(24.91 /S)	0.96	Model Underwood
R10	S = 24.59	*e^(D -0.0001)	V = 24.59	*D*e^(D -0.0001)	V = 10870.45	*S*Ln(24.59 /S)	0.98	Model Underwood
R11	S = 33.19	*e^(D -0.0013)	V = 33.19	*D*e^(D -0.0013)	V = 775.78	*S*Ln(33.19 /S)	0.88	Model Underwood
R12	S = 26.33	*e^(D -0.0005)	V = 26.33	*D*e^(D -0.0005)	V = 2099.81	*S*Ln(26.33 /S)	0.97	Model Underwood
R13	S = 28.28	*e^(D -0.0009)	V = 28.28	*D*e^(D -0.0009)	V = 1103.77	*S*Ln(28.28 /S)	0.94	Model Underwood
R14	S = 21.56	*e^(D 0.0001)	V = 21.56	*D*e^(D 0.0001)	V = -10722.78	*S*Ln(21.56 /S)	0.97	Model Underwood
R15	S = 26.13	*e^(D -0.0012)	V = 26.13	*D*e^(D -0.0012)	V = 807.68	*S*Ln(26.13 /S)	0.87	Model Underwood
R16	S = 25.74	*e^(D -0.0008)	V = 25.74	*D*e^(D -0.0008)	V = 1289.99	*S*Ln(25.74 /S)	0.98	Model Underwood



REKAPITULASI MODEL V-S-D volume 85%

Kode Ruas	Model VSD									R ²	Model yang digunakan
	S-D			V-D			V-S				
R01	S =	24.85	*e^(D -0.0005)	V =	24.85	*D*e^(D -0.001)	V =	1992.34	*S*Ln(24.851 /S)	0.963	Model Underwood
R02	S =	25.14	*e^(D -0.0002)	V =	25.14	*D*e^(D 0.000)	V =	5888.22	*S*Ln(25.136 /S)	0.945	Model Underwood
R03	S =	33.32	*e^(D -0.0013)	V =	33.32	*D*e^(D -0.001)	V =	796.13	*S*Ln(33.323 /S)	0.877	Model Underwood
R04	S =	26.44	*e^(D -0.0005)	V =	26.44	*D*e^(D 0.000)	V =	2128.03	*S*Ln(26.436 /S)	0.969	Model Underwood
R05	S =	28.51	*e^(D -0.0009)	V =	28.51	*D*e^(D -0.001)	V =	1107.95	*S*Ln(28.508 /S)	0.940	Model Underwood
R06	S =	21.57	*e^(D 0.0001)	V =	21.57	*D*e^(D 0.000)	V =	-11195.71	*S*Ln(21.567 /S)	0.968	Model Underwood
R07	S =	26.79	*e^(D -0.0008)	V =	26.79	*D*e^(D -0.001)	V =	1224.55	*S*Ln(26.788 /S)	0.912	Model Underwood
R08	S =	28.66	*e^(D -0.0009)	V =	28.66	*D*e^(D -0.001)	V =	1138.06	*S*Ln(28.661 /S)	0.957	Model Underwood
R09	S =	24.85	*e^(D -0.0005)	V =	24.85	*D*e^(D -0.001)	V =	1992.34	*S*Ln(24.851 /S)	0.963	Model Underwood
R10	S =	24.59	*e^(D -0.0001)	V =	24.59	*D*e^(D 0.000)	V =	11274.58	*S*Ln(24.589 /S)	0.976	Model Underwood
R11	S =	33.32	*e^(D -0.0013)	V =	33.32	*D*e^(D -0.001)	V =	796.13	*S*Ln(33.323 /S)	0.877	Model Underwood
R12	S =	26.44	*e^(D -0.0005)	V =	26.44	*D*e^(D 0.000)	V =	2128.03	*S*Ln(26.436 /S)	0.969	Model Underwood
R13	S =	28.51	*e^(D -0.0009)	V =	28.51	*D*e^(D -0.001)	V =	1107.95	*S*Ln(28.508 /S)	0.940	Model Underwood
R14	S =	21.57	*e^(D 0.0001)	V =	21.57	*D*e^(D 0.000)	V =	-11195.71	*S*Ln(21.567 /S)	0.968	Model Underwood
R15	S =	26.13	*e^(D -0.0012)	V =	26.13	*D*e^(D -0.001)	V =	807.68	*S*Ln(26.134 /S)	0.870	Model Underwood
R16	S =	25.74	*e^(D -0.0008)	V =	25.74	*D*e^(D -0.001)	V =	1289.99	*S*Ln(25.739 /S)	0.976	Model Underwood



REKAPITULASI MODEL V-S-D volume 95%

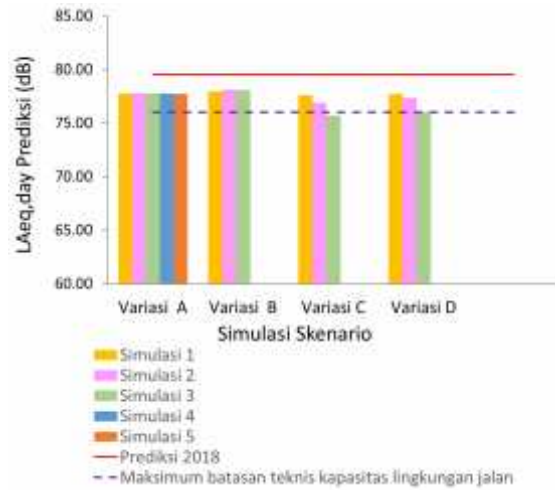
Kode Ruas	Model VSD						R ²	Model yang digunakan
	S-D		V-D		V-S			
R01	S = 24.75	*e^(D -0.0005)	V = 24.75	*D*e^(D -0.0005)	V = 2200.48	*S*Ln(24.749 /S)	0.964	Model Underwood
R02	S = 25.09	*e^(D -0.0002)	V = 25.09	*D*e^(D -0.0002)	V = 6522.99	*S*Ln(25.092 /S)	0.947	Model Underwood
R03	S = 33.53	*e^(D -0.0012)	V = 33.53	*D*e^(D -0.0012)	V = 839.35	*S*Ln(33.531 /S)	0.873	Model Underwood
R04	S = 26.62	*e^(D -0.0005)	V = 26.62	*D*e^(D -0.0005)	V = 2191.81	*S*Ln(26.620 /S)	0.967	Model Underwood
R05	S = 28.88	*e^(D -0.0009)	V = 28.88	*D*e^(D -0.0009)	V = 1129.22	*S*Ln(28.876 /S)	0.941	Model Underwood
R06	S = 21.58	*e^(D 0.0001)	V = 21.58	*D*e^(D 0.0001)	V = -12312.54	*S*Ln(21.584 /S)	0.965	Model Underwood
R07	S = 27.19	*e^(D -0.0008)	V = 27.19	*D*e^(D -0.0008)	V = 1215.88	*S*Ln(27.194 /S)	0.906	Model Underwood
R08	S = 28.87	*e^(D -0.0008)	V = 28.87	*D*e^(D -0.0008)	V = 1179.66	*S*Ln(28.865 /S)	0.950	Model Underwood
R09	S = 24.75	*e^(D -0.0005)	V = 24.75	*D*e^(D -0.0005)	V = 2200.48	*S*Ln(24.749 /S)	0.964	Model Underwood
R10	S = 24.59	*e^(D -0.0001)	V = 24.59	*D*e^(D -0.0001)	V = 12100.82	*S*Ln(24.591 /S)	0.976	Model Underwood
R11	S = 33.53	*e^(D -0.0012)	V = 33.53	*D*e^(D -0.0012)	V = 839.35	*S*Ln(33.531 /S)	0.873	Model Underwood
R12	S = 26.62	*e^(D -0.0005)	V = 26.62	*D*e^(D -0.0005)	V = 2191.81	*S*Ln(26.620 /S)	0.967	Model Underwood
R13	S = 28.88	*e^(D -0.0009)	V = 28.88	*D*e^(D -0.0009)	V = 1129.22	*S*Ln(28.876 /S)	0.941	Model Underwood
R14	S = 21.58	*e^(D 0.0001)	V = 21.58	*D*e^(D 0.0001)	V = -12312.54	*S*Ln(21.584 /S)	0.965	Model Underwood
R15	S = 26.13	*e^(D -0.0012)	V = 26.13	*D*e^(D -0.0012)	V = 807.68	*S*Ln(26.134 /S)	0.870	Model Underwood
R16	S = 25.74	*e^(D -0.0008)	V = 25.74	*D*e^(D -0.0008)	V = 1289.99	*S*Ln(25.739 /S)	0.976	Model Underwood



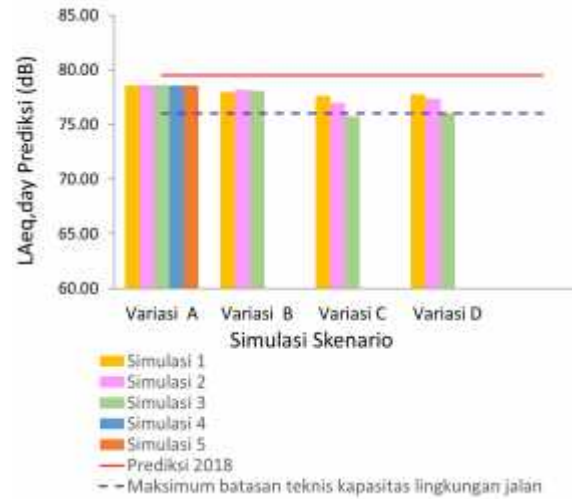
Lampiran 14 Histogram Mitigasi Tingkat Kebisingan

Skenario 1

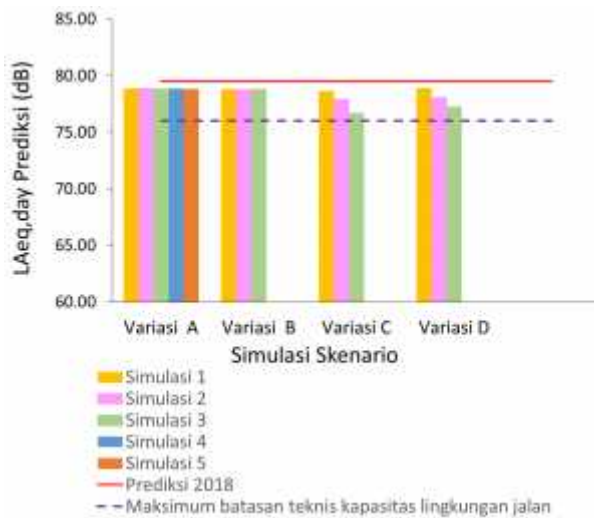
Variasi 1.I



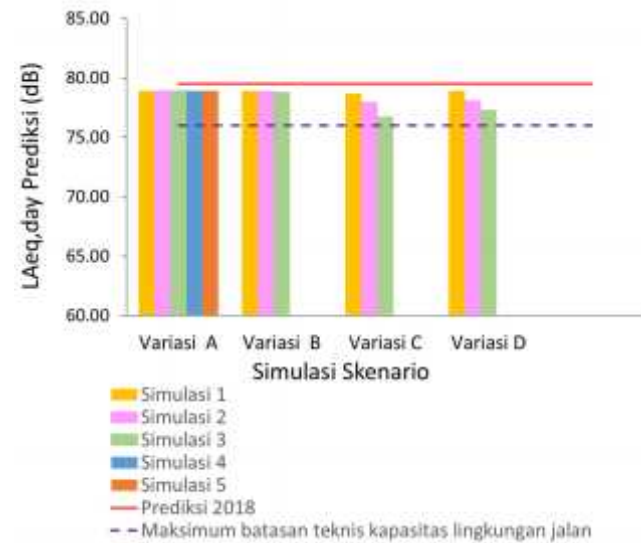
Variasi 1.II



Variasi 1.III

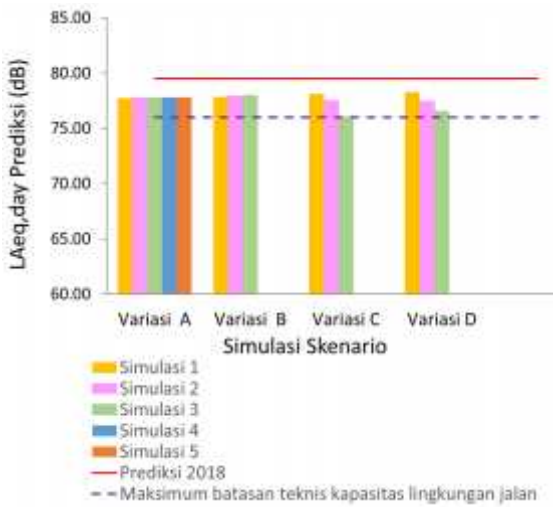


Variasi 1.VI

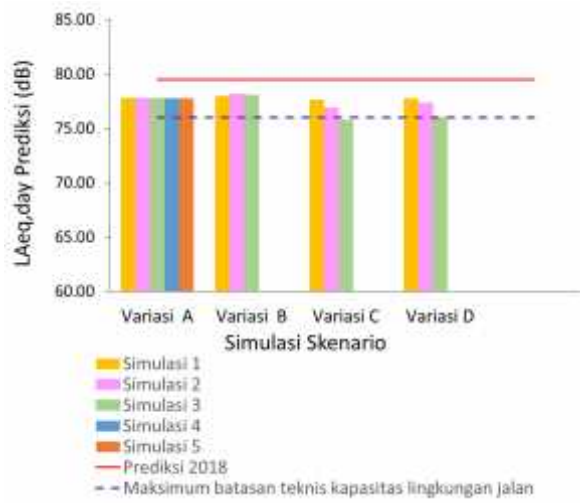


Skenario 2

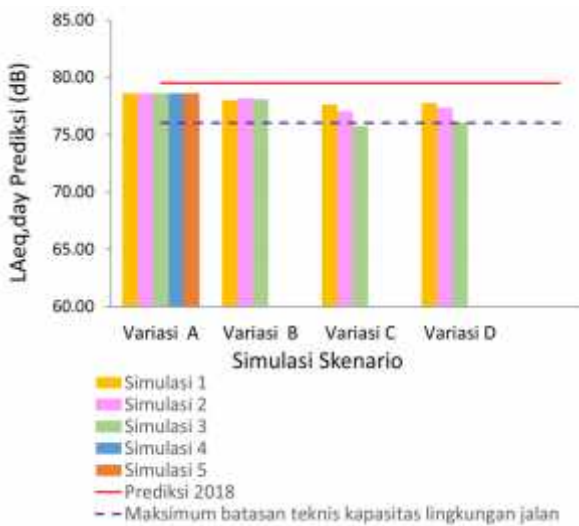
Variasi 2.I



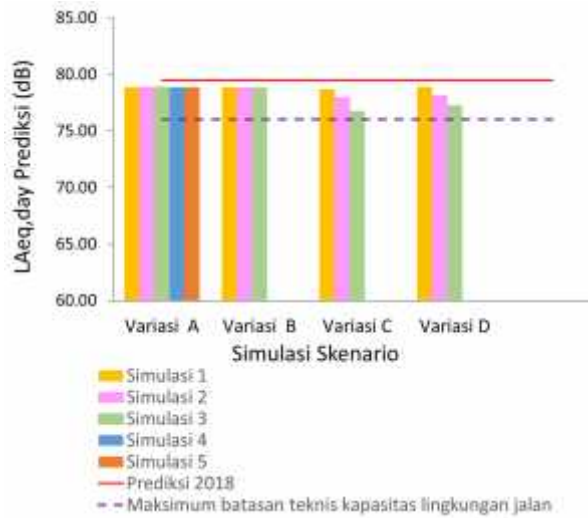
Variasi 2.II



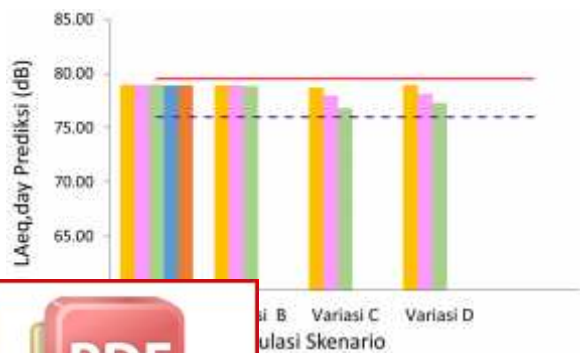
Variasi 2.III



Variasi 2.IV

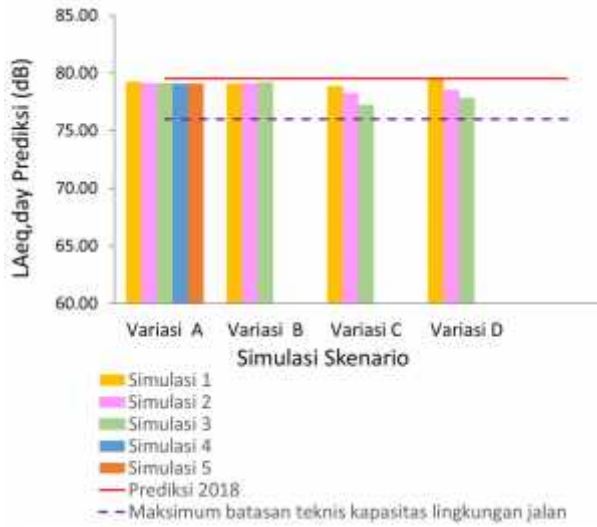


Variasi 2.V

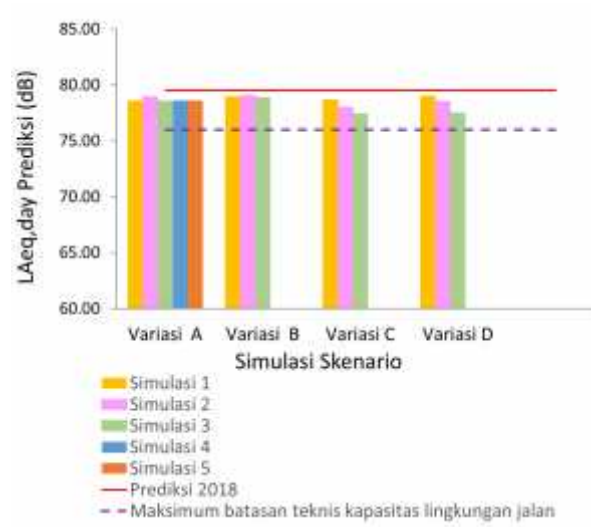


Skenario 3

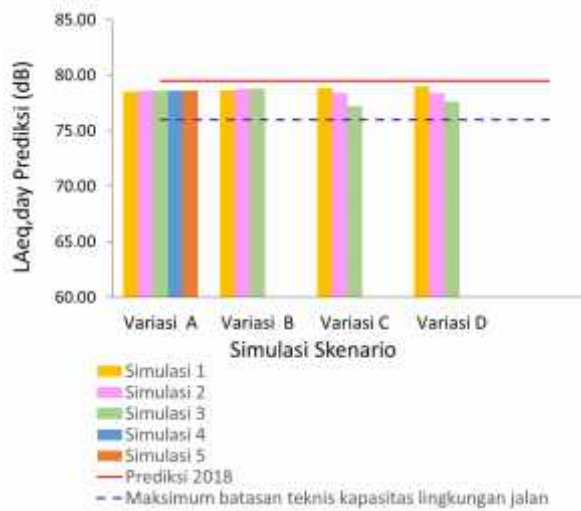
Variasi 3.I



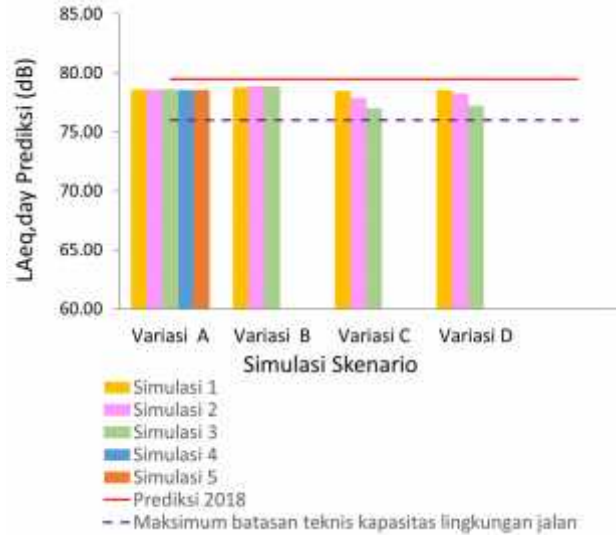
Variasi 3.II



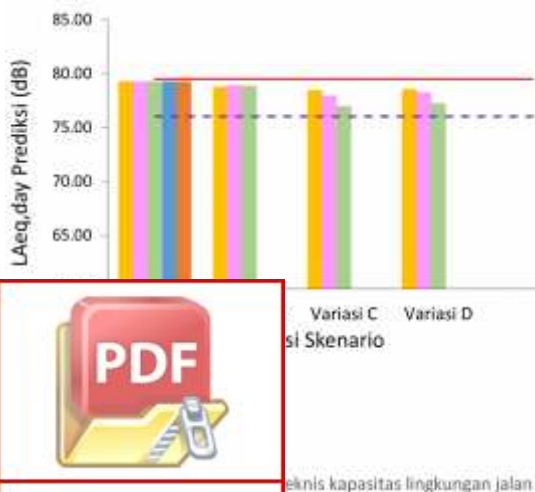
Variasi 3.III



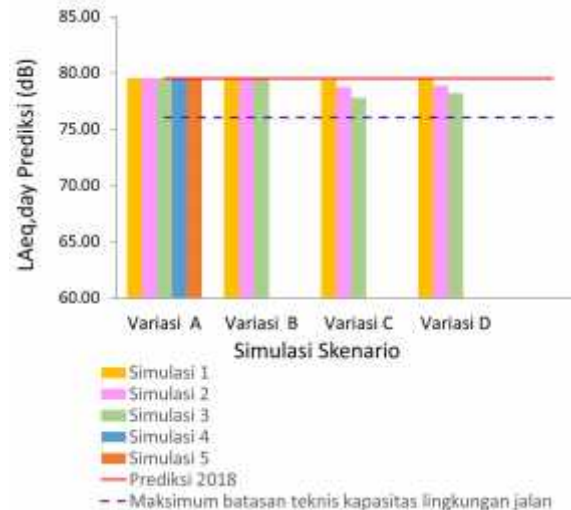
Variasi 3.IV



Variasi 3.V



Variasi 3.VI



Optimization Software:
www.balesio.com

Variasi 3.VII

