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LAMPIRAN - LAMPIRAN



KEMENTERIAN PENDIDIKAN DAN KEBUDAYAAN
UNIVERSITAS HASANUDDIN FAKULTAS KEDOKTERAN
KOMITE ETIK PENELITIAN KESEHATAN
RSPTN UNIVERSITAS HASANUDDIN
RSUP Dr. WAHIDIN SUDIROHUSODO MAKASSAR
Sekretariat : Lantai 2 Gedung Laboratorium Terpadu
JL.PERINTIS KEMERDEKAAN KAMPUS TAMALANREA KALLO MAKASSAR 90245.



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REKOMENDASI PERSETUJUAN ETIK

Nomor : 86/UN4.6.4.5.31/ PP36/ 2021

Tanggal: 15 Februari 2021

Dengan ini Menyatakan bahwa Protokol dan Dokumen yang Berhubungan Dengan Protokol berikut ini telah mendapatkan Persetujuan Etik :

No Protokol	UH21020081		No Sponsor	
Peneliti Utama	Hilda Emma Mallisa,S.Kep		Sponsor	
Judul Peneliti	Analisis Pengaruh Cahaya LED Di Malam Hari terhadap Kadar Malondialdehyde (MDA) Otak dan Histologi Sel CA3 dan CA1 Hipokampus pada Tikus Wistar Jantan			
No Versi Protokol	1	Tanggal Versi	11 Februari 2021	
No Versi PSP		Tanggal Versi		
Tempat Penelitian	Klinik Hewan Universitas Hasanuddin dan Laboratorium Fakultas Farmasi Universitas Hasanuddin Makassar			
Jenis Review	<input type="checkbox"/> Exempted	Masa Berlaku 15 Februari 2021 sampai 15 Februari 2022	Frekuensi review lanjutan	
	<input checked="" type="checkbox"/> Expedited			
	<input type="checkbox"/> Fullboard Tanggal			
Ketua Komisi Etik Penelitian Kesehatan FKUH	Nama Prof.Dr.dr. Suryani As'ad, M.Sc.,Sp.GK (K)	Tanda tangan		
Sekretaris Komisi Etik Penelitian Kesehatan FKUH	Nama dr. Agussalim Bukhari, M.Med.,Ph.D.,Sp.GK (K)	Tanda tangan		

Kewajiban Peneliti Utama:

- Menyerahkan Amendemen Protokol untuk persetujuan sebelum di implementasikan
- Menyerahkan Laporan SAE ke Komisi Etik dalam 24 jam dan dilengkapi dalam 7 hari dan Laporan SUSAR dalam 72 jam setelah Peneliti Utama menerima laporan
- Menyerahkan Laporan Kemajuan (progress report) setiap 6 bulan untuk penelitian resiko tinggi dan setiap setahun untuk penelitian resiko rendah
- Menyerahkan laporan akhir setelah Penelitian berakhir
- Melaporkan penyimpangan dari protokol yang disetujui (protocol deviation / violation)
- Mematuhi semua peraturan yang ditentukan

Lampiran 2

KARAKTERISTIK SAMPEL

Variabel	Kelompok				p
	K15	P15	K30	P30	
Jenis Kelamin:					
Jantan	6	6	6	6	
Betina	0	0	0	0	
Usia	12 minggu				
BB (gr)	192.83±16.881	200.33±7.607	192.83±11.754	205.33±16.269	0.263

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
BB	Based on Mean	1.431	3	20	.263
	Based on Median	.345	3	20	.793
	Based on Median and with adjusted df	.345	3	12.928	.794
	Based on trimmed mean	1.267	3	20	.313

Lampiran 3

NORMALITAS DATA

Tests of Normality

Kelompok perlakuan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Kadar MDA						
Kontrol 15	.267	6	.200*	.915	6	.471
Kontrol 30	.172	6	.200*	.923	6	.524
Perlakuan 15	.244	6	.200*	.899	6	.369
Perlakuan 30	.181	6	.200*	.907	6	.418

a. Lilliefors Significance Correction

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

Lampiran 4

HASIL ANALISIS KADAR MDA OTAK

Kontrol 15 hari dan Perlakuan 15 hari

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.000 ^a	2	.011
Likelihood Ratio	12.137	2	.002
Linear-by-Linear Association	7.652	1	.006
N of Valid Cases	12		

a. 6 cells (100.0%) have expected count less than 5. The minimum expected count is 1.50.

Kontrol 30 hari dan Perlakuan 30 hari

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.800 ^a	2	.012
Likelihood Ratio	11.632	2	.003
Linear-by-Linear Association	7.187	1	.007
N of Valid Cases	12		

a. 6 cells (100.0%) have expected count less than 5. The minimum expected count is 1.00.

Perlakuan 15 hari dan Perlakuan 30 hari

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.500 ^a	1	.221		
Continuity Correction ^b	.375	1	.540		
Likelihood Ratio	1.552	1	.213		
Fisher's Exact Test				.545	.273
Linear-by-Linear Association	1.375	1	.241		
N of Valid Cases ^b	12				

a. 4 cells (100.0%) have expected count less than 5. The minimum expected count is 2.00.

b. Computed only for a 2x2 table

Lampiran 5

HASIL ANALISIS KERUSAKAN SEL CA3 DAN CA1

Kontrol 15 hari dan Perlakuan 15 hari

Group Statistics

kelompok	N	Mean	Std. Deviation	Std. Error Mean
kadarMDA kontrol 15 hari	6	.150483	.0493232	.0201361
perlakuan 15 hari	6	.331733	.0548048	.0223740

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
kadarMDA Equal variances assumed	.149	.708	-6.021	10	.000	-.1812500	.0301008	-.2483188	-.1141812
Equal variances not assumed			-6.021	9.891	.000	-.1812500	.0301008	-.2484191	-.1140809

Kontrol 30 hari dan Perlakuan 30 hari

Group Statistics

	Perlakuan	N	Mean	Std. Deviation	Std. Error Mean
Kadar MDA	Kontrol 30	6	.218550	.0226362	.0092412
	Perlakuan 30	6	.493533	.0157145	.0064154

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
								Lower	Upper	
Kadar MDA	1.252	.289	Equal variances assumed	-24.443	10	.000	-.2749833	.0112498	-.3000494	-.2499173
Equal variances not assumed			-24.443	8.911	.000	-.2749833	.0112498	-.3004709	-.2494958	

Perlakuan 15 hari dan Perlakuan 30 hari

Group Statistics

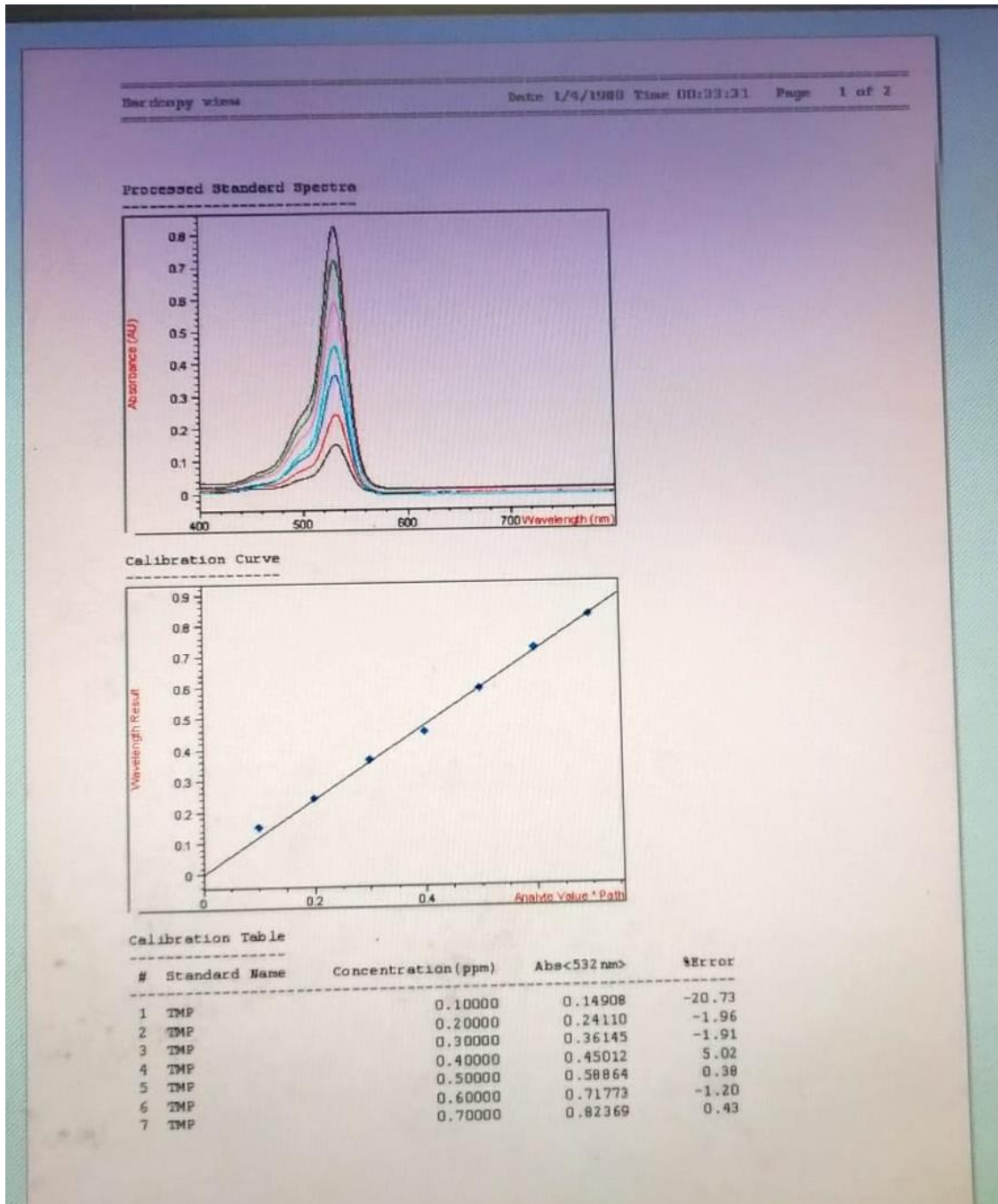
Perlakuan		N	Mean	Std. Deviation	Std. Error Mean
Kadar MDA	Perlakuan 15	6	.331433	.0542953	.0221659
	Perlakuan 30	6	.493533	.0157145	.0064154

Independent Samples Test

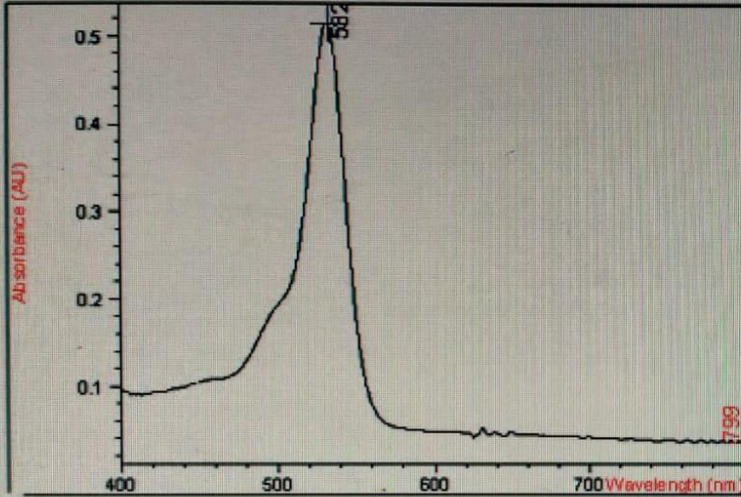
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Kadar MDA	Equal variances assumed	7.953	.018	-7.025	10	.000	-.1621000	.0230757	-.2135158	-.1106842
	Equal variances not assumed			-7.025	5.832	.000	-.1621000	.0230757	-.2189612	-.1052388

Lampiran 6

KURVA BAKU MDA



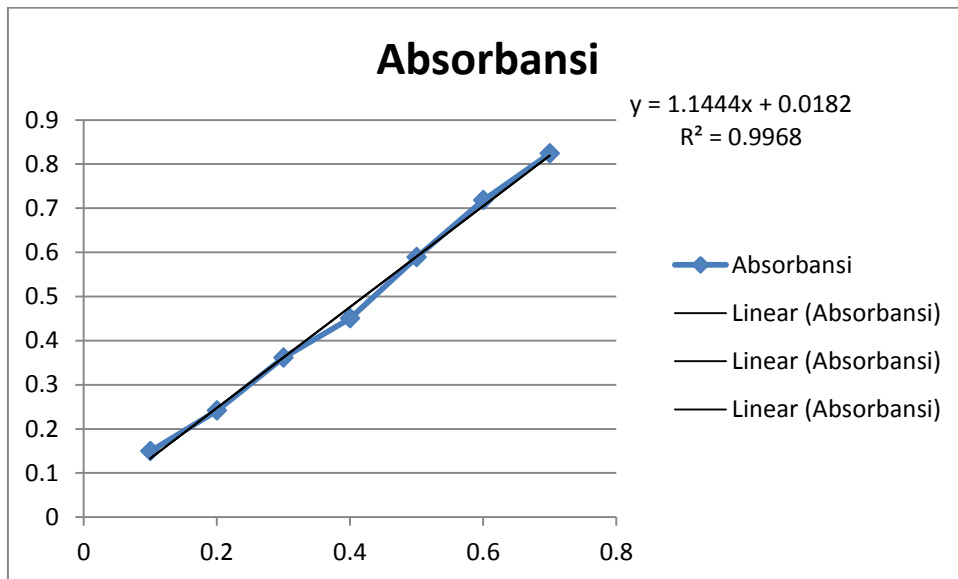
Overlaid Sample Spectra



Sample/Result Table

#	Name	Peaks (nm)	Abs (AU)	Valleys (nm)	Abs (AU)
1	Lamda Max.	532.0	0.51489	799.0	3.4777E-2

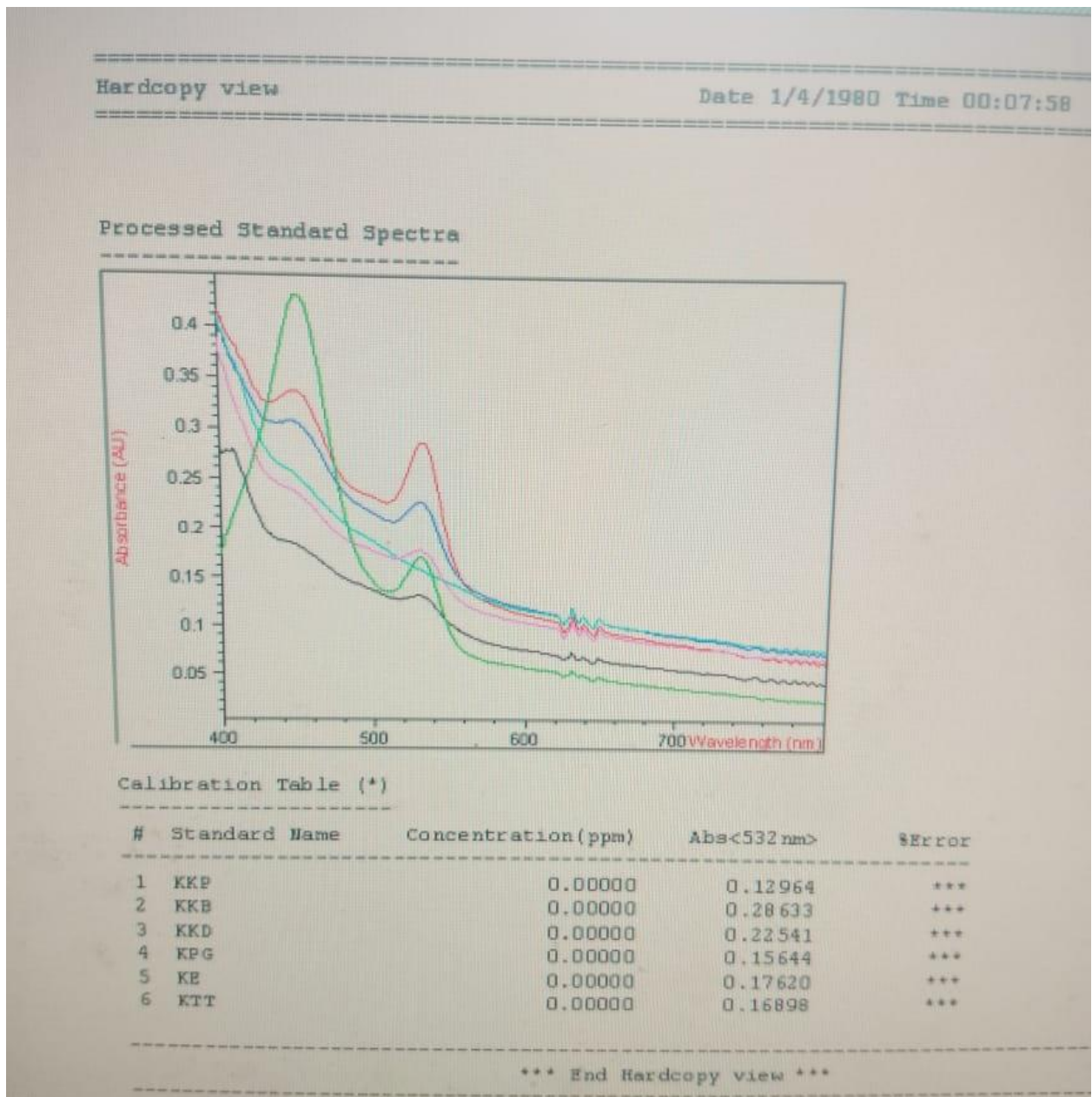
*** End Hardcopy view ***



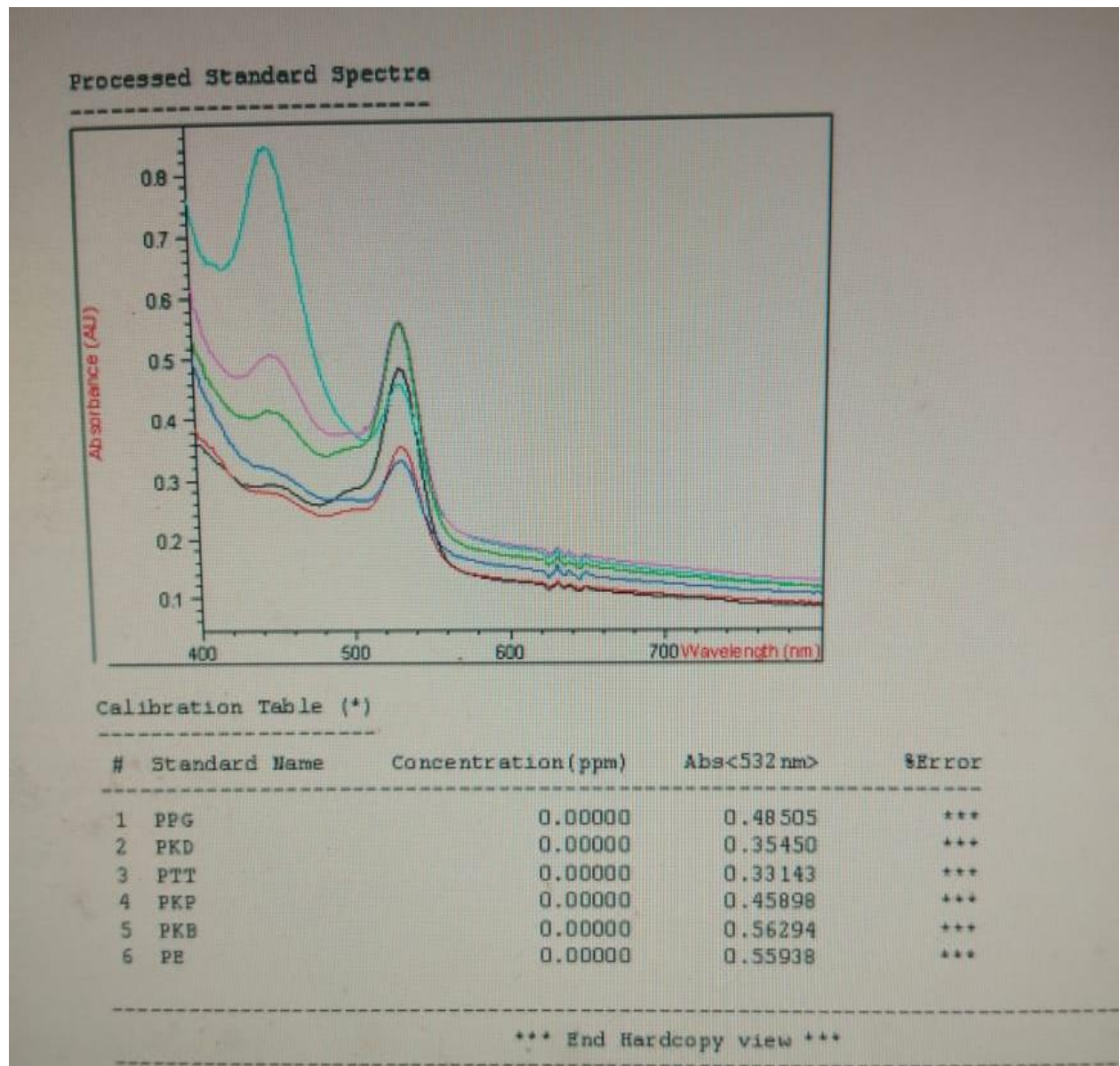
Lampiran 7

HASIL PENGUKURAN MDA

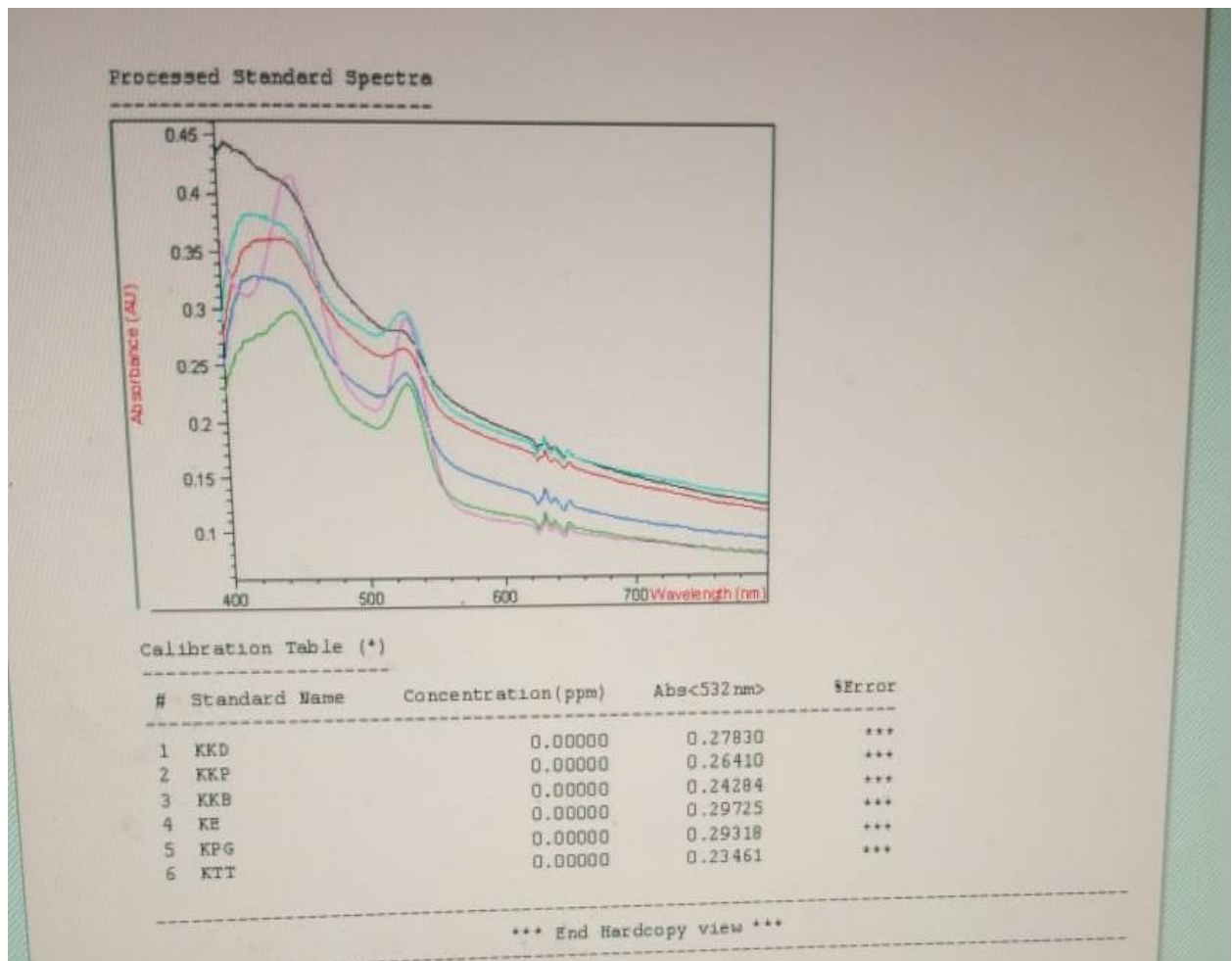
Kelompok kontrol 15 hari



Kelompok perlakuan 15 hari

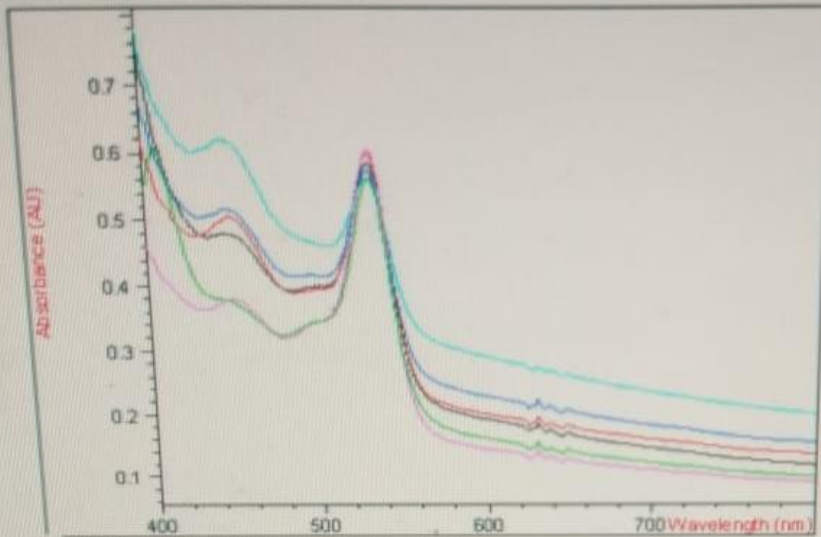


Kelompok kontrol 30 hari



Kelompok perlakuan 30 hari

Processed Standard Spectra



Calibration Table (*)

#	Standard Name	Concentration(ppm)	Abs<532 nm>	%Error
1	PKD	0.00000	0.58713	***
2	PKP	0.00000	0.60016	***
3	PPG	0.00000	0.57566	***
4	PTT	0.00000	0.56410	***
5	PE	0.00000	0.60657	***
6	PKB	0.00000	0.56456	***

*** End Hardcopy view ***

DATA HASIL PEMERIKSAAN KADAR MDA OTAK

KONTROL 15 HARI	KONTROL 30 HARI	PERLAKUAN 15 HARI	PERLAKUAN 30 HARI
0.0973	0.2272	0.4079	0.4971
0.2342	0.2148	0.2938	0.5085
0.181	0.1962	0.2737	0.4871
0.1207	0.2438	0.3851	0.477
0.138	0.2402	0.3322	0.5141
0.1317	0.1891	0.2959	0.4774

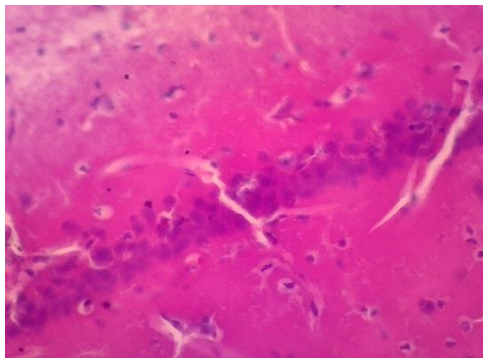
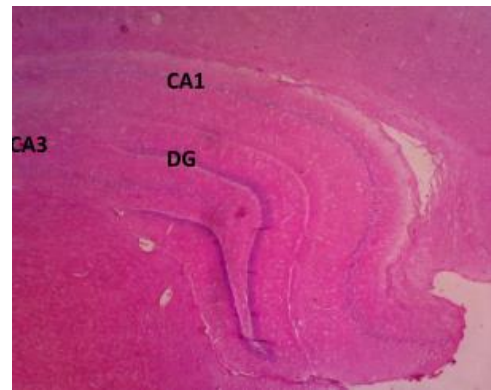
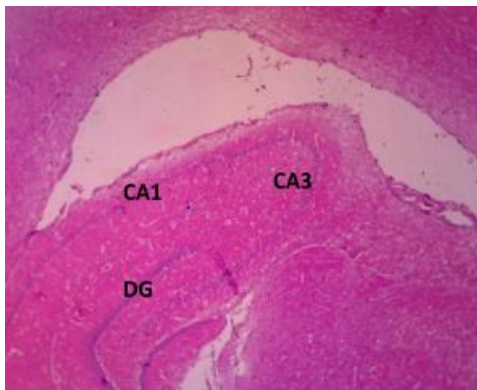
Keterangan : Kadar MDA otak ($\mu\text{mol/ml}$ homogenate) yang diukur berdasarkan absorbansi kurva baku

Lampiran 8

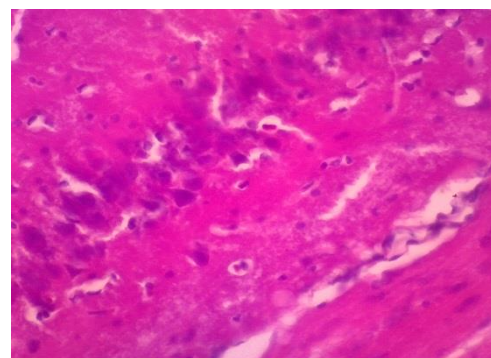
GAMBARAN MIKROSKOPIS SAMPEL PENELITIAN

Kontrol 15 hari

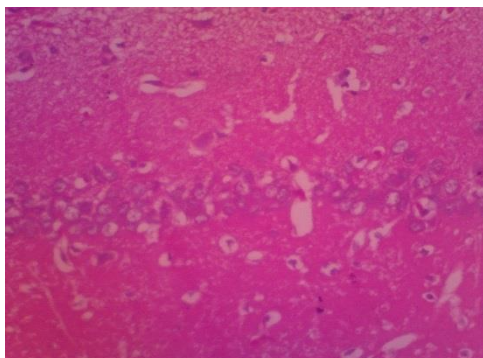
Pembesaran 400x



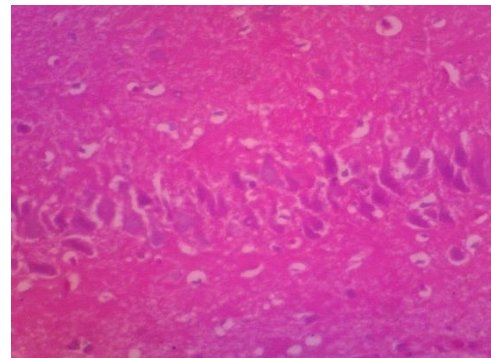
CA1



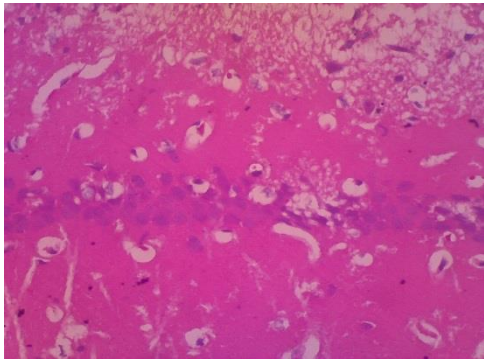
CA3



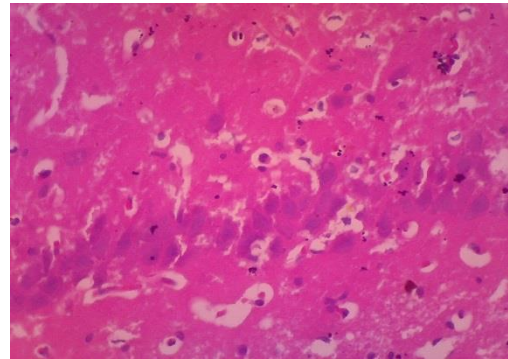
CA1



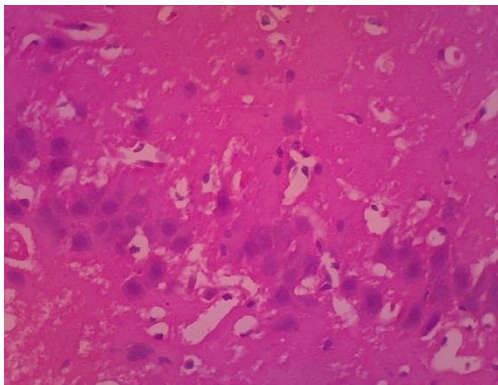
CA3



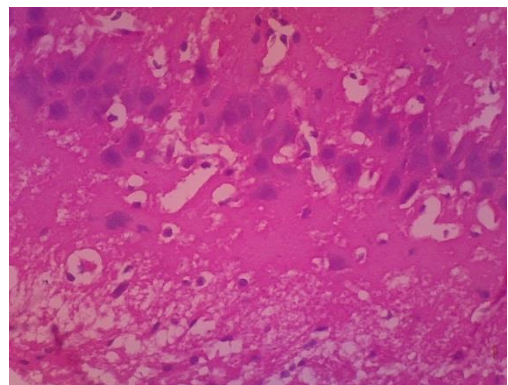
CA1



CA3



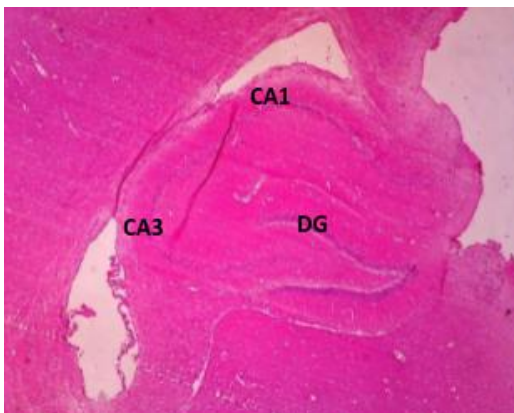
CA1

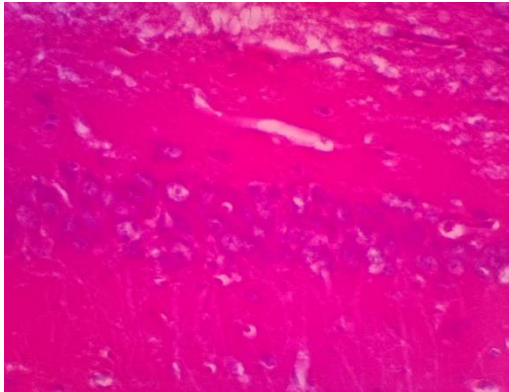


CA3

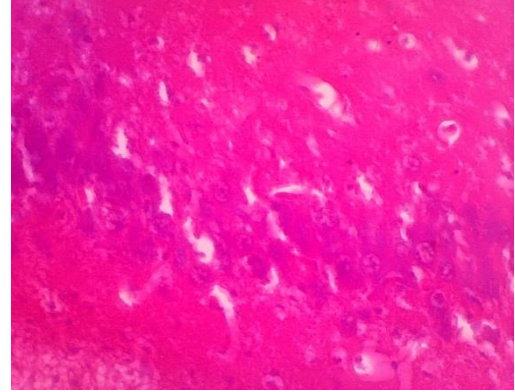
Perlakuan 15 hari

Pembesaran 400x

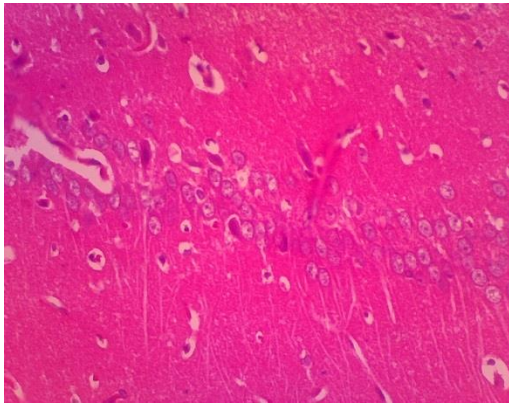




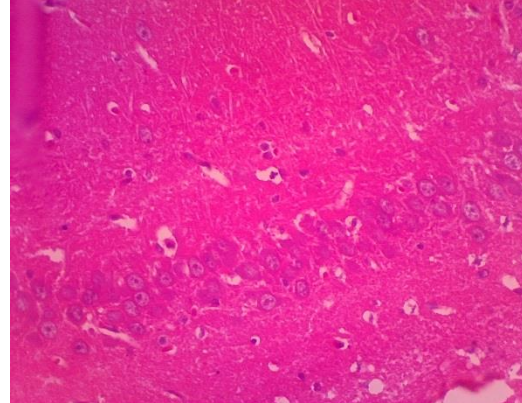
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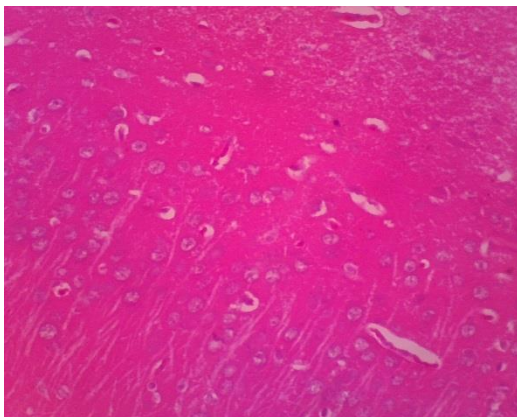
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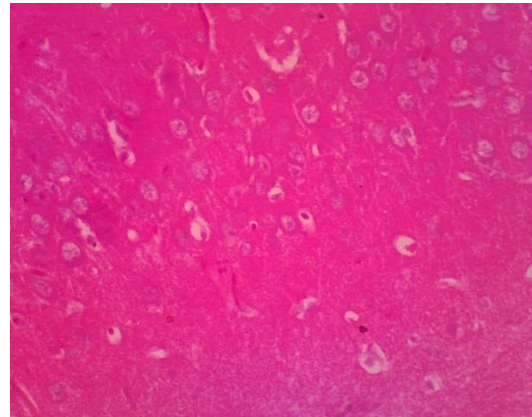
CA1



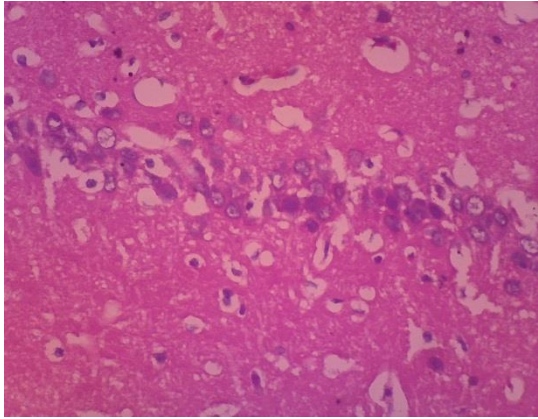
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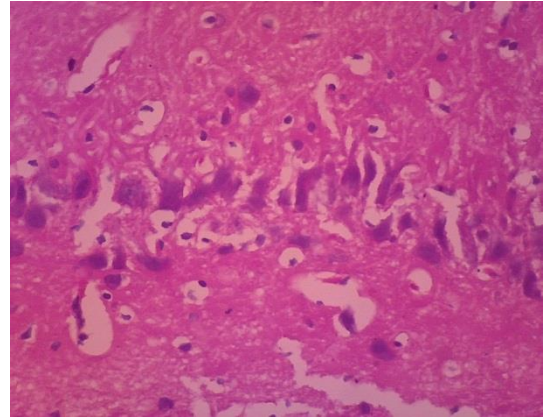
CA1



CA3



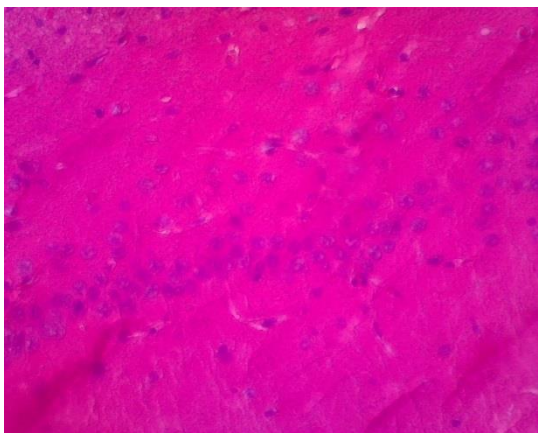
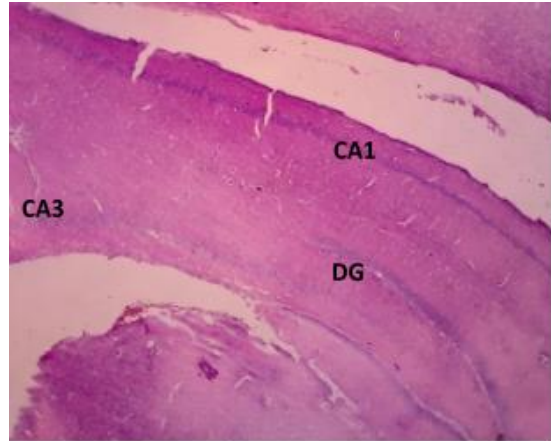
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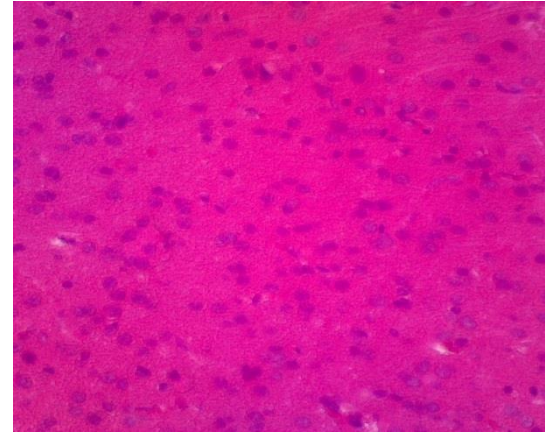
CA3

Kontrol 30 hari

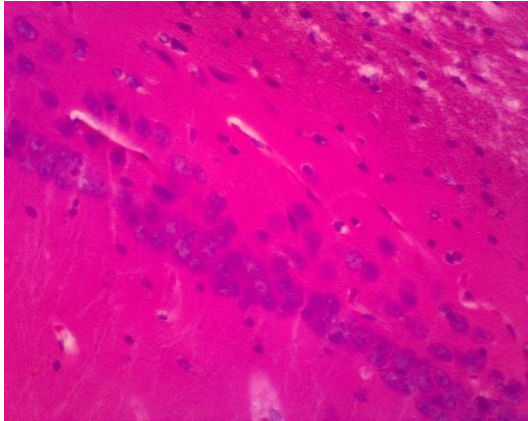
Pembesaran 400x



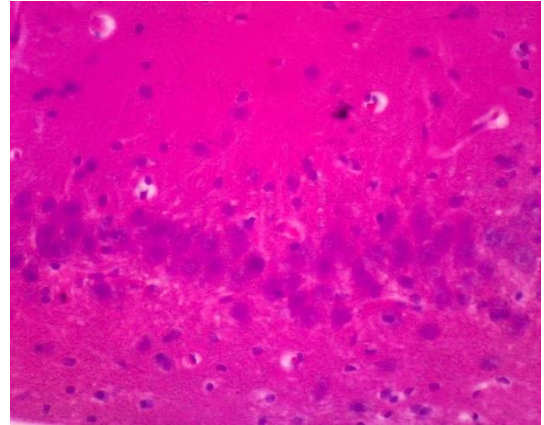
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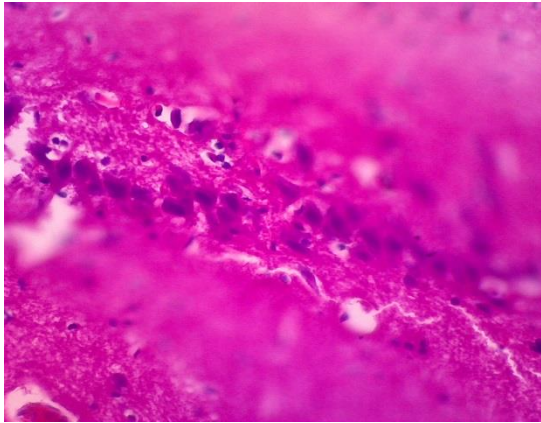
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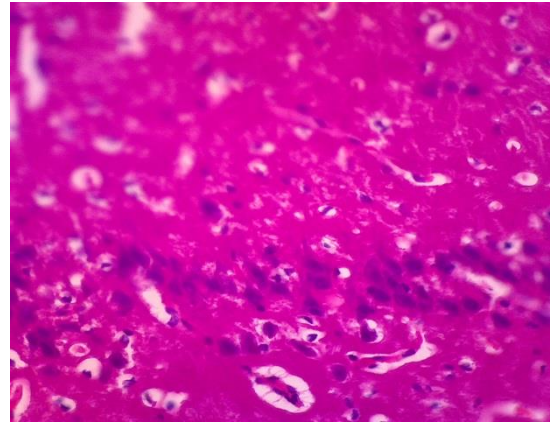
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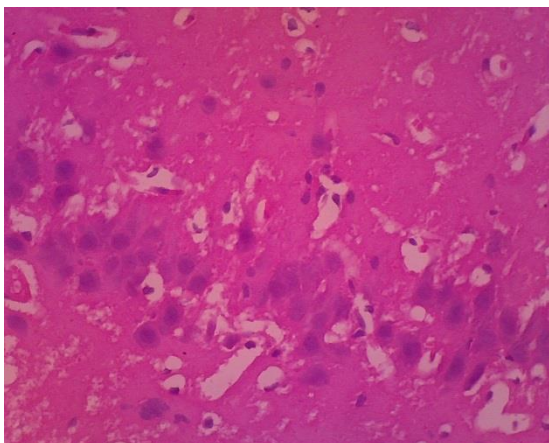
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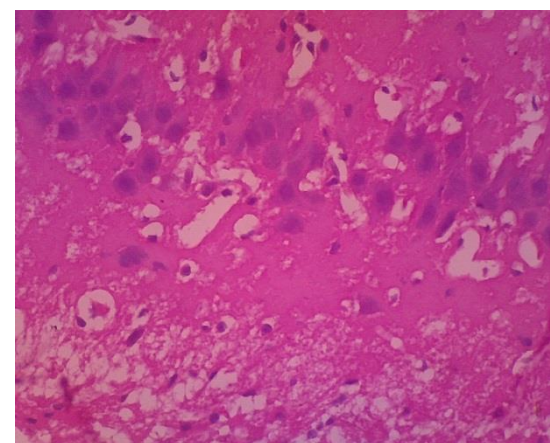
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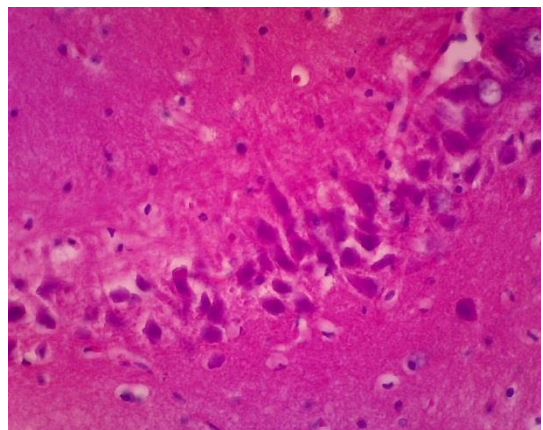
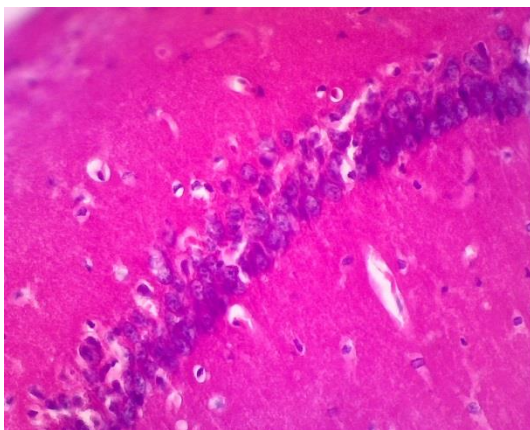
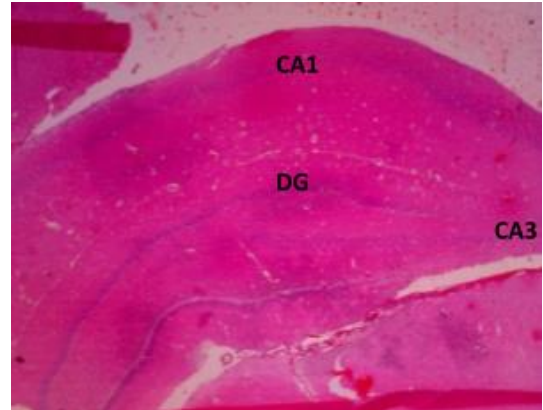
CA1



CA3

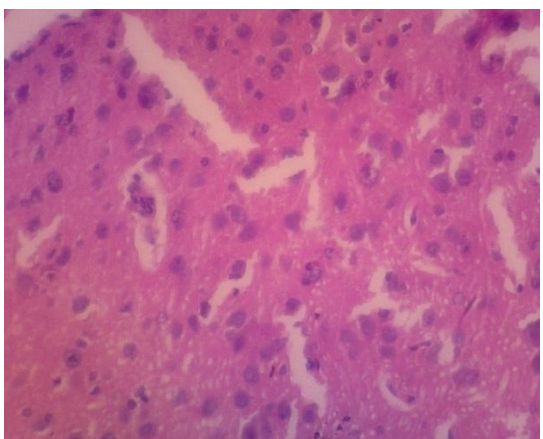
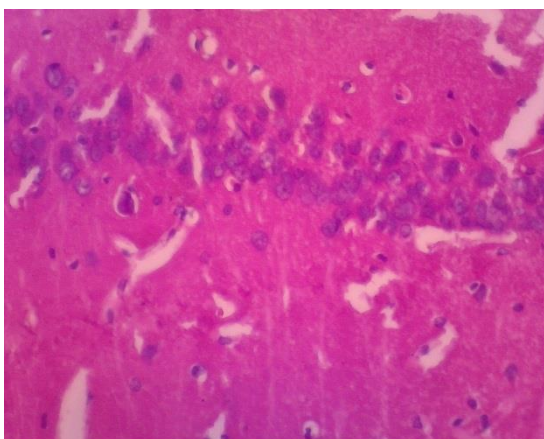
Perlakuan 30 hari

Pembesaran 400x



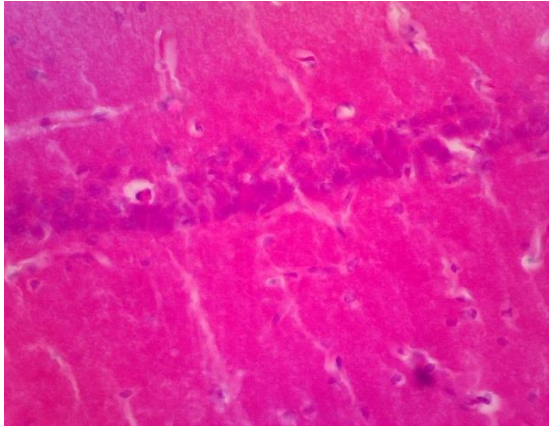
CA1

CA3

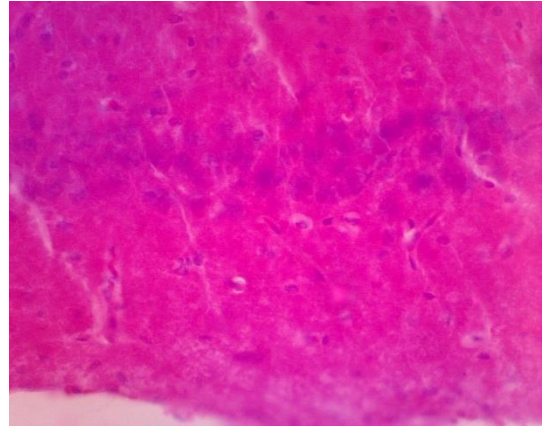


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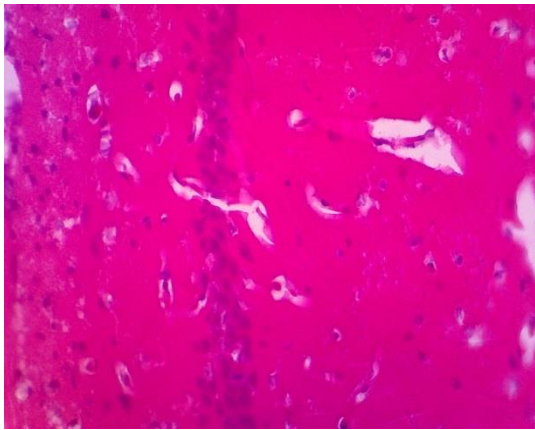
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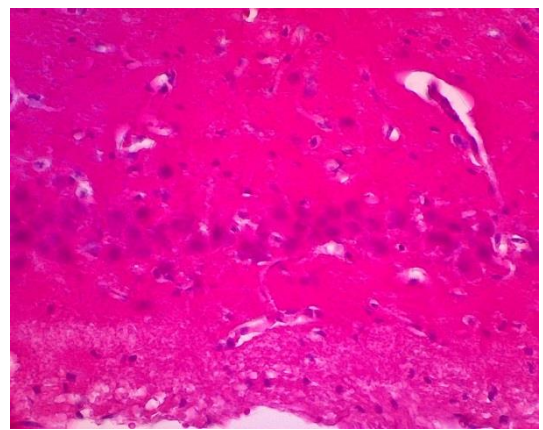
CA1



CA3



CA1



CA3

Lampiran 9

Hasil Perhitungan Sel Rusak/Nekrosa Hipokampus

Kelompok	Vakuolisasi	Nekrosa
Kontrol 15 hari	CA1: + CA3: +	CA1: + CA3: +
	CA1: ++ CA3: ++	CA1: ++ CA3: ++
	CA1: + CA3: +	CA1: + CA3: +
	CA1: + CA3: +	CA1: + CA3: +
	CA1: + CA3: +	CA1: + CA3: +
	CA1: + CA3: +	CA1: + CA3: +
Kontrol 30 hari	CA1: + CA3: +	CA1: + CA3: +
	CA1: + CA3: +	CA1: + CA3: +
	CA1: ++ CA3: ++	CA1: ++ CA3: ++
	CA1: ++ CA3: ++	CA1: ++ CA3: ++
	CA1: ++ CA3: ++	CA1: ++ CA3: ++
	CA1: + CA3: +	CA1: + CA3: +
	CA1: ++ CA3: ++	CA1: ++ CA3: ++
	CA1: ++	CA1: ++

Perlakuan 15 hari	CA3: ++	CA3: ++
	CA1: ++ CA3: ++	CA1: ++ CA3: ++
	CA1: ++ CA3: ++	CA1: ++ CA3: ++
	CA1: +++ CA3: +++	CA1: +++ CA3: +++
	CA1: ++ CA3: ++	CA1: ++ CA3: ++
	CA1: +++ CA3: +++	CA1: +++ CA3: +++
Perlakuan 30 hari	CA1: +++ CA3: +++	CA1: +++ CA3: +++
	CA1: +++ CA3: +++	CA1: +++ CA3: +++
	CA1: +++ CA3: +++	CA1: +++ CA3: +++
	CA1: +++ CA3: +++	CA1: +++ CA3: +++
	CA1: +++ CA3: +++	CA1: +++ CA3: +++
	CA1: +++ CA3: +++	CA1: +++ CA3: +++

Keterangan :

+ = 25% keseluruhan lapang pandang

++ = 50% keseluruhan lapang pandang

+++ = 75% keseluruhan lapang pandang

++++ = kurang lebih 100% keseluruhan lapang pandang

DOKUMENTASI PENELITIAN

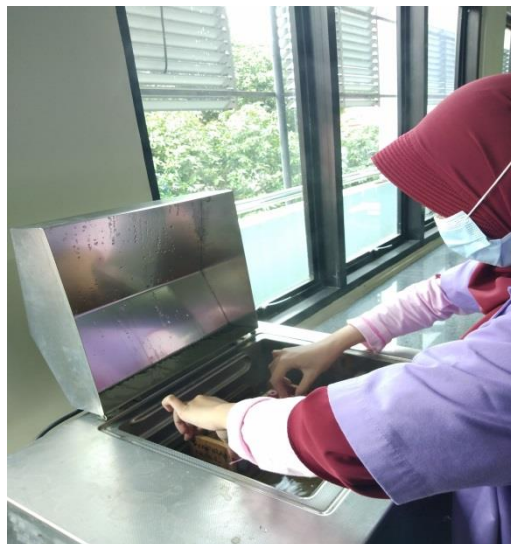
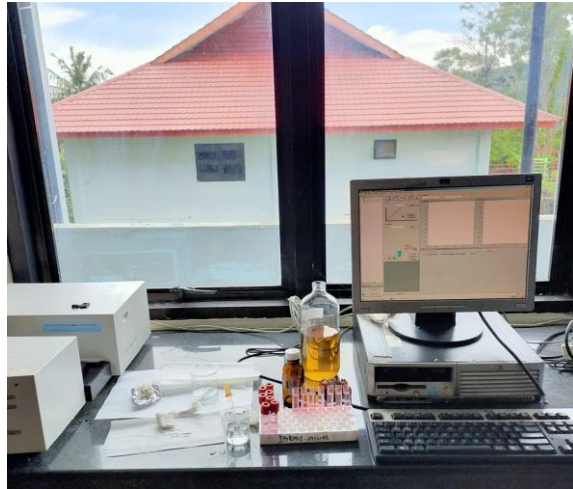
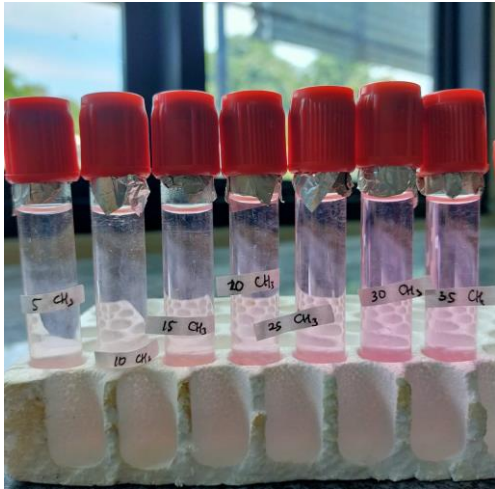
1. Proses aklimatisasi tikus



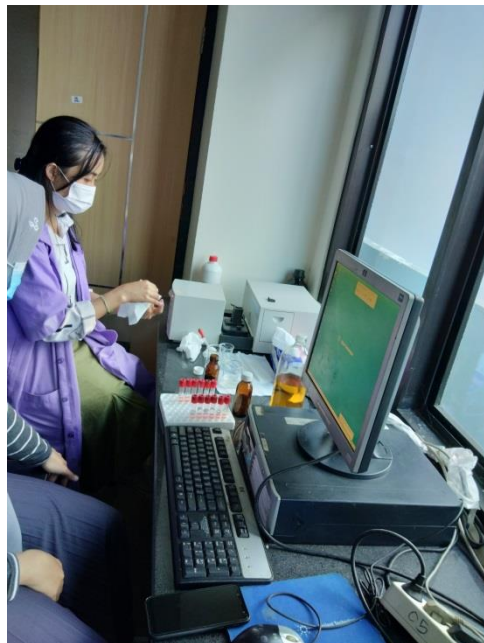
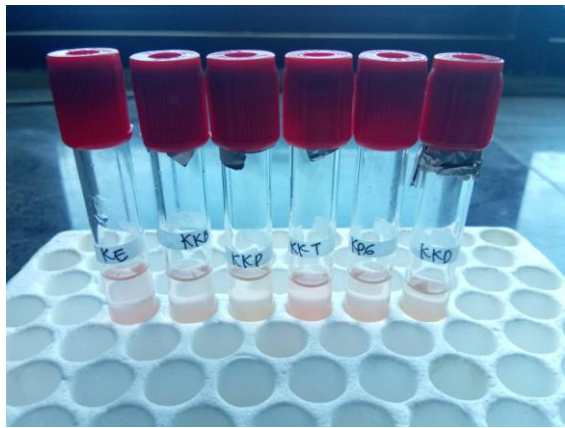
2. Proses terminasi dan nekropsi otak tikus untuk pemeriksaan histopatologi



3. Pembuatan kurva baku dan pengukuran kadar MDA otak tikus







BIODATA PENELITI

I. DATA PRIBADI

Nama : Hilda Emma Mallisa
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Tempat/Tanggal Lahir : Mengke'pe', 07 Agustus 1995
Agama : Katholik
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Telpon/HP : 082322289893
Alamat : Jl. Perintis Kemerdekaan 18 km. 12



II. RIWAYAT PENDIDIKAN

NO.	STRATA	INSTITUSI	TEMPAT	TAHUN LULUS
1	SD	SDN Inpres Kantisang	Kota Makassar	2007
3	SMP	SMP Kr. Elim Makassar	Kota Makassar	2010
4	SMA	SMK Keperawatan Dr. Wahidin Makassar	Kota Makassar	2013
5	S1	Stikes Nusantara Jaya Makassar	Kota Makassar	2017
6	S2	Universitas Hasanuddin	Kota Makassar	2021

III. PENGALAMAN PENELITIAN

1. Oktober – Desember 2016

Hubungan Pola Asuh Orang Tua terhadap Kesulitan Makan pada Anak Usia Prasekolah Di TK Kristen Tunas Rama Makassar

2. Februari – Maret 2021

Pengaruh Cahaya LED Putih Di Malam Hari terhadap Kadar Malondialdehyde Otak dan Histopatologi Sel CA3 dan CA1 Hipokampus pada Tikus Wistar Jantan