Lampiran I. Hasil Pengukuran Kualitas Udara di Pelabuhan

Kualitas Udara (PM$_{10}$) Ambien, Suhu, Kelembaban dan Kecepatan Angin di
Dermaga Konvensional Pelabuhan Boom Baru Palembang Tahun 2008

Waktu	Titik	Suhu	Kelembaban	Kecepatan Angin	PM$_{10}$
		(Derajat Celcius)	(% RH)	(meter/detik)	($\mu g/m^3/24$)
Hari ke 1	kiri depan	32,1	55,43	1,07	153
	kiri belakang	31,07	55,43	1,07	156
	Tengah	31,8	55	1,07	156
	kanan depan	32,63	53,13	1,2	153
	kanan belakang	32,27	53,63	1,37	154
Hari ke 2	kiri depan	32,27	54,57	1,37	155
	kiri belakang	32,07	54,5	1,47	154
	Tengah	31,1	55,33	1,9	155
	kanan depan	32,23	54,73	1,97	153
	kanan belakang	31,8	52,1	2	152
Hari ke 3	kiri depan	32	54,2	2	152
	kiri belakang	31,03	53,33	2,43	161
	Tengah	31,8	53,4	2,53	152
	kanan depan	32,1	53,07	2,61	159
	kanan belakang	32,97	53,4	2,61	162
Hari ke 4	kiri depan	32,07	53,93	2,8	160
	kiri belakang	32,3	53,53	2,8	164
	Tengah	32,93	53,53	2,93	160
	kanan depan	31,93	54,06	2,93	171
	kanan belakang	32	54,84	3,23	158
Hari ke 5	kiri depan	32,9	55,77	3,27	165
	kiri belakang	34	52,83	3,27	201
	Tengah	32,1	55,67	3,43	168
	kanan depan	31,07	54,93	3,47	163
	kanan belakang	34	54	3,47	179
Hari ke 6	kiri depan	31,8	54,37	3,5	158
	kiri belakang	32,1	53,97	2,1	163
	Tengah	33,94	54	3,53	180
	kanan depan	32,97	55,33	3,7	172
	kanan belakang	31,83	54,6	3,73	177
Hari ke 7	kiri depan	32,63	53,1	3,9	159
	kiri belakang	33,97	52,6	3,9	167
	Tengah	32,93	54	4	168
	kanan depan	33,9	53,23	4,07	198
	kanan belakang	32,23	52,23	4,4	159

Kualitas Udara (PM_{10}) Ambien, Suhu, Kelembaban dan Kecepatan Angin di Dermaga Kontainer Pelabuhan Boom Baru Palembang Tahun 2008

Waktu	Titik	Suhu (Derajat Celcius)	Kelembaban (% RH)	Kecepatan Angin (meter/detik)	PM_{10} ($\mu g/m^3/24$)
Hari ke 1	kiri depan	31,57	55,43	0,83	126
	kiri belakang	32	54,03	1,17	131
	Tengah	32,03	54,03	1,26	124
	kanan depan	32,27	53,87	1,3	133
	kanan belakang	32,1	54,06	1,33	117
Hari ke 2	kiri depan	33,74	52,56	1,37	127
	kiri belakang	33,97	56,4	1,5	121
	Tengah	33,94	55,83	1,53	117
	kanan depan	31,6	54,9	1,53	122
	kanan belakang	32,9	55,8	1,73	120
Hari ke 3	kiri depan	33,57	52,66	1,73	124
	kiri belakang	31,2	55,5	1,8	121
	Tengah	31,6	55,07	1,8	131
	kanan depan	31,07	54,87	1,8	136
	kanan belakang	32,97	55	2,03	113
Hari ke 4	kiri depan	34	53,23	2,37	114
	kiri belakang	32,27	56,97	2,46	104
	Tengah	30,97	55,73	2,56	79
	kanan depan	32,93	55,73	2,63	89
	kanan belakang	32,93	55,4	2,63	97
Hari ke 5	kiri depan	32,33	56,1	2,7	88
	kiri belakang	31,8	56,6	2,9	106
	Tengah	32,9	55,67	3,07	108
	kanan depan	32	54,93	3,17	104
	kanan belakang	31,1	53,73	3,3	104
Hari ke 6	kiri depan	32,1	53,06	3,3	108
	kiri belakang	32,1	55,6	3,5	82
	Tengah	31,3	55,2	3,53	103
	kanan depan	31,7	54,4	3,73	101
	kanan belakang	32,93	55,33	3,8	111
Hari ke 7	kiri depan	31,8	55,77	4	106
	kiri belakang	32,77	53,47	4,03	94
	Tengah	32,03	56,97	4,37	97
	kanan depan	31,07	53,4	4,53	105
	kanan belakang	31,93	54,6	4,53	111

Kualitas Udara (PM_{10}) Ambien, Suhu, Kelembaban dan Kecepatan Angin di
Terminal Penumpang Pelabuhan Boom Baru Palembang Tahun 2008

Waktu	Titik	Suhu (Derajat Celcius)	Kelembaban (% RH)	Kecepatan Angin (meter/detik)	PM_{10} ($\mu g/m^3/24$)
Hari ke 1	kiri depan	32,3	52,4	1,67	117
	kiri belakang	31,83	54	1,87	113
	Tengah	33,8	55,3	2,07	124
	kanan depan	32,9	56,67	2,42	82
	kanan belakang	33,7	56,97	2,46	67
Hari ke 2	kiri depan	34	55,26	2,56	95
	kiri belakang	32,03	55,77	2,61	81
	Tengah	32,97	55,73	2,63	89
	kanan depan	31,17	53,97	3,26	88
	kanan belakang	30,83	56,47	3,33	60
Hari ke 3	kiri depan	32,97	55,93	3,33	78
	kiri belakang	33,7	55,33	3,33	79
	Tengah	31,1	55,07	3,33	90
	kanan depan	32,73	52,97	3,33	99
	kanan belakang	32	54,13	3,5	102
Hari ke 4	kiri depan	32,03	53,57	3,33	69
	kiri belakang	32,27	54,47	3,11	78
	Tengah	30,83	54	3,4	86
	kanan depan	31,63	54,47	3,2	104
	kanan belakang	31,03	52,5	3,63	68
Hari ke 5	kiri depan	31,43	54,97	3,62	104
	kiri belakang	32,27	52,26	3,67	61
	Tengah	31,03	53,4	3,67	80
	kanan depan	32,53	53,13	3,67	92
	kanan belakang	32,93	52,5	3,67	100
Hari ke 6	kiri depan	31,17	54,83	3,8	103
	kiri belakang	32,27	55,13	3,83	88
	Tengah	31,97	55,2	3,87	76
	kanan depan	33,97	54	3,97	108
	kanan belakang	30,97	53,37	4,03	66
Hari ke 7	kiri depan	31,13	56,57	4,03	75
	kiri belakang	32,97	53,97	4,1	64
	Tengah	30,13	55,07	4,1	74
	kanan depan	32,93	55,53	4,1	93
	kanan belakang	30,83	56,97	4,37	77

Lampiran II. Kuesioner responden

PAJANAN PM$_{10}$ TERHADAP KEJADIAN GANGGUAN SALURAN PERNAPASAN NON INFEKSI PADA TENAGA KERJA BONGKAR MUAT DI PELABUHAN BOOM BARU PALEMBANG TAHUN 2008

Responden adalah tenaga kerja bongkar muat di pelabuhan Boom Baru Palembang

No. Kuesioner : ....

Tanggal : ....

Petugas : ....

Tanda Tangan : ....

Petunjuk Umum : Isilah dan silangi

I. DATA UMUM : (IDENTITAS)

1. Nama Responden : ....

2. Alamat : ....

....

3. Umur : ....

4. Pendidikan : ☐ tdk sekolah ☐ tdk tamat SD ☐ SD

☐ SLTP ☐ SLTA ☐ PT

5. Lokasi Pekerjaan : ☐ Dermaga Konvensional

☐ Dermaga Container

☐ Terminal Penumpang

6. Berat badan : .... Kg

7. Tinggi Badan : .... Cm

II.DATA PEKERJAAN DAN PERILAKU

1. Sudah berapa lama Anda kerja di pelabuhan ini sebagai tenaga kerja bongkar muat ?

.... tahun

2. Apa alasan Anda bekerja di pelabuhan ini ?

   a. Mencari nafkah

   b. Mencari pengalaman

   c. Disuruh orang tua

3. Berapa jauh jarak tempat tinggal Anda ? ……….. Meter

   a. < 100 meter

   b. 100 meter – 1 KM

   c. > 1 KM

4. Apakah Anda tahu resiko kesehatan bekerja di Pelabuhan ini ?

   a. Tidak tahu

   b. Tahu.

   Bila tahu apa saja resikonya ? ……………………………………………………..…

   ………………………………………………………………………………………

GANGGUAN PERNAPASAN

Diadopsi dari *American Thoracic society*, (untuk mengukur gejala penyakit saluran pernapasan yaitu kelainan batuk kronik, dan atau dahak/reak kronik dan sesak napas, dan atau asthma.

III. BATUK

1. Apakah dalam 2 minggu terakhir ini biasanya Sdr. Batuk ? (Mendehem tidak termasuk batuk)

   A. Ya

      1. Batuk 4 – 6 kali setiap hari, selama sekurang-kurangnya 4 hari dalam seminggu.

         1. Ya   2. Tidak

      2. Batuk pada bangun tidur di pagi hari

         1. Ya   2. Tidak

      3. Batuk sepanjang hari, baik siang atau malam hari

         1. Ya   2. Tidak

   B. Tidak, langsung ke Pertanyaan 4

2. Bila Pertanyaan 1 = ya, apakah saudara biasanya batuk seperti sekarang ini, selama sekurang-kurangnya 3 bulan berturut-turut dalam setahun ini ?

A. Ya

B. Tidak

3. Bila Pertanyaan no. 2 = ya, Selama berapa tahun Saudara telah batuk seperti ini ?............. tahun

A. = ...bulan

B. = ...tahun .... bulan

IV. DAHAK/REAK

4. Apakah dalam 2 minggu terakhir ini biasanya saudara mengeluarkan dahak/reak dari dalam dada ?

A. Ya

    1. Sampai dua kali sehari, selama sekurang-kurangnya 4 hari dalam seminggu.

      1. Ya   2. Tidak

    2. Pada waktu bangun tidur di pagi hari

      1. Ya   2. Tidak

    3. Sepanjang hari, baik siang atau malam hari

      1. Ya   2. Tidak

B. Tidak, langsung ke pertanyaan no. 7

5. Bila pertanyaan no. 4 = ya, apakah saudara biasanya mengeluarkan dahak/reak seperti ini sekurang-kurangnya 3 bulan berturut-turut dalam setahun ini ?

1. = Ya

2. = Tidak

6. Bila pertanyaan no. 5 = Ya, selama berapa tahun saudara telah menghadapi masalah dahak/reak ini ?

1. =..............bulan

2. =............. tahun.............bulan

V. SERANGAN BATUK DAN DAHAK/REAK

7. Pernahkah Sdr mengalami serangan batuk dengan dahak/reak meningkat yang berlangsung sekurang-kurangnya 3 minggu berturut-turut dalam setahun ini ?

A. Ya

B. Tidak, (langsung ke pertannyaan no. 9)

8. Bila pertannyaan no. 7 = Ya, selama berapa tahun Saudara telah mengalami serangan batuk dengan dahak/reak seperti ini ?

A. = ... bulan

B. = ... tahun .... bulan

VI. NAPAS BERBUNYI/MENGI

9. Apakah dalam 2 minggu terakhir ini dada sudara pernah berbunyi "mengi" atau "bengek" waktu bernapas ?

1. Ya

2. Tidak, (langsung ke pertannyaan no.14)

10. Kapan bunyi "mengi" atau "bengek" ini terjadi

1. Pada saat tidak flu/pilek ?

2. Ketika Sdr flu/pilek ?

11. Apakah bunyi " mengi" atau "bengek" tersebut terjadi hampir setiap hari (4 hari atau lebih dalam seminggu)

1. Ya   2. Tidak

12. Bila pertanyaan no. 11 = ya, selama berapa tahun saudara telah mengalami bunyi "mengi" atau "bengek"?

1. = ... bulan

2. = ... tahun .... bulan

13. Apakah saudara sehari-hari terlalu pendek napas untuk pergi keluar rumah atau ketika mengenakan/menanggalkan pakaian ?

1. Ya   2. Tidak

VII   SESAK NAPAS

14. Apakah dalam 2 minggu terakhir ini saudara merasa sesak napas ?

1. Ya

2. Tidak (langsung ke pertannyaan 19)

15. Pada waktu kapan sesak napas seperti ini timbul ?

1. Sebelum masuk kerja

2. Pada saat bekerja

3. Sesudah masuk kerja

16. Sudah berapa lama saudara merasa sesak napas seperti ini ?

1. _____ bulan

2. _____ tahun

17. Apakah setiap hari pertama masuk kerja (setelah mendapat libur), saudara merasa sesak napas ?

1. _____ bulan

2. _____ tahun

VIII. KEBIASAAN MENGGUNAKAN ALAT PELINDUNG DIRI

18. Apabila dalam 2 minggu terakhir ini, saat saudara berada di tempat berdebu, apakah saudara menggunakan APD (masker) untuk melindungi diri dari debu ?

1. Ya   2. Tidak, (langsung ke pertanyaan no. 21)

19. Bila pertanyaan no. 18 = ya, kebiasaan sdr menggunakan APD tersebut ?

   1. Hampir selalu

   2. Jarang

   3. Hampir tak pernah

20. APD yang saudara gunakan berupa ?

   1. Masker yang disediakan pihak pelabuhan

   2. Cara lain, sebutkan : ....

IX. RIWAYAT MEROKOK

21. Apakah sdr merokok ?

   1.Ya   2. Tidak

22. Pernahkah saudara merokok 100 batang rokok atau lebih selama hidup saudara ?

   1.Ya   2. Tidak   3. Tidak pernah merokok (Selesai)

23. Bila pertanyaan no. 21 = ya, Apakah dalam 2 minggu terakhir ini terakhir ini sdr masih merokok ?

   1.Ya   2. Tidak, langsung ke pertanyaan No.24

24. Bila pertanyaan no. 23 = ya, berapa batang rokok rata-rata sehari yang saudara hisap sekarang ?_____ batang rokok

25. Sudah berapa lama saudara merokok ? _____ tahun

Lampiran III. Daftar check list faktor lingkungan kerja

DAFTAR CHECKLIST

FAKTOR LINGKUNGAN KERJA DI PELABUHAN BOOM BARU

PALEMBANG TAHUN 2008

No.	Variabel	Hasil Pengukuran
1.	Rata-rata konsentrasi PM $_{10}$	..............................$\mu g/m^3$
2.	Kelembaban	.... %
3.	Suhu	.... ^0C
4.	Kecepatan Angin	..............................m/dt

Lampiran IV. Baku Mutu Udara Ambien Nasional

Lampiran

Peraturan Pemerintah Republik Indonesia

Nomor : 41 TAHUN 1999

TANGGAl   : 26 MEI 1999

BAKU MUTU UDARA AMBIEN NASIONAL

No	Parameter	Waktu Pengukuran	Baku Mutu	Metode Analisis	Peralatan
1.	SO_2 (Sulfur Dioksida)	1 Jam 24 Jam 1 Thn	900 µg/Nm^3 365 µg/Nm^3 60 µg/Nm^3	Pararosanilin	Spektrofotometer
2.	CO (Karbon Monoksida)	1 Jam 24 Jam 1 Thn	30.000 µg/Nm^3 10.000 µg/Nm^3	NDIR	NDIR Analyzer
3.	NO_2 (Nitrogen Dioksida)	1 Jam 24 Jam 1 Thn	400 µg/Nm^3 150 µg/Nm^3 100 µg/Nm^3	Saltzman	Spektrofotometer
4.	O_3 (Oksidan)	1 Jam 1 Thn	235 µg/Nm^3 50 µg/Nm^3	Chemiluminescent	Spektrofotometer
5.	HC (Hidro Karbon)	3 Jam	160 µg/Nm^3	Flame Ionization	Gas Chromatograf
6.	PM_{10} (Partikel <10µm)	24 Jam	150 µg/Nm^3	Gravimetric	Hi - Vol
	$PM_{2,5}$* (Partikel <10µm)	24 Jam 1 Thn	65 µg/Nm^3 15 µg/Nm^3	Gravimetric Gravimetric	Hi – Vol Hi - Vol
7.	TSP (Debu)	24 Jam 1 Thn	230 µg/Nm^3 90 µg/Nm^3	Gravimetric	Hi - Vol
8.	Pb (Timah Hitam)	24 Jam 1 Thn	2 µg/Nm^3 1 µg/Nm^3	Gravimetric Ekstraktif Pengabuan	Hi – Vol AAS
9.	Dustfall (Debu Jatuh)	30 Hari	10 Ton/Km^2/Bulan (Pemukiman) 20 Ton/Km^2/Bulan (Pemukiman)	Gravimetric	Cannister
10.	Total Fluorides (as F)	24 Jam 90 hari	3 µg/Nm^3 0,5 µg/Nm^3	Spesific ion Electrode	Impinger atau Continous Analyzer
11.	Fluor Indeks	30 Hari	40 µg/100 cm^2 Dari kertas limed filter	Colourimetric	Limed filter paper

12.	Khlorine & Khlorine Dioksida	24 Jam	150 µg/Nm³	Spesific ion Electrode	Impinger atau Continous Analyzer
13.	Sulphat Indeks	30 Hari	1 mg SO₂/100 cm³ Dari Lead Peroksida	Colourimetric	Lead Peroxide Candle

Catatan :   - (*) PM2,5 mulai diberlakukan tahun 2002

- Nomor 1 0 s/d 13 hanya diberlakukan untuk daerah/kawasan industri kimia dasar

PRESIDEN REPUBLIK INDONESIA

Ttd

BACHARUDDIN JUSUF HABIBIE

Salinan sesuai dengan aslinya

SEKRETARIAT KABINET RI

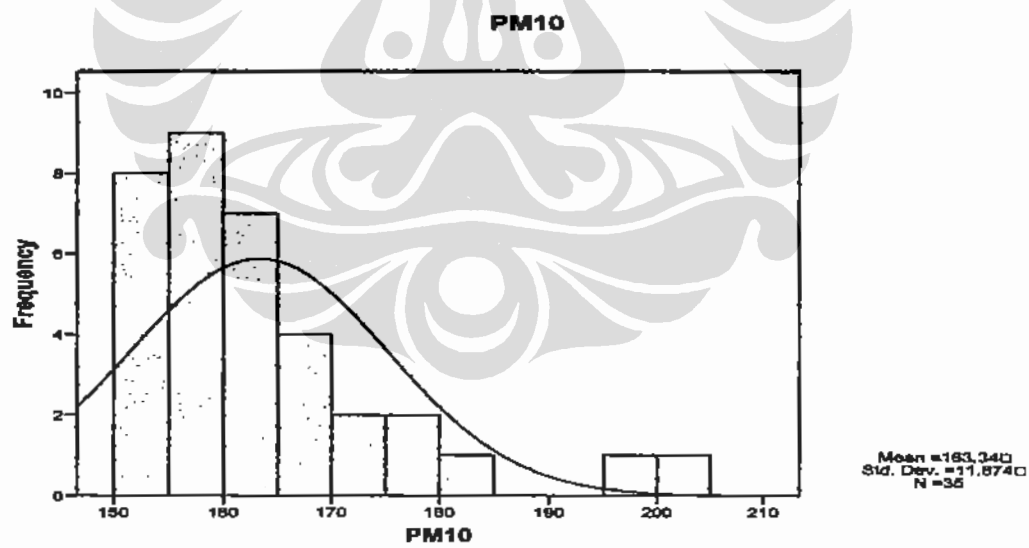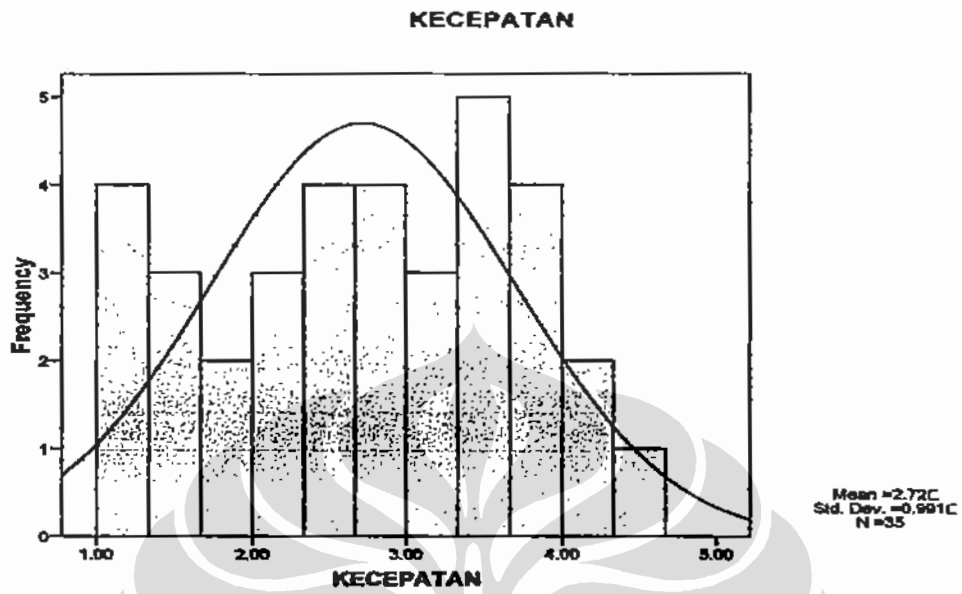Lampiran V. Analisis suhu, kelembaban dan kecepatan angin dengan konsentrasi PM_{10}

Daerah terpajan

Statistics

		SUHU	KELEMBABAN	KECEPATAN	PM10
N	Valid	35	35	35	35
	Missing	0	0	0	0
Mean		32,3669	54,0506	2,7171	163,34
Median		32,1000	54,0000	2,8000	160,00
Mode		31,80[a]	54,00	1,07	152[a]
Std. Deviation		,83711	,97812	,99105	11,874
Skewness		,602	-,040	-,267	1,779
Std. Error of Skewness		,398	,398	,398	,398
Kurtosis		-,063	-,743	-1,109	3,342
Std. Error of Kurtosis		,778	,778	,778	,778
Range		2,97	3,67	3,33	49
Minimum		31,03	52,10	1,07	152
Maximum		34,00	55,77	4,40	201
Percentiles	10	31,0880	52,7380	1,1480	152,60
	20	31,8000	53,1500	1,5560	154,00
	30	31,9860	53,4000	2,0000	155,80
	40	32,0820	53,7500	2,5620	158,40
	50	32,1000	54,0000	2,8000	160,00
	60	32,2700	54,3020	3,2540	162,60
	70	32,6840	54,6260	3,4700	165,40
	80	32,9620	54,9860	3,6660	170,40
	90	33,9520	55,4300	3,9400	179,40

a. Multiple modes exist. The smallest value is shown

Histogram

SUHU

Mean =32.37
Std. Dev. =0.837
N =35

KELEMBABAN

Mean =54.00
Std. Dev. =0.976
N =35

KECEPATAN

Mean =2.72☐
Std. Dev. =0.991☐
N =35

PM10

Mean =163,34☐
Std. Dev. =11.874☐
N =35
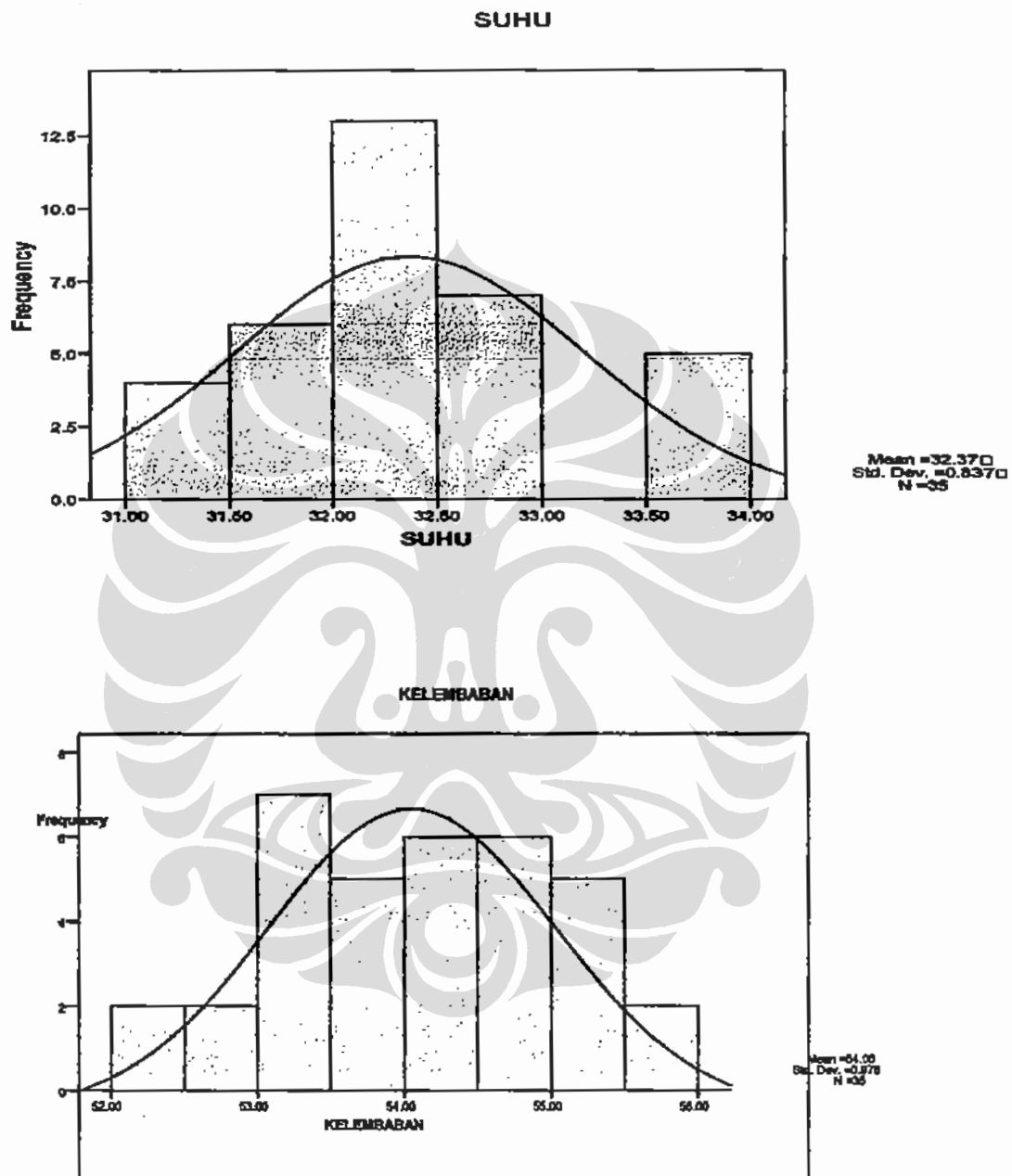
Daerah tidak terpajan

Statistics

		SUHU	KELEMBA BAN	KECEPATAN	PM10
N	Valid	70	70	70	70
	Missing	0	0	0	0
Mean		32,1977	54,7683	2,9528	98,63
Median		32,0650	54,9850	3,2800	101,50
Mode		32,27[a]	56,97	3,33	104
Std. Deviation		,95717	1,26038	,97480	19,629
Skewness		,252	-,175	-,408	-,102
Std. Error of Skewness		,287	,287	,287	,287
Kurtosis		-,702	-,763	-,961	-,868
Std. Error of Kurtosis		,568	,568	,568	,568
Range		3,87	4,71	3,70	76
Minimum		30,13	52,26	,83	60
Maximum		34,00	56,97	4,53	138
Percentiles	10	31,0300	52,9790	1,5030	69,50
	20	31,1700	53,4900	1,8000	79,00
	30	31,6090	54,0000	2,4600	88,00
	40	31,9820	54,4700	2,6580	93,40
	50	32,0650	54,9850	3,2800	101,50
	60	32,2700	55,2380	3,3300	104,00
	70	32,9000	55,5210	3,6580	110,10
	80	32,9620	55,7700	3,8240	117,00
	90	33,7360	56,5600	4,0930	124,00

a. Multiple modes exist. The smallest value is shown

Histogram

SUHU

Mean =32.20
Std. Dev. =0.957
N =70

KELEMBABAN

Mean =54.77
Std. Dev. =1.26
N =70

KECEPATAN

Mean =2.960
Std. Dev. =0.9760
N =70

PM10

Mean =96.630
Std. Dev. =19.6290
N =70
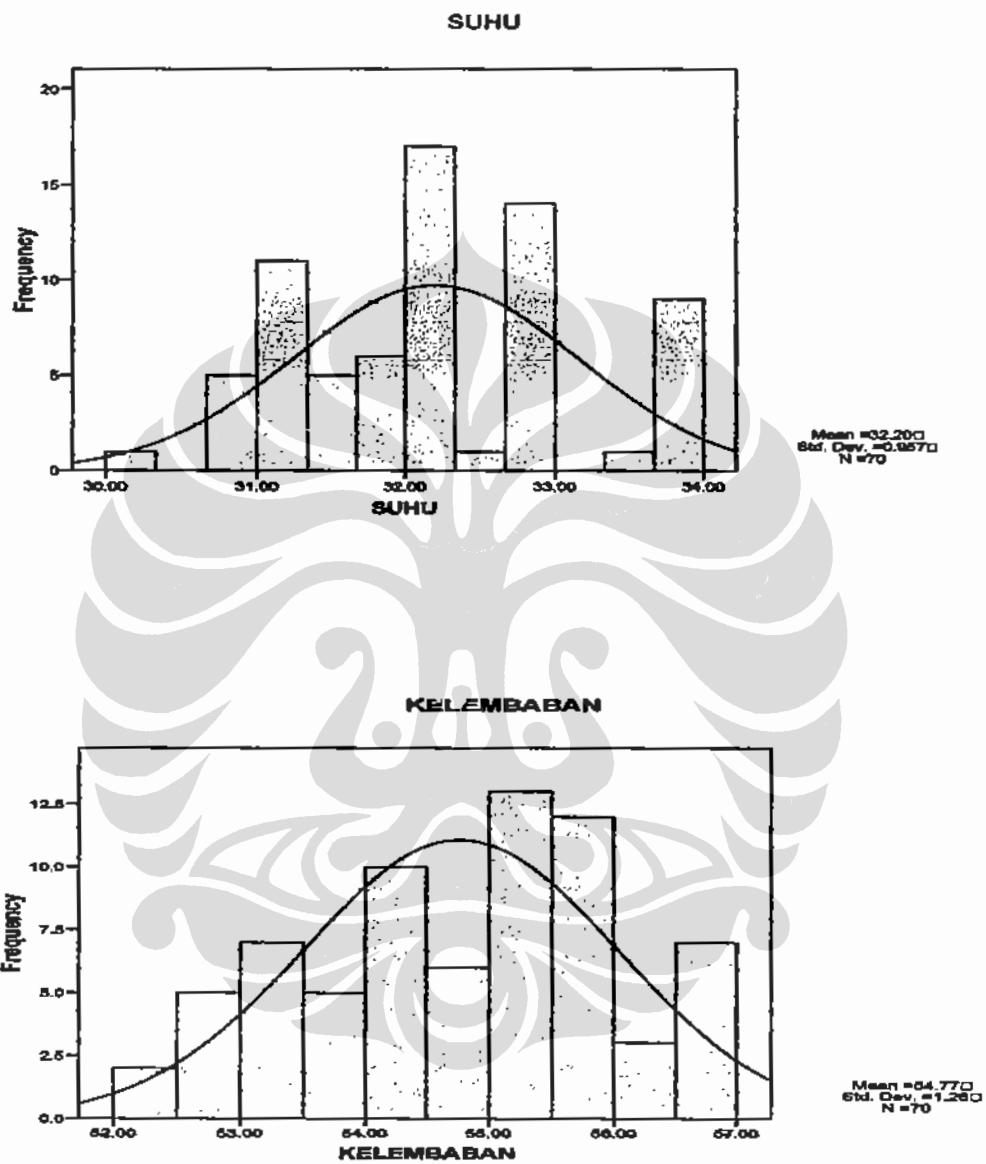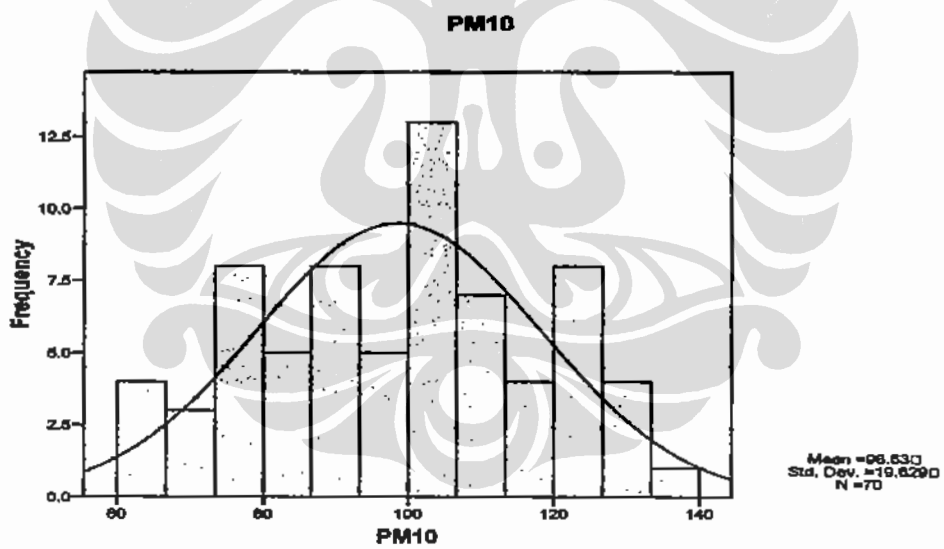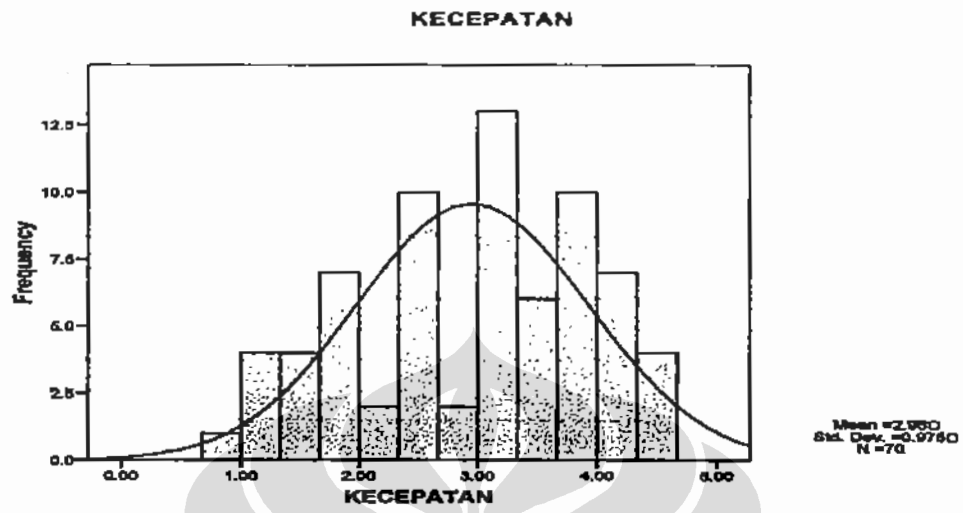
Daerah Terpajan dan Tidak Terpajan

Statistics

		PM10	SUHU	KELEMBA BAN	KECEPATAN
N	Valid	105	105	105	105
	Missing	0	0	0	0
Mean		120,20	32,2541	54,5290	2,8743
Std. Error of Mean		3,438	,08962	,11882	,09582
Median		113,00	32,1000	54,5700	3,1700
Std. Deviation		35,232	,91835	1,21750	,98184
Skewness		,236	,298	,024	-,352
Std. Error of Skewness		,238	,236	,236	,238
Kurtosis		-1,038	-,524	-,728	-1,021
Std. Error of Kurtosis		,467	,467	,467	,467
Range		141	3,87	4,87	3,70
Minimum		60	30,13	52,10	,83
Maximum		201	34,00	56,97	4,53
Percentiles	10	76,60	31,0700	52,9140	1,3700
	20	88,00	31,3260	53,4000	1,8000
	30	97,00	31,8000	53,9180	2,4100
	40	104,00	32,0000	54,0300	2,6300
	50	113,00	32,1000	54,5700	3,1700
	60	124,00	32,2700	54,9880	3,3300
	70	153,00	32,9000	55,3300	3,5300
	80	158,80	32,9620	55,6560	3,7860
	90	165,80	33,8400	55,9980	4,0300

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PM10	,150	105	,000	,951	105	,001
SUHU	,118	105	,001	,953	105	,001
KELEMBABAN	,079	105	,114	,979	105	,089
KECEPATAN	,129	105	,000	,948	105	,000

a. Lilliefors Significance Correction

Histogram
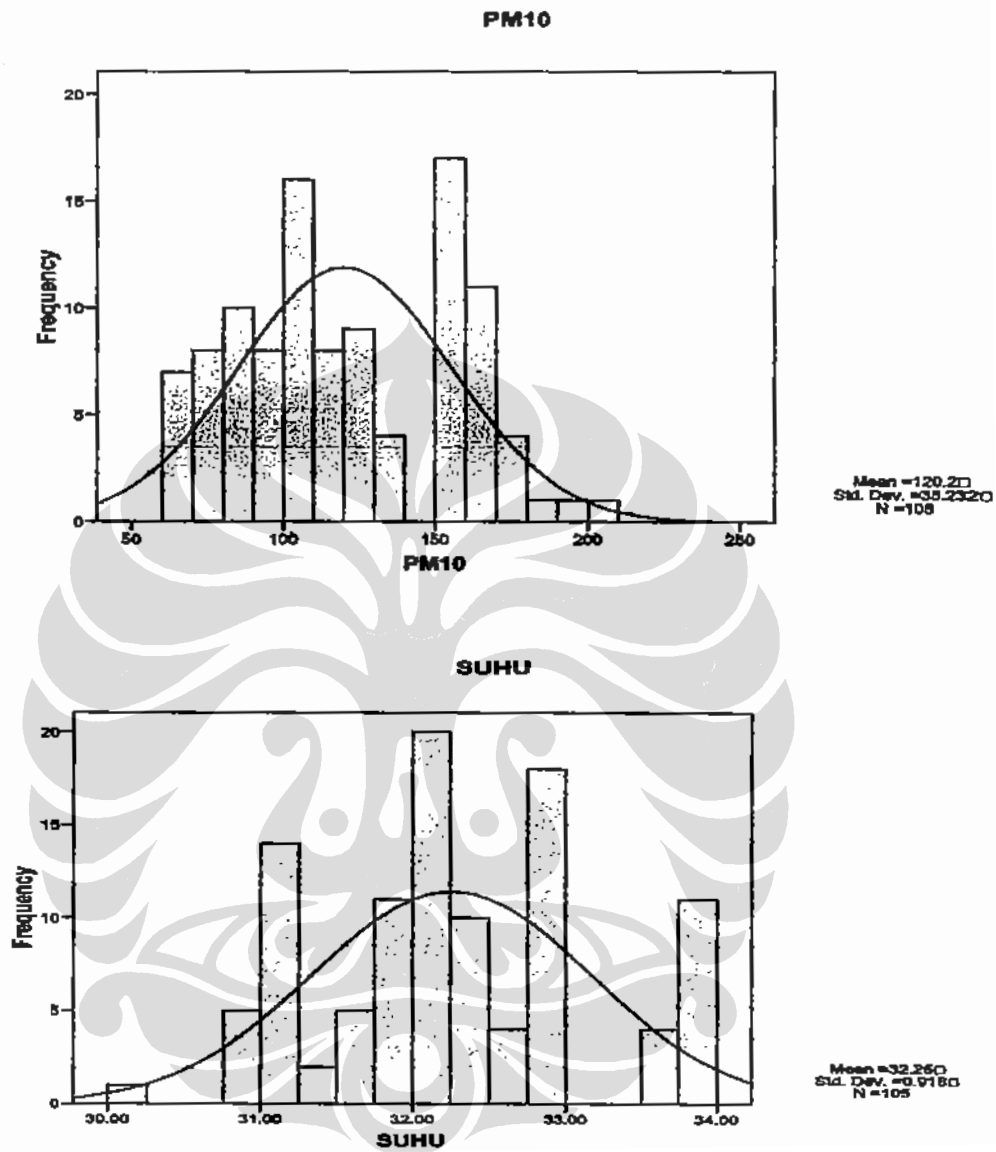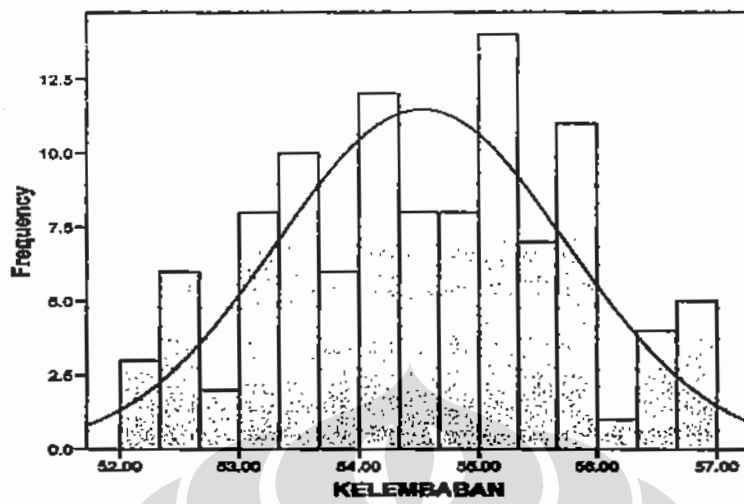
PM10

Mean =120.20
Std. Dev. =35.2320
N =106

SUHU

Mean =32.260
Std. Dev. =0.9180
N =105

KELEMBABAN

KECEPATAN
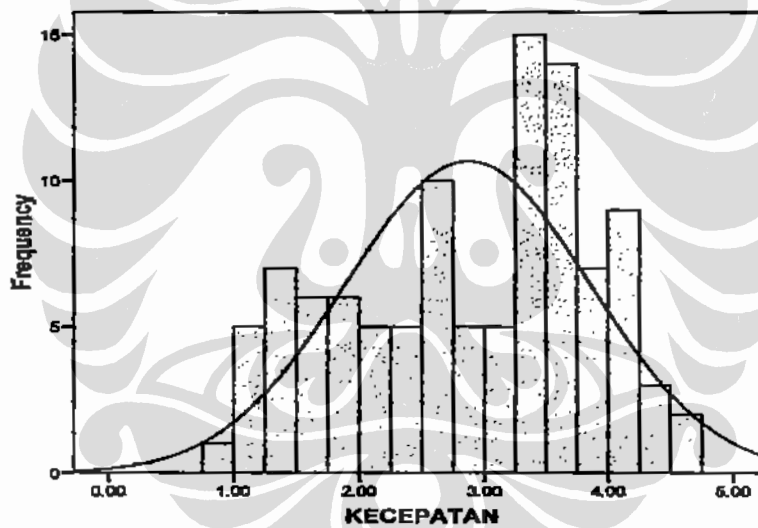
Descriptives

			Statistic	Std. Error
PM10	Mean		120,20	3,438
	95% Confidence	Lower Bound	113,38	
	Interval for Mean	Upper Bound	127,02	
	5% Trimmed Mean		119,66	
	Median		113,00	
	Variance		1241,315	
	Std. Deviation		35,232	
	Minimum		60	
	Maximum		201	
	Range		141	
	Interquartile Range		64	
	Skewness		,236	,236
	Kurtosis		-1,036	,467
SUHU	Mean		32,2541	,08962
	95% Confidence	Lower Bound	32,0764	
	Interval for Mean	Upper Bound	32,4318	
	5% Trimmed Mean		32,2422	
	Median		32,1000	
	Variance		,843	
	Std. Deviation		,91835	
	Minimum		30,13	
	Maximum		34,00	
	Range		3,87	
	Interquartile Range		1,27	
	Skewness		,298	,236
	Kurtosis		-,524	,467
KELEMBABAN	Mean		54,5290	,11882
	95% Confidence	Lower Bound	54,2934	
	Interval for Mean	Upper Bound	54,7647	
	5% Trimmed Mean		54,5210	
	Median		54,5700	
	Variance		1,482	
	Std. Deviation		1,21750	
	Minimum		52,10	
	Maximum		56,97	
	Range		4,87	
	Interquartile Range		1,90	
	Skewness		,024	,236
	Kurtosis		-,728	,467
KECEPATAN	Mean		2,8743	,09582
	95% Confidence	Lower Bound	2,6843	
	Interval for Mean	Upper Bound	3,0643	
	5% Trimmed Mean		2,8896	
	Median		3,1700	
	Variance		,964	
	Std. Deviation		,98164	
	Minimum		,83	
	Maximum		4,53	
	Range		3,70	
	Interquartile Range		1,67	
	Skewness		-,352	,236
	Kurtosis		-1,021	,467

Analisa Bivariat Suhu, Kelembaban dan kecepatan Angin dengan Konsentrasi PM$_{10}$

Correlations
Suhu dengan Konsentrasi PM$_{10}$

Correlations

		PM10	SUHU
PM10	Pearson Correlation	1	,223*
	Sig. (2-tailed)		,022
	N	105	105
SUHU	Pearson Correlation	,223*	1
	Sig. (2-tailed)	,022	
	N	105	105

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations
Klelembaban dengan Konsentrasi PM$_{10}$

Correlations

		PM10	KELEMBA BAN
PM10	Pearson Correlation	1	-,300**
	Sig. (2-tailed)		,002
	N	105	105
KELEMBABAN	Pearson Correlation	-,300**	1
	Sig. (2-tailed)	,002	
	N	105	105

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations
Kecepatan Angin dengan Konsentrasi PM$_{10}$

Correlations

		PM10	KECEPATAN
PM10	Pearson Correlation	1	-,265**
	Sig. (2-tailed)		,006
	N	105	105
KECEPATAN	Pearson Correlation	-,265**	1
	Sig. (2-tailed)	,006	
	N	105	105

**. Correlation is significant at the 0.01 level (2-tailed).

Regression

Suhu dengan Konsentrasi PM_{10}

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,223[a]	,050	,041	34,508

a. Predictors: (Constant), SUHU

b. Dependent Variable: PM10

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6442,403	1	6442,403	5,410	,022[a]
	Residual	122654,4	103	1190,819		
	Total	129096,8	104			

a. Predictors: (Constant), SUHU

b. Dependent Variable: PM10

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-156,230	118,894		-1,314	,192
	SUHU	8,570	3,685	,223	2,326	,022

a. Dependent Variable: PM10

Charts

Regression

Kelembaban dengan Konsentrasi PM_{10}

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,300[a]	,090	,081	33,771

a. Predictors: (Constant), KELEMBABAN

b. Dependent Variable: PM10

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11630,517	1	11630,517	10,198	,002[a]
	Residual	117466,3	103	1140,449		
	Total	129096,8	104			

a. Predictors: (Constant), KELEMBABAN

b. Dependent Variable: PM10

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	593,834	148,350		4,003	,000
	KELEMBABAN	-8,686	2,720	-,300	-3,193	,002

a. Dependent Variable: PM10

Regression

Kecepatan Angin dengan Konsentrasi PM$_{10}$

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,265[a]	,070	,061	34,133

a. Predictors: (Constant), KECEPATAN

b. Dependent Variable: PM10

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9097,844	1	9097,844	7,809	,006[a]
	Residual	119999,0	103	1165,038		
	Total	129096,8	104			

a. Predictors: (Constant), KECEPATAN

b. Dependent Variable: PM10

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	147,581	10,349		14,261	,000
	KECEPATAN	-9,526	3,409	-,265	-2,794	,006

a. Dependent Variable: PM10

Regression

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,445[a]	,198	,175	32,009

a. Predictors: (Constant), KECEPATAN, KELEMBABAN, SUHU

ANOVA[b]

| Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25615,019	3	8538,340	8,334	,000[a]
	Residual	103481,8	101	1024,572		
	Total	129096,8	104			

a. Predictors: (Constant), KECEPATAN, KELEMBABAN, SUHU

b. Dependent Variable: PM10

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	395,100	189,350		2,087	,039		
	SUHU	6,754	3,444	,176	1,961	,053	,985	1,015
	KELEMBABA	-8,534	2,593	-,295	-3,290	,001	,988	1,012
	KECEPATAN	-9,540	3,209	-,266	-2,973	,004	,992	1,008

a. Dependent Variable: PM10
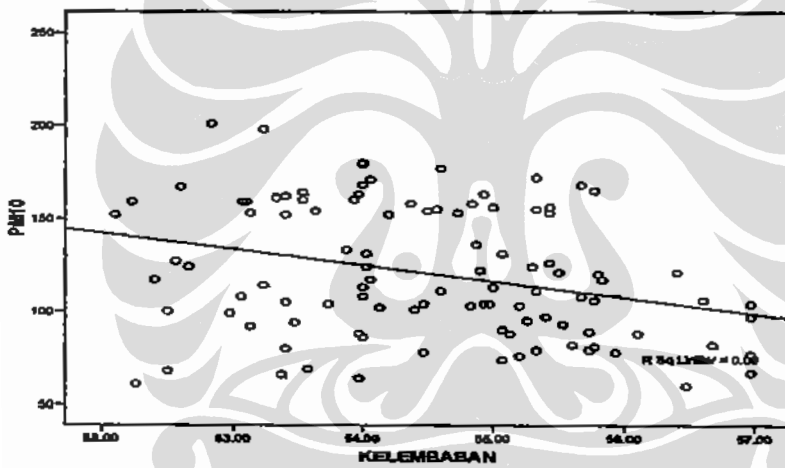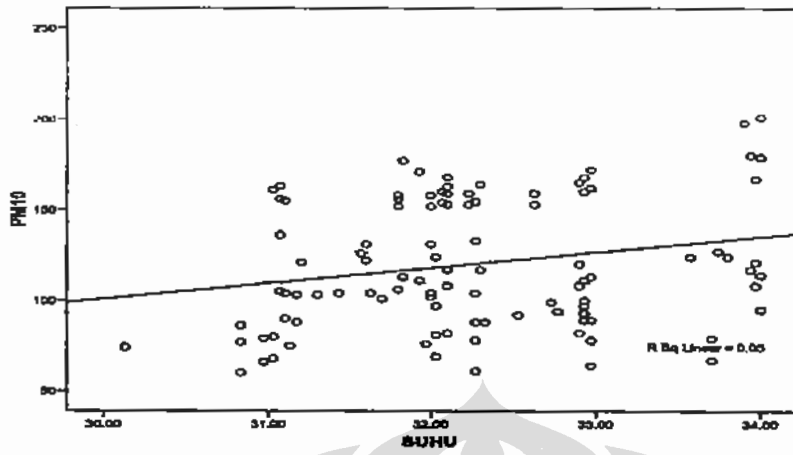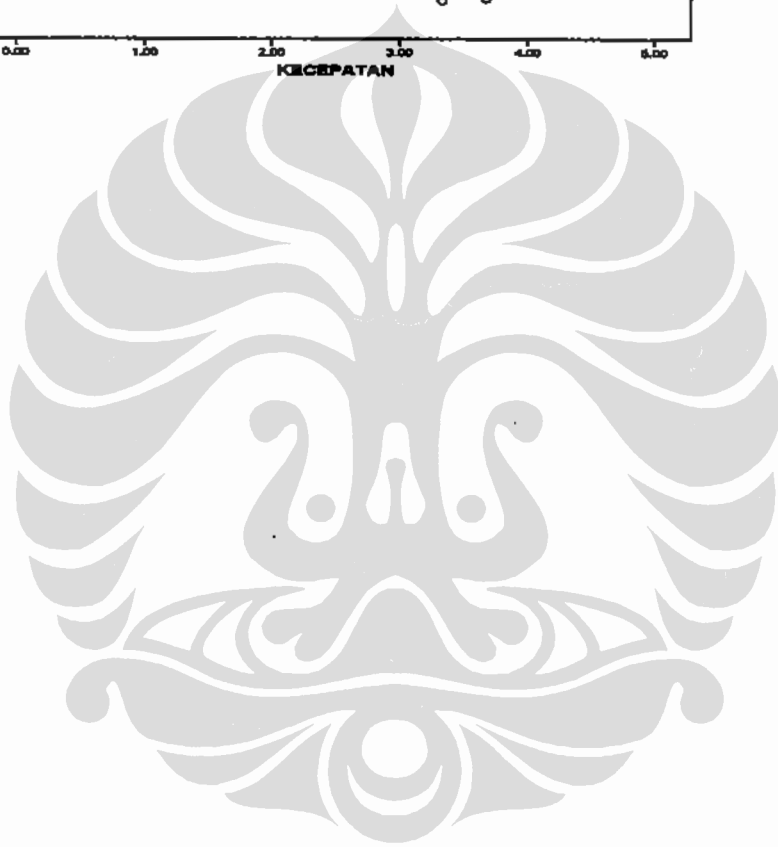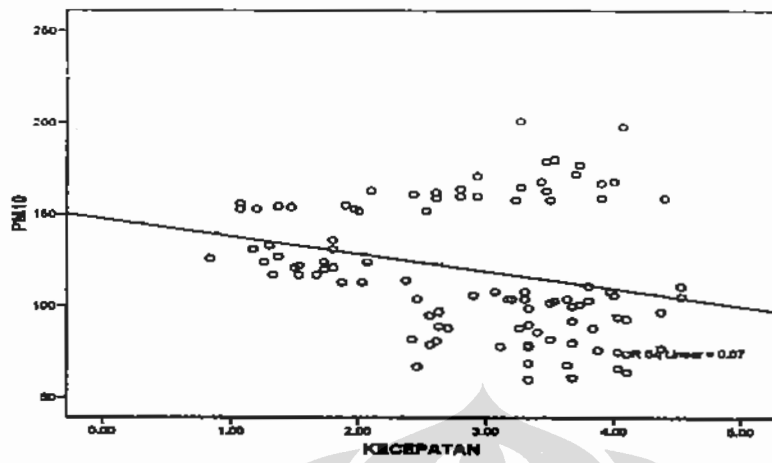
Multivariat suhu, Kelembaban dan Kecepatan angin dengan Konsentrasi PM_{10}.

Seleksi Bivariat

Correlations

		PM10	SUHU	KELEMBA BAN	KECEPATAN
PM10	Pearson Correlation	1	,223*	-,300**	-,265**
	Sig. (2-tailed)		,022	,002	,006
	N	105	105	105	105
SUHU	Pearson Correlation	,223*	1	-,096	-,071
	Sig. (2-tailed)	,022		,329	,470
	N	105	105	105	105
KELEMBABAN	Pearson Correlation	-,300**	-,096	1	-,044
	Sig. (2-tailed)	,002	,329		,656
	N	105	105	105	105
KECEPATAN	Pearson Correlation	-,265**	-,071	-,044	1
	Sig. (2-tailed)	,006	,470	,656	
	N	105	105	105	105

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Pemodelan Multivariat

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,445[a]	,198	,175	32,009

a. Predictors: (Constant), KECEPATAN, KELEMBABAN, SUHU

ANOVA[b]

| Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25615,019	3	8538,340	8,334	,000[a]
	Residual	103481,8	101	1024,572		
	Total	129096,8	104			

a. Predictors: (Constant), KECEPATAN, KELEMBABAN, SUHU

b. Dependent Variable: PM10

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	395,100	189,350		2,087	,039
	SUHU	6,754	3,444	,176	1,961	,053
	KELEMBABAN	-8,534	2,593	-,295	-3,290	,001
	KECEPATAN	-9,540	3,209	-,266	-2,973	,004

a. Dependent Variable: PM10

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,410[a]	,168	,152	32,453

a. Predictors: (Constant), KECEPATAN, KELEMBABAN

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21673,835	2	10836,917	10,290	,000[a]
	Residual	107423,0	102	1053,166		
	Total	129096,8	104			

a. Predictors: (Constant), KECEPATAN, KELEMBABAN

b. Dependent Variable: PM10

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	641,981	143,411		4,477	,000
	KELEMBABAN	-9,041	2,616	-,312	-3,456	,001
	KECEPATAN	-10,018	3,244	-,279	-3,088	,003

a. Dependent Variable: PM10

Uji Asumsi

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,410[a]	,168	,152	32,453	1,870

a. Predictors: (Constant), KECEPATAN, KELEMBABAN

b. Dependent Variable: PM10

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21673,835	2	10836,917	10,290	,000[a]
	Residual	107423,0	102	1053,166		
	Total	129096,8	104			

a. Predictors: (Constant), KECEPATAN, KELEMBABAN

b. Dependent Variable: PM10

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	641,981	143,411		4,477	,000		
	KELEMBABA	-9,041	2,616	-,312	-3,456	,001	,998	1,002
	KECEPATAN	-10,018	3,244	-,279	-3,088	,003	,998	1,002

a. Dependent Variable: PM10

Coefficient Correlations[a]

Model			KECEPATAN	KELEMBABAN
1	Correlations	KECEPATAN	1,000	,044
		KELEMBABAN	,044	1,000
	Covariances	KECEPATAN	10,525	,373
		KELEMBABAN	,373	6,845

a. Dependent Variable: PM10

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	83,15	153,07	120,20	14,436	105
Std. Predicted Value	-2,567	2,277	,000	1,000	105
Standard Error of Predicted Value	3,260	8,780	5,329	1,306	105
Adjusted Predicted Value	82,05	154,72	120,28	14,519	105
Residual	-71,742	78,035	,000	32,139	105
Std. Residual	-2,211	2,405	,000	,990	105
Stud. Residual	-2,266	2,446	-,001	1,004	105
Deleted Residual	-75,362	80,755	-,060	33,010	105
Stud. Deleted Residual	-2,314	2,509	,001	1,012	105
Mahal. Distance	,059	8,621	1,981	1,490	105
Cook's Distance	,000	,088	,009	,014	105
Centered Leverage Value	,001	,084	,019	,014	105

a. Dependent Variable: PM10

Charts

Histogram

Dependent Variable: PM10

Mean =1,76E-15
Std. Dev. =0,990
N =105
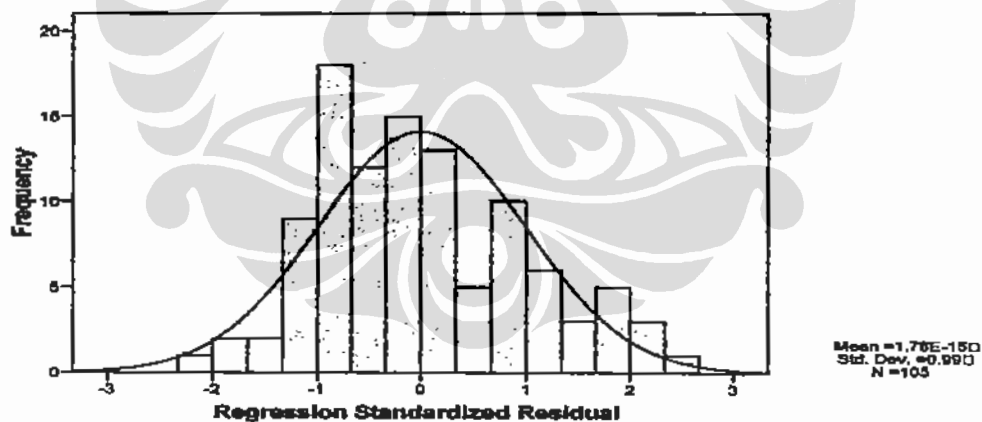
Normal P-P Plot of Regression Standardized Residual

Dependent Variable: PM10

Scatterplot

Dependent Variable: PM10
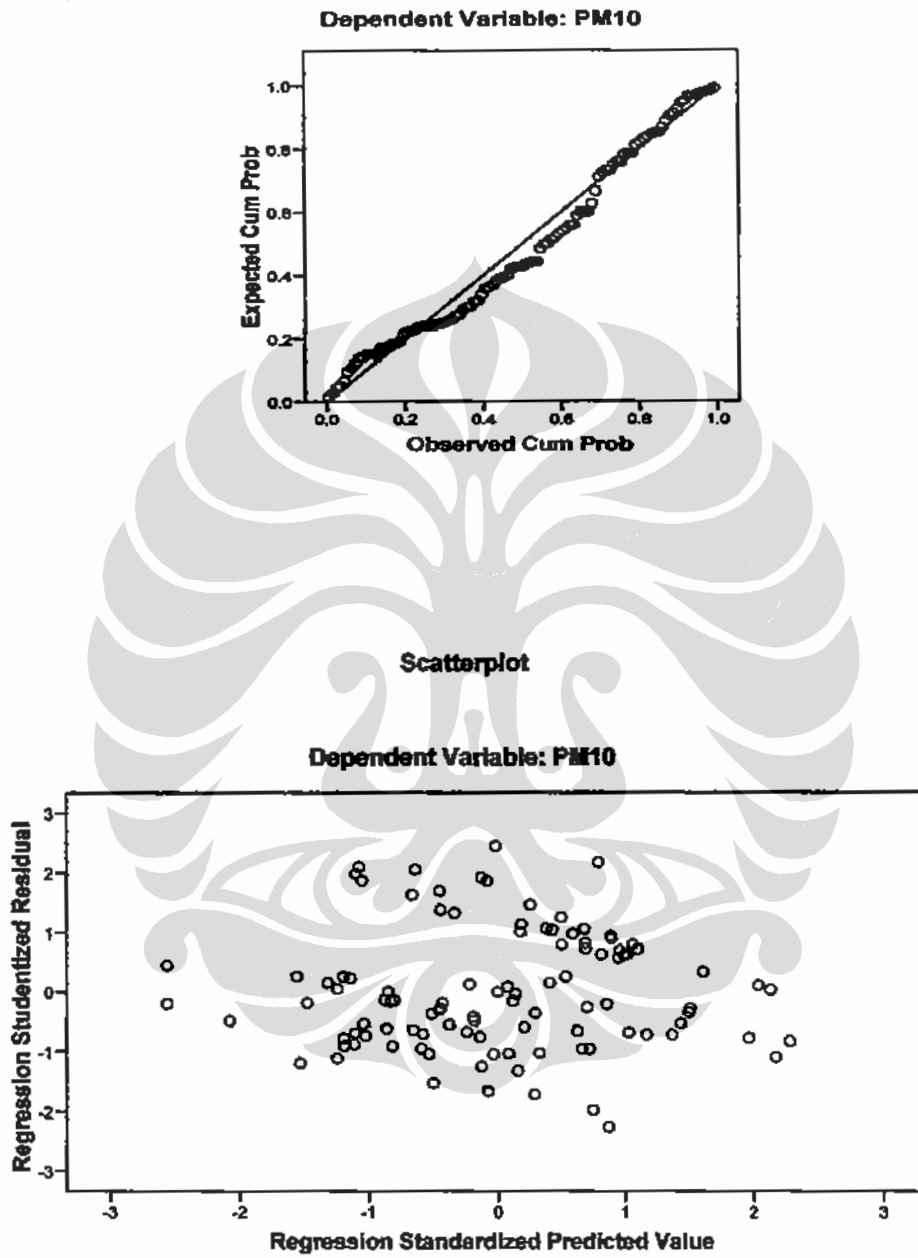
Regression

Interaksi

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	kelkec, KELEMBA BAN, SUHU, sukec, sukel, KECEPAT AN	.	Enter

a. All requested variables entered.

b. Dependent Variable: PM10

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,548[a]	,300	,257	30,370

a. Predictors: (Constant), kelkec, KELEMBABAN, SUHU, sukec, sukel, KECEPATAN

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	38706,866	6	6451,144	6,994	,000[a]
	Residual	90389,934	98	922,346		
	Total	129096,8	104			

a. Predictors: (Constant), kelkec, KELEMBABAN, SUHU, sukec, sukel, KECEPATAN

b. Dependent Variable: PM10

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-5593,041	5302,454		-1,055	,294
	SUHU	191,360	157,953	4,988	1,212	,229
	KELEMBABAN	120,688	95,166	4,171	1,268	,208
	KECEPATAN	-379,169	220,380	-10,567	-1,721	,088
	sukel	-3,988	2,834	-6,873	-1,407	,163
	sukec	10,993	3,710	9,836	2,963	,004
	kelkec	,284	2,815	,431	,101	,920

a. Dependent Variable: PM10

Regression

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	sukec, SUHU, KELEMBA BAN, KECEPAT AN, sukel	.	Enter

a. All requested variables entered.

b. Dependent Variable: PM10

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,547[a]	,300	,264	30,218

a. Predictors: (Constant), sukec, SUHU, KELEMBABAN, KECEPATAN, sukel

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	38697,461	5	7739,492	8,476	,000[a]
	Residual	90399,339	99	913,125		
	Total	129096,8	104			

a. Predictors: (Constant), sukec, SUHU, KELEMBABAN, KECEPATAN, sukel

b. Dependent Variable: PM10

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-5837,100	4695,935		-1,243	,217
	SUHU	197,492	145,085	5,148	1,361	,177
	KELEMBABAN	124,990	84,669	4,319	1,476	,143
	KECEPATAN	-360,121	113,395	-10,036	-3,176	,002
	sukel	-4,095	2,615	-7,058	-1,566	,121
	sukec	10,882	3,526	9,737	3,086	,003

a. Dependent Variable: PM10

Regression

Variables Entered/Removed^b

Model	Variables Entered	Variables Removed	Method
1	sukec, sukel, KELEMBABAN, KECEPATAN^a	.	Enter

a. All requested variables entered.

b. Dependent Variable: PM10

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,535^a	,287	,258	30,347

a. Predictors: (Constant), sukec, sukel, KELEMBABAN, KECEPATAN

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	37005,533	4	9251,383	10,046	,000^a
	Residual	92091,267	100	920,913		
	Total	129096,8	104			

a. Predictors: (Constant), sukec, sukel, KELEMBABAN, KECEPATAN

b. Dependent Variable: PM10

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	552,410	135,926		4,064	,000
	KELEMBABAN	10,132	7,029	,350	1,441	,153
	KECEPATAN	-399,732	110,064	-11,140	-3,632	,000
	sukel	-,545	,197	-,940	-2,767	,007
	sukec	12,127	3,419	10,851	3,547	,001

a. Dependent Variable: PM10

Regression

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	sukec, sukel, KECEPATAN[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: PM10

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,521[a]	,272	,250	30,508

a. Predictors: (Constant), sukec, sukel, KECEPATAN

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	35092,200	3	11697,400	12,568	,000[a]
	Residual	94004,600	101	930,739		
	Total	129096,8	104			

a. Predictors: (Constant), sukec, sukel, KECEPATAN

b. Dependent Variable: PM10

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	637,677	123,030		5,183	,000
	KECEPATAN	-256,031	46,885	-7,135	-5,461	,000
	sukel	-,279	,070	-,482	-4,017	,000
	sukec	7,661	1,455	6,855	5,266	,000

a. Dependent Variable: PM10
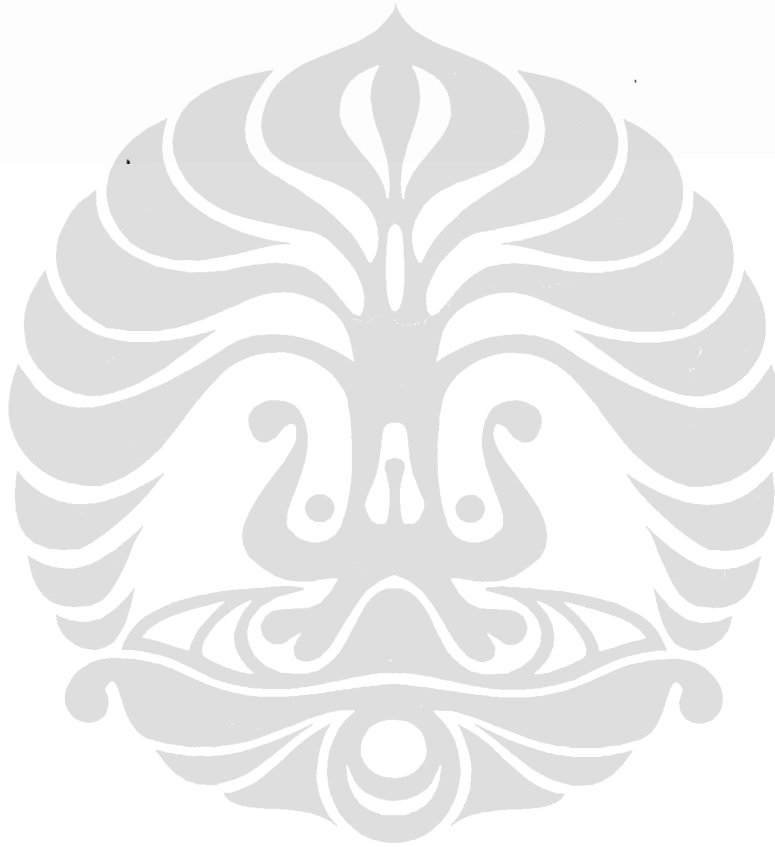
Lampiran VII. Uji Cox Regresi

Cox Regression

Case Processing Summary

		N	Percent
Cases available in analysis	Event[a]	44	44.0%
	Censored	56	56.0%
	Total	100	100.0%
Cases dropped	Cases with missing values	0	.0%
	Cases with negative time	0	.0%
	Censored cases before the earliest event in a stratum	0	.0%
	Total	0	.0%
Total		100	100.0%

a. Dependent Variable: Time

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

-2 Log Likelihood	Overall (score)			Change From Previous Step			Change From Previous Block		
	Chi-square	df	Sig.	Chi-square	df	Sig.	Chi-square	df	Sig.
397.671	7.364	1	.007	7.584	1	.006	7.584	1	.006

a. Beginning Block Number 0, initial Log Likelihood function: -2 Log likelihood: 405.255

b. Beginning Block Number 1. Method = Enter

Variables in the Equation

	B	SE	Wald	df	Sig.	Exp(B)	95.0% CI for Exp(B)	
							Lower	Upper
PM10	.869	.330	6.917	1	.009	2.385	1.248	4.557

Survival Table

Time	Baseline Cum Hazard	At mean of covariates		
		Survival	SE	Cum Hazard
4	.366	.568	.038	.568

Cox Regression

Case Processing Summary

		N	Percent
Cases available in analysis	Event[a]	44	44.0%
	Censored	56	56.0%
	Total	100	100.0%
Cases dropped	Cases with missing values	0	.0%
	Cases with negative time	0	.0%
	Censored cases before the earliest event in a stratum	0	.0%
	Total	0	.0%
Total		100	100.0%

a. Dependent Variable: Time

Block 1: Method = Enter

Omnibus Tests of Model Coefficients[a,b]

-2 Log Likelihood	Overall (score)			Change From Previous Step			Change From Previous Block		
	Chi-square	df	Sig.	Chi-square	df	Sig.	Chi-square	df	Sig.
401.759	3.579	1	.059	3.496	1	.062	3.496	1	.062

a. Beginning Block Number 0, initial Log Likelihood function: -2 Log likelihood: 405.255

b. Beginning Block Number 1. Method = Enter

Variables in the Equation

	B	SE	Wald	df	Sig.	Exp(B)	95.0% CI for Exp(B)	
							Lower	Upper
umur	.021	.011	3.527	1	.060	1.021	.999	1.044

Survival Table

	Baseline	At mean of covariates		
Time	Cum Hazard	Survival	SE	Cum Hazard
4	.262	.562	.037	.576

Cox Regression

Case Processing Summary

		N	Percent
Cases available in analysis	Event[a]	44	44.0%
	Censored	56	56.0%
	Total	100	100.0%
Cases dropped	Cases with missing values	0	.0%
	Cases with negative time	0	.0%
	Censored cases before the earliest event in a stratum	0	.0%
	Total	0	.0%
Total		100	100.0%

a. Dependent Variable: Time

Block 1: Method = Enter

Omnibus Tests of Model Coefficients[a,b]

-2 Log Likelihood	Overall (score)			Change From Previous Step			Change From Previous Block		
	Chi-square	df	Sig.	Chi-square	df	Sig.	Chi-square	df	Sig.
403.030	2.283	1	.131	2.225	1	.136	2.225	1	.136

a. Beginning Block Number 0, initial Log Likelihood function: -2 Log likelihood: 405.255

b. Beginning Block Number 1. Method = Enter

Variables in the Equation

	B	SE	Wald	df	Sig.	Exp(B)	95.0% CI for Exp(B)	
							Lower	Upper
masakerja	.019	.013	2.265	1	.132	1.020	.994	1.048

Survival Table

Time	Baseline Cum Hazard	At mean of covariates		
		Survival	SE	Cum Hazard
4	.406	.561	.037	.578

Cox Regression

Case Processing Summary

		N	Percent
Cases available in analysis	Event[a]	44	44.0%
	Censored	56	56.0%
	Total	100	100.0%
Cases dropped	Cases with missing values	0	.0%
	Cases with negative time	0	.0%
	Censored cases before the earliest event in a stratum	0	.0%
	Total	0	.0%
Total		100	100.0%

a. Dependent Variable: Time

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

-2 Log Likelihood	Overall (score)			Change From Previous Step			Change From Previous Block		
	Chi-square	df	Sig.	Chi-square	df	Sig.	Chi-square	df	Sig.
405.217	.037	1	.847	.038	1	.846	.038	1	.846

a. Beginning Block Number 0, initial Log Likelihood function: -2 Log likelihood: 405.255

b. Beginning Block Number 1. Method = Enter

Variables in the Equation

	B	SE	Wald	df	Sig.	Exp(B)	95.0% CI for Exp(B)	
							Lower	Upper
status_gizi	.079	.412	.037	1	.847	1.083	.483	2.428

Survival Table

Time	Baseline Cum Hazard	At mean of covariates		
		Survival	SE	Cum Hazard
4	.543	.560	.037	.580

Cox Regression

Case Processing Summary

		N	Percent
Cases available in analysis	Event[a]	44	44.0%
	Censored	56	56.0%
	Total	100	100.0%
Cases dropped	Cases with missing values	0	.0%
	Cases with negative time	0	.0%
	Censored cases before the earliest event in a stratum	0	.0%
	Total	0	.0%
Total		100	100.0%

a. Dependent Variable: Time

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

-2 Log Likelihood	Overall (score)			Change From Previous Step			Change From Previous Block		
	Chi-square	df	Sig.	Chi-square	df	Sig.	Chi-square	df	Sig.
397.994	8.620	1	.003	7.261	1	.007	7.261	1	.007

a. Beginning Block Number 0, Initial Log Likelihood function: -2 Log likelihood: 405.255

b. Beginning Block Number 1. Method = Enter

Variables in the Equation

	B	SE	Wald	df	Sig.	Exp(B)	95.0% CI for Exp(B)	
							Lower	Upper
rokok	.890	.313	8.072	1	.004	2.436	1.318	4.602

Survival Table

Time	Baseline Cum Hazard	At mean of covariates		
		Survival	SE	Cum Hazard
4	.495	.556	.036	.587

Cox Regression

Case Processing Summary

		N	Percent
Cases available in analysis	Event[a]	44	44.0%
	Censored	56	56.0%
	Total	100	100.0%
Cases dropped	Cases with missing values	0	.0%
	Cases with negative time	0	.0%
	Censored cases before the earliest event in a stratum	0	.0%
	Total	0	.0%
Total		100	100.0%

a. Dependent Variable: Time

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

-2 Log Likelihood	Overall (score)			Change From Previous Step			Change From Previous Block		
	Chi-square	df	Sig.	Chi-square	df	Sig.	Chi-square	df	Sig.
405.004	.258	1	.611	.251	1	.616	.251	1	.616

a. Beginning Block Number 0, initial Log Likelihood function: -2 Log likelihood: 405.255

b. Beginning Block Number 1. Method = Enter

Variables in the Equation

	B	SE	Wald	df	Sig.	Exp(B)	95.0% CI for Exp(B)	
							Lower	Upper
apd	.172	.339	.258	1	.612	1.188	.812	2.306

Survival Table

Time	Baseline Cum Hazard	At mean of covariates		
		Survival	SE	Cum Hazard
4	.556	.560	.037	.580

Cox Regression

Case Processing Summary

		N	Percent
Cases available in analysis	Event[a]	44	44.0%
	Censored	56	56.0%
	Total	100	100.0%
Cases dropped	Cases with missing values	0	.0%
	Cases with negative time	0	.0%
	Censored cases before the earliest event in a stratum	0	.0%
	Total	0	.0%
Total		100	100.0%

a. Dependent Variable: Time

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

-2 Log Likelihood	Overall (score)			Change From Previous Step			Change From Previous Block		
	Chi-square	df	Sig.	Chi-square	df	Sig.	Chi-square	df	Sig.
390.610	15.769	4	.003	14.645	4	.005	14.645	4	.005

a. Beginning Block Number 0, initial Log Likelihood function: -2 Log likelihood: 405.255

b. Beginning Block Number 1. Method = Enter

Variables in the Equation

	B	SE	Wald	df	Sig.	Exp(B)	95.0% CI for Exp(B)	
							Lower	Upper
PM10	.861	.395	4.754	1	.029	2.365	1.091	5.127
umur	.009	.027	.100	1	.751	1.009	.956	1.064
masakerja	-.012	.029	.181	1	.671	.988	.933	1.046
rokok	.875	.322	7.380	1	.007	2.399	1.276	4.510

Correlation Matrix of Regression Coefficients

	PM10	umur	masakerja
umur	-.319		
masakerja	.053	-.885	
rokok	.106	-.106	-.010

Survival Table

Time	Baseline Cum Hazard	At mean of covariates		
		Survival	SE	Cum Hazard
4	.287	.564	.037	.574

Cox Regression

Case Processing Summary

		N	Percent
Cases available in analysis	Event[a]	44	44.0%
	Censored	56	56.0%
	Total	100	100.0%
Cases dropped	Cases with missing values	0	.0%
	Cases with negative time	0	.0%
	Censored cases before the earliest event in a stratum	0	.0%
	Total	0	.0%
Total		100	100.0%

a. Dependent Variable: Time

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

-2 Log Likelihood	Overall (score)			Change From Previous Step			Change From Previous Block		
	Chi-square	df	Sig.	Chi-square	df	Sig.	Chi-square	df	Sig.
390.710	15.615	3	.001	14.545	3	.002	14.545	3	.002

a. Beginning Block Number 0, initial Log Likelihood function: -2 Log likelihood: 405.255

b. Beginning Block Number 1. Method = Enter

Variables in the Equation

	B	SE	Wald	df	Sig.	Exp(B)	95.0% CI for Exp(B)	
							Lower	Upper
PM10	.900	.373	5.829	1	.016	2.461	1.185	5.111
masakerja	-.004	.015	.093	1	.760	.996	.968	1.024
rokok	.886	.321	7.609	1	.006	2.425	1.292	4.552

Correlation Matrix of Regression Coefficients

	PM10	masakerja
masakerja	-.463	
rokok	.082	-.218

Survival Table

	Baseline	At mean of covariates		
Time	Cum Hazard	Survival	SE	Cum Hazard
4	.336	.563	.037	.574

Cox Regression

Case Processing Summary

		N	Percent
Cases available in analysis	Event[a]	44	44.0%
	Censored	56	56.0%
	Total	100	100.0%
Cases dropped	Cases with missing values	0	.0%
	Cases with negative time	0	.0%
	Censored cases before the earliest event in a stratum	0	.0%
	Total	0	.0%
Total		100	100.0%

a. Dependent Variable: Time

Block 1: Method = Enter

Omnibus Tests of Model Coefficients[b]

-2 Log Likelihood	Overall (score)			Change From Previous Step			Change From Previous Block		
	Chi-square	df	Sig.	Chi-square	df	Sig.	Chi-square	df	Sig.
390.803	15.587	2	.000	14.452	2	.001	14.452	2	.001

a. Beginning Block Number 0, initial Log Likelihood function: -2 Log likelihood: 405.255

b. Beginning Block Number 1, Method = Enter

Variables in the Equation

	B	SE	Wald	df	Sig.	Exp(B)	95.0% CI for Exp(B)	
							Lower	Upper
PM10	.847	.331	6.569	1	.010	2.333	1.221	4.460
rokok	.865	.314	7.605	1	.006	2.374	1.284	4.389

Correlation Matrix of Regression Coefficients

	PM10
rokok	-.028

Survival Table

	Baseline	At mean of covariates		
Time	Cum Hazard	Survival	SE	Cum Hazard
4	.319	.563	.037	.575

Cox Regression

Case Processing Summary

		N	Percent
Cases available in analysis	Event[a]	44	44.0%
	Censored	56	56.0%
	Total	100	100.0%
Cases dropped	Cases with missing values	0	.0%
	Cases with negative time	0	.0%
	Censored cases before the earliest event in a stratum	0	.0%
	Total	0	.0%
Total		100	100.0%

a. Dependent Variable: Time

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

-2 Log Likelihood	Overall (score)			Change From Previous Step			Change From Previous Block		
	Chi-square	df	Sig.	Chi-square	df	Sig.	Chi-square	df	Sig.
390.803	15.587	2	.000	14.452	2	.001	14.452	2	.001

a. Beginning Block Number 0, initial Log Likelihood function: -2 Log likelihood: 405.255

b. Beginning Block Number 1. Method = Enter

Variables in the Equation

	B	SE	Wald	df	Sig.	Exp(B)	95.0% CI for Exp(B)	
							Lower	Upper
PM10	.847	.331	6.569	1	.010	2.333	1.221	4.460
rokok	.865	.314	7.605	1	.006	2.374	1.284	4.389

Variables not in the Equation

	Score	df	Sig.
PM10*rokok	3.109	1	.078

a. Residual Chi Square = 3.109 with 1 df Sig. = .078

Block 2: Method = Enter

Omnibus Tests of Model Coefficients

-2 Log Likelihood	Overall (score)			Change From Previous Step			Change From Previous Block		
	Chi-square	df	Sig.	Chi-square	df	Sig.	Chi-square	df	Sig.
387.790	16.278	3	.001	3.013	1	.083	3.013	1	.083

a. Beginning Block Number 0, initial Log Likelihood function: -2 Log likelihood: 405.255

b. Beginning Block Number 2. Method = Enter

Variables in the Equation

	B	SE	Wald	df	Sig.	Exp(B)	95.0% CI for Exp(B)	
							Lower	Upper
PM10	1.324	.481	8.264	1	.004	3.758	1.524	9.269
rokok	1.670	.556	9.016	1	.003	5.315	1.786	15.814
PM10*rokok	-1.178	.683	2.977	1	.084	.308	.081	1.174

Correlation Matrix of Regression Coefficients

	PM10	rokok
rokok	.650	
PM10*rokok	-.675	-.815

Survival Table

Time	Baseline Cum Hazard	At mean of covariates		
		Survival	SE	Cum Hazard
4	.226	.585	.039	.536

Cox Regression

Case Processing Summary

		N	Percent
Cases available in analysis	Event	44	44.0%
	Censored	56	56.0%
	Total	100	100.0%
Cases dropped	Cases with missing values	0	.0%
	Cases with negative time	0	.0%
	Censored cases before the earliest event in a stratum	0	.0%
	Total	0	.0%
Total		100	100.0%

a. Dependent Variable: Time

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

-2 Log Likelihood	Overall (score)			Change From Previous Step			Change From Previous Block		
	Chi-square	df	Sig.	Chi-square	df	Sig.	Chi-square	df	Sig.
390.803	15.587	2	.000	14.452	2	.001	14.452	2	.001

a. Beginning Block Number 0, initial Log Likelihood function: -2 Log likelihood: 405.255

b. Beginning Block Number 1. Method = Enter

Variables in the Equation

	B	SE	Wald	df	Sig.	Exp(B)	95.0% CI for Exp(B)	
							Lower	Upper
PM10	.847	.331	6.569	1	.010	2.333	1.221	4.460
rokok	.865	.314	7.605	1	.006	2.374	1.284	4.389

Lampiran VI. Analisis konsentrasi PM_{10}, umur, masa kerja, status gizi, kebiasaan merokok dan penggunaan APD
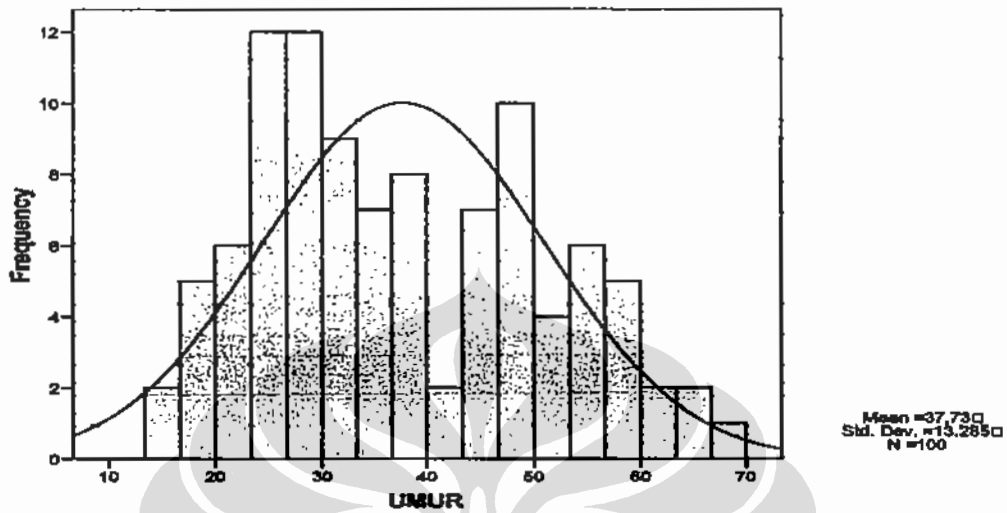
Statistics

UMUR

N	Valid	100
	Missing	0
Mean		37,73
Std. Error of Mean		1,329
Median		35,00
Mode		25
Std. Deviation		13,285
Minimum		15
Maximum		67

UMUR

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15	2	2,0	2,0	2,0
	18	3	3,0	3,0	5,0
	19	1	1,0	1,0	6,0
	20	1	1,0	1,0	7,0
	21	2	2,0	2,0	9,0
	23	4	4,0	4,0	13,0
	24	2	2,0	2,0	15,0
	25	7	7,0	7,0	22,0
	26	3	3,0	3,0	25,0
	27	4	4,0	4,0	29,0
	28	4	4,0	4,0	33,0
	29	2	2,0	2,0	35,0
	30	2	2,0	2,0	37,0
	31	4	4,0	4,0	41,0
	32	3	3,0	3,0	44,0
	33	2	2,0	2,0	46,0
	35	5	5,0	5,0	51,0
	36	2	2,0	2,0	53,0
	37	2	2,0	2,0	55,0
	38	1	1,0	1,0	56,0
	39	1	1,0	1,0	57,0
	40	4	4,0	4,0	61,0
	42	1	1,0	1,0	62,0
	43	1	1,0	1,0	63,0
	45	6	6,0	6,0	69,0
	46	1	1,0	1,0	70,0
	47	3	3,0	3,0	73,0
	48	3	3,0	3,0	76,0
	49	1	1,0	1,0	77,0
	50	3	3,0	3,0	80,0
	51	1	1,0	1,0	81,0
	52	1	1,0	1,0	82,0
	53	2	2,0	2,0	84,0
	54	5	5,0	5,0	89,0
	55	1	1,0	1,0	90,0
	57	2	2,0	2,0	92,0
	60	3	3,0	3,0	95,0
	61	1	1,0	1,0	96,0
	63	1	1,0	1,0	97,0
	64	1	1,0	1,0	98,0
	65	1	1,0	1,0	99,0
	67	1	1,0	1,0	100,0
	Total	100	100,0	100,0	

Histogram

Mean =37,73
Std. Dev. =13.285
N =100

Descriptives

			Statistic	Std. Error
UMUR	Mean		37,73	1,329
	95% Confidence Interval for Mean	Lower Bound	35,09	
		Upper Bound	40,37	
	5% Trimmed Mean		37,43	
	Median		35,00	
	Variance		176,502	
	Std. Deviation		13,285	
	Minimum		15	
	Maximum		67	
	Range		52	
	Interquartile Range		22	
	Skewness		,335	,241
	Kurtosis		-,941	,478

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
UMUR	,107	100	,007	,957	100	,003

a. Lilliefors Significance Correction

Frequencies

Statistics

MASA KERJA

N	Valid	100
	Missing	0
Mean		18,28
Std. Error of Mean		1,140
Median		17,50
Mode		14ᵃ
Std. Deviation		11,399
Minimum		1
Maximum		43

a. Multiple modes exist. The smallest value is shown

MASA KERJA

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	2	2,0	2,0	2,0
	2	4	4,0	4,0	6,0
	3	5	5,0	5,0	11,0
	4	3	3,0	3,0	14,0
	5	4	4,0	4,0	18,0
	6	2	2,0	2,0	20,0
	8	2	2,0	2,0	22,0
	9	3	3,0	3,0	25,0
	10	2	2,0	2,0	27,0
	11	4	4,0	4,0	31,0
	12	4	4,0	4,0	35,0
	13	1	1,0	1,0	36,0
	14	6	6,0	6,0	42,0
	15	2	2,0	2,0	44,0
	16	3	3,0	3,0	47,0
	17	3	3,0	3,0	50,0
	18	4	4,0	4,0	54,0
	19	2	2,0	2,0	56,0
	20	6	6,0	6,0	62,0
	21	4	4,0	4,0	66,0
	22	2	2,0	2,0	68,0
	23	3	3,0	3,0	71,0
	24	2	2,0	2,0	73,0
	25	4	4,0	4,0	77,0
	28	1	1,0	1,0	78,0
	29	2	2,0	2,0	80,0
	30	3	3,0	3,0	83,0
	31	1	1,0	1,0	84,0
	32	1	1,0	1,0	85,0
	33	2	2,0	2,0	87,0
	34	3	3,0	3,0	90,0
	35	1	1,0	1,0	91,0
	37	1	1,0	1,0	92,0
	38	3	3,0	3,0	95,0
	41	2	2,0	2,0	97,0
	42	1	1,0	1,0	98,0
	43	2	2,0	2,0	100,0
	Total	100	100,0	100,0	

Histogram

Mean =18.28
Std. Dev. =11.399
N =100
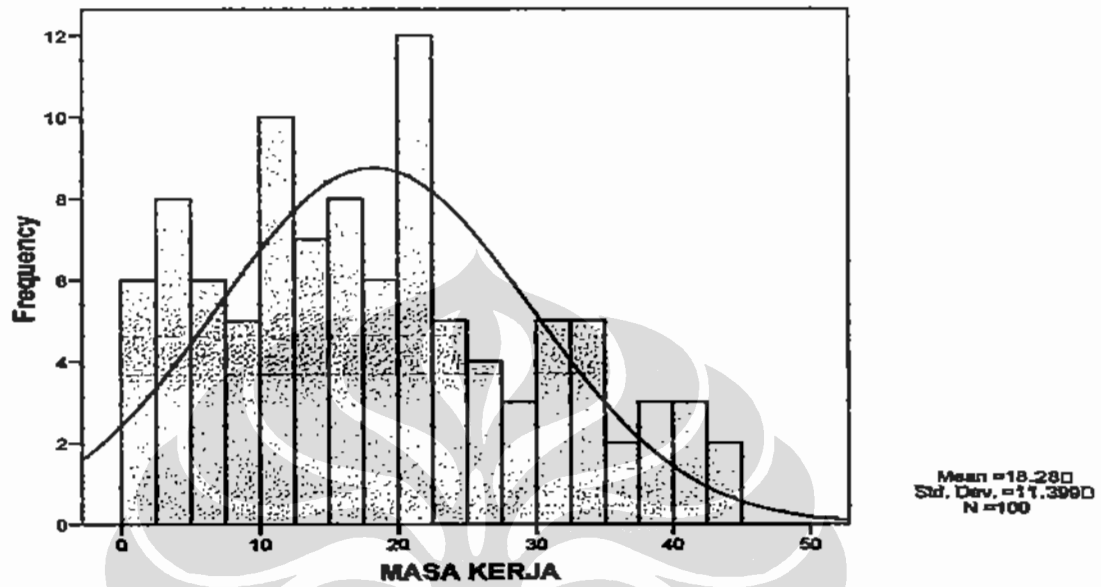
MASA KERJA

Descriptives

			Statistic	Std. Error
MASA KERJA	Mean		18,28	1,140
	95% Confidence Interval for Mean	Lower Bound	16,02	
		Upper Bound	20,54	
	5% Trimmed Mean		17,89	
	Median		17,50	
	Variance		129,941	
	Std. Deviation		11,399	
	Minimum		1	
	Maximum		43	
	Range		42	
	Interquartile Range		16	
	Skewness		,404	,241
	Kurtosis		-,681	,476

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
MASA KERJA	,066	100	,200*	,957	100	,003

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

a. Lilliefors Significance Correction

Multivariat

Seleksi Bivaraiat

Logistic Regression

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	13,474	1	,000
	Block	13,474	1	,000
	Model	13,474	1	,000

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
								Lower	Upper
Step 1ª	PM10	1,636	,435	12,486	1	,000	4,644	1,981	10,883
	Constant	-1,046	,322	10,525	1	,001	,351		

a. Variable(s) entered on step 1: PM10.

Logistic Regression

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	6,493	1	,011
	Block	6,493	1	,011
	Model	6,493	1	,011

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
								Lower	Upper
Step 1ª	umur	,040	,016	6,109	1	,013	1,041	1,008	1,074
	Constant	-1,760	,652	7,283	1	,007	,172		

a. Variable(s) entered on step 1: umur.

Logistic Regression

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	4,116	1	,042
	Block	4,116	1	,042
	Model	4,116	1	,042

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
								Lower	Upper
Step 1	masakerja	,037	,018	3,948	1	,047	1,037	1,000	1,076
	Constant	-,920	,401	5,258	1	,022	,399		

a. Variable(s) entered on step 1: masakerja.

Logistic Regression

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	,067	1	,796
	Block	,067	1	,796
	Model	,067	1	,796

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
								Lower	Upper
Step 1	status_gizi	,139	,540	,066	1	,797	1,149	,399	3,311
	Constant	-,357	,493	,524	1	,469	,700		

a. Variable(s) entered on step 1: status_gizi.

Logistic Regression

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	16,165	1	,000
	Block	16,165	1	,000
	Model	16,165	1	,000

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B) Lower	Upper
Step 1	rokok	2,312	,671	11,868	1	,001	10,095	2,709	37,817
	Constant	-,638	,234	7,459	1	,006	,528		

a. Variable(s) entered on step 1: rokok.

Logistic Regression

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	,459	1	,498
	Block	,459	1	,498
	Model	,459	1	,498

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B) Lower	Upper
Step 1	apd	,318	,470	,460	1	,498	1,375	,548	3,453
	Constant	-,318	,232	1,879	1	,170	,727		

a. Variable(s) entered on step 1: apd.

Hasil seleksi bivariat :

Variabel	P value
Konsentrasi PM_{10}	0,000
Umur	0,011
Masa kerja	0,042
Status gizi	0,796
Kebeiasaan merokok	0,000
Penggunaan APD	0,498

Hasil seleksi bivariat 4 variabel menghasilkan p value < 0,25, sedangkan variabel status gizi dan penggunaan APD dikelurkan.

Pemodelan Multivariat

Variables In the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
								Lower	Upper
Step 1	PM10	1,774	,579	9,399	1	,002	5,897	1,897	18,336
	umur	,029	,045	,399	1	,527	1,029	,942	1,124
	masakerja	-,032	,051	,395	1	,530	,969	,877	1,070
	rokok	2,671	,740	13,013	1	,000	14,455	3,386	61,697
	Constant	-2,141	,949	5,093	1	,024	,117		

a. Variable(s) entered on step 1: PM10, umur, masakerja, rokok.

Dari hasil analisis terlihat ada 2 variabel yang p valuenya > 0,05 yaitu masa kerja dan umur, yang terbesar adalah masa kerja, sehingga pemodelan selanjutnya variabel masa kerja dikeluarkan dari model.

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B) Lower	Upper
Step 1	PM10	1,791	,580	9,544	1	,002	5,994	1,924	18,668
	umur	,003	,021	,025	1	,873	1,003	,963	1,045
	rokok	2,662	,739	12,970	1	,000	14,321	3,364	60,965
	Constant	-1,779	,748	5,664	1	,017	,169		

a. Variable(s) entered on step 1: PM10, umur, rokok.

Kemudian umur dikeluarkan dari model karena p valuenya > 0,05

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B) Lower	Upper
Step 1	PM10	1,836	,505	13,214	1	,000	6,274	2,331	16,887
	rokok	2,669	,737	13,117	1	,000	14,425	3,403	61,149
	Constant	-1,680	,415	16,429	1	,000	,186		

a. Variable(s) entered on step 1: PM10, rokok.

Uji interaksi :

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B) Lower	Upper
Step 1	PM10	1,964	,544	13,024	1	,000	7,130	2,453	20,719
	rokok	3,016	,915	10,856	1	,001	20,417	3,394	122,811
	PM10 by rokok	-1,020	1,432	,507	1	,476	,361	,022	6,969
	Constant	-1,764	,442	15,931	1	,000	,171		

a. Variable(s) entered on step 1: PM10, rokok, PM10 * rokok .

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B) Lower	Upper
Step 1	PM10	1,836	,505	13,214	1	,000	6,274	2,331	16,887
	rokok	2,669	,737	13,117	1	,000	14,425	3,403	61,149
	Constant	-1,680	,415	16,429	1	,000	,186		

a. Variable(s) entered on step 1: PM10, rokok.

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No : 991 /PT.02.H5.FKMUI/I/2008   1 Maret 2008
Lamp. : ---
Hal : *Ijin penelitian*

Kepada Yth.
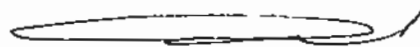**Kepala Administrator Pelabuhan**
Di
Palembang

Sehubungan dengan penulisan Tesis mahasiswa Program Pascasarjana Fakultas Kesehatan Masyarakat Universitas Indonesia mohon diberikan ijin kepada mahasiswa kami :

        Nama   : M. Firdaus
        NPM   : 0606020594
        Th. Angkatan   : 2006/2007

Untuk dapat melakukan penelitian dan menggunakan data yang akan dianalisis dalam penulisan tesis dengan tema *"Pajanan PM 10 terhadap Kejadian Gangguan Saluran Pernafasan pada Tenaga Kerja Bongkar Muat Pelabuhan di Pelabuhan Boom Baru Palembang"*

Demikian permohonan ini kami sampaikan, atas perkenan dan kerjasama yang baik kami haturkan terima kasih.

                                        Wakil Dekan Bidang Akademik,

                                        Dr. Sudijanto Kamso, dr, SKM
                                        NIP. 140 062 213

Tembusan:
- *Pembimbing Tesis*
- *Arsip*