

LAMPIRAN

Lampiran 1. Data Pengaruh Pelarut DMSO terhadap Kontraksi Otot Polos Ileum

1. Data Persentase Kontraksi Otot Polos Ileum Akibat Pemberian Seri Konsentrasi Asetilkolin (Kontrol)

Log Konsentrasi	% Respon Kontraksi Otot Polos Ileum*						Mean	SEM
	1	2	3	4	5	6		
-10.0	22.22	11.11	28.57	5.56	5.56	5.56	13.10	2.88
-9.5	22.22	11.11	28.57	5.56	5.56	5.56	13.10	2.88
-9.0	33.33	11.11	42.86	5.56	5.56	5.56	17.33	4.77
-8.5	44.44	22.22	42.86	5.56	5.56	11.11	21.96	5.16
-8.0	55.56	22.22	42.86	5.56	5.56	11.11	23.81	6.06
-7.5	55.56	33.33	42.86	5.56	5.56	11.11	25.66	6.15
-7.0	88.89	33.33	42.86	5.56	16.67	22.22	34.92	8.50
-6.5	88.89	33.33	57.14	22.22	22.22	33.33	42.86	7.48
-6.0	88.89	33.33	57.14	27.78	44.44	55.56	51.19	6.31
-5.5	100.00	44.44	71.43	33.33	72.22	66.67	64.68	6.77
-5.0	100.00	66.67	71.43	66.67	94.44	77.78	79.50	4.17
-4.5	100.00	66.67	85.71	100.00	100.00	88.89	90.21	3.79
-4.0	100.00	88.89	100.00	100.00	100.00	100.00	98.15	1.31
-3.5	100.00	100.00	100.00	100.00	100.00	100.00	100.00	0.00

Keterangan

* : % Respon kontraksi dihitung berdasarkan kontraksi otot polos ileum maksimal yang dicapai oleh seri konsentrasi asetilkolin (kontrol) Media: Larutan *buffer tyrode*

2. Data Pengaruh Pelarut DMSO terhadap Kontraksi Otot Polos Ileum
 Akibat Pemberian DMSO 100 μ M + Seri Kadar Asetilkolin

Log Konsentrasi	% Respon Kontraksi Otot Polos Ileum*						Mean	SEM
	1	2	3	4	5	6		
-10.0	11.11	11.11	14.29	5.56	16.67	5.56	10.71	1.30
-9.5	22.22	11.11	14.29	5.56	16.67	5.56	12.57	1.89
-9.0	22.22	22.22	14.29	11.11	16.67	5.56	15.34	1.88
-8.5	33.33	22.22	28.57	11.11	16.67	5.56	19.58	3.04
-8.0	55.56	33.33	28.57	16.67	16.67	11.11	26.98	4.70
-7.5	66.67	33.33	28.57	16.67	16.67	11.11	28.84	5.86
-7.0	77.78	33.33	28.57	22.22	22.22	22.22	34.39	6.27
-6.5	88.89	33.33	42.86	22.22	33.33	27.78	41.40	7.00
-6.0	88.89	44.44	57.14	22.22	50.00	50.00	52.12	6.24
-5.5	100.00	55.56	57.14	27.78	66.67	55.56	60.45	6.74
-5.0	100.00	66.67	71.43	61.11	72.22	66.67	73.02	3.99
-4.5	100.00	77.78	71.43	83.33	77.78	72.22	80.42	3.04
-4.0	100.00	88.89	100.00	100.00	100.00	100.00	98.15	1.31
-3.5	100.00	88.89	100.00	100.00	100.00	100.00	98.15	1.31

Keterangan

* : % Respon kontraksi dihitung berdasarkan kontraksi otot polos ileum maksimal yang dicapai oleh seri konsentrasi asetilkolin (kontrol) Media: Larutan *buffer tyrode*

Lampiran 2. Data Pengaruh Jahe terhadap Reseptor ACh M₃ Otot Polos Ileum

1. Data Persentase Kontraksi Otot Polos Ileum Akibat Pemberian Seri Konsentrasi Asetilkolin (Kontrol)

Log	% Respon Kontraksi Otot Polos Ileum*												Mean	SEM
	1	2	3	4	5	6	7	8	9	10	11	12		
-10.0	2.6	0.0	2.8	2.9	3.7	3.3	0.0	3.8	3.4	3.4	0.0	3.2	2.4	0.4
-9.5	2.6	0.0	2.8	2.9	3.7	3.3	0.0	3.8	3.4	3.4	3.3	3.2	2.7	0.4
-9.0	3.8	2.6	2.8	5.7	3.7	3.3	3.0	3.8	3.4	3.4	3.3	3.2	3.5	0.2
-8.5	5.9	5.1	5.6	5.7	3.7	6.7	3.0	7.7	3.4	6.9	3.3	6.5	5.3	0.5
-8.0	6.4	10.3	8.3	8.6	7.4	10.0	3.0	7.7	6.9	6.9	6.7	6.5	7.4	0.5
-7.5	15.4	17.9	16.7	11.4	14.8	16.7	9.1	11.5	10.3	10.3	10.0	9.7	12.8	0.9
-7.0	23.1	23.1	27.8	17.1	29.6	30.0	15.2	15.4	17.2	20.7	16.7	19.4	21.3	1.6
-6.5	38.5	38.5	41.7	28.6	48.1	43.3	33.3	23.1	27.6	44.8	30.0	38.7	36.3	2.2
-6.0	59.0	59.0	55.6	42.9	70.4	66.7	57.6	42.3	48.3	69.0	53.3	58.1	56.8	2.7
-5.5	76.9	74.4	75.0	65.7	81.5	83.3	75.8	69.2	69.0	82.8	73.3	77.4	75.4	1.6
-5.0	89.7	92.3	86.1	85.7	88.9	93.3	90.9	88.5	86.2	89.7	86.7	93.5	89.3	0.8
-4.5	97.4	100	94.4	97.1	96.3	100	100	100	96.6	96.6	96.7	100	97.9	0.6
-4.0	100	100	100	100	100	100	100	100	100	100	100	100	100	0.0
-3.5	100	100	100	100	100	100	100	100	100	100	100	100	100	0.0

Keterangan

* : % Respon kontraksi dihitung berdasarkan kontraksi otot polos ileum maksimal yang dicapai oleh seri konsentrasi asetilkolin (kontrol) Media: Larutan *buffer tyrode*.

2. Data Persentase Kontraksi Otot Polos Ileum Akibat Pemberian Minyak
 Atsiri Jahe 1 ppm (*part per million*) + Seri Konsentrasi Asetilkolin

Log Konsentrasi	% Respon Kontraksi Otot Polos Ileum*						Mean	SEM
	1	2	3	4	5	6		
-10.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-9.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-9.0	2.00	0.00	0.00	0.00	0.00	0.00	0.33	0.33
-8.5	4.00	2.08	0.00	0.00	0.00	3.13	1.53	0.73
-8.0	4.00	4.17	3.13	4.00	0.00	6.25	3.59	0.83
-7.5	4.00	4.17	6.25	4.00	6.25	6.25	5.15	0.49
-7.0	4.00	8.33	12.50	4.00	12.50	12.50	8.97	1.70
-6.5	8.00	12.50	15.63	8.00	25.00	18.75	14.65	2.70
-6.0	16.00	16.67	25.00	16.00	37.50	31.25	23.74	3.73
-5.5	40.00	29.17	43.75	32.00	56.25	43.75	40.82	3.96
-5.0	60.00	58.33	62.50	56.00	75.00	62.50	62.39	2.72
-4.5	80.00	83.33	81.25	76.00	87.50	81.25	81.56	1.55
-4.0	96.00	95.83	90.63	88.00	96.88	93.75	93.51	1.43
-3.5	100.00	100.00	100.00	100.00	100.00	100.00	100.00	0.00

Keterangan

* : % Respon kontraksi dihitung berdasarkan kontraksi otot polos ileum maksimal yang dicapai oleh seri konsentrasi asetilkolin (kontrol) Media: Larutan *buffer tyrode*, Organ dicuci dengan larutan *buffer tyrode* selama 30 menit sebelum pemberian minyak atsiri jahe 1 ppm (*part per million*), Perlakuan seri konsentrasi minyak atsiri jahe dilakukan 5 menit setelah pemberian minyak atsiri jahe 1 ppm.

3. Data Persentase Kontraksi Otot Polos Ileum Akibat Pemberian Jahe 1,25 ppm (*part per million*) + Seri Konsentrasi Asetilkolin

Log Konsentrasi	% Respon Kontraksi Otot Polos Ileum*						Mean	SEM
	1	2	3	4	5	6		
-10.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-9.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-9.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-8.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-8.0	0.00	0.00	0.00	3.33	3.33	7.14	2.30	1.18
-7.5	0.00	7.69	0.00	6.67	6.67	7.14	4.69	1.49
-7.0	6.67	7.69	0.00	6.67	6.67	7.14	5.81	1.17
-6.5	13.33	7.69	7.14	13.33	13.33	14.29	11.52	1.31
-6.0	26.67	15.38	14.29	20.00	20.00	21.43	19.63	1.82
-5.5	46.67	30.77	28.57	40.00	33.33	42.86	37.03	2.94
-5.0	66.67	46.15	50.00	66.67	53.33	64.29	57.85	3.72
-4.5	80.00	76.92	71.43	80.00	73.33	85.71	77.90	2.11
-4.0	93.33	92.31	92.86	93.33	93.33	92.86	93.00	0.17
-3.5	100.00	100.00	100.00	100.00	100.00	100.00	100.00	0.00

Keterangan

* : % Respon kontraksi dihitung berdasarkan kontraksi otot polos ileum maksimal yang dicapai oleh seri konsentrasi asetilkolin (kontrol) Media: Larutan *buffer tyrode*, Organ dicuci dengan larutan *buffer tyrode* selama 30 menit sebelum pemberian minyak atsiri jahe 1,25 ppm (*part per million*), Perlakuan seri konsentrasi minyak atsiri jahe dilakukan 5 menit setelah pemberian minyak atsiri jahe 1,25 ppm.

Lampiran 3. Data Uji Reversibilitas Minyak Atsiri Jahe 1 ppm dan 1,25 ppm (*part per million*) terhadap Reseptor Asetilkolin Muskarinik (ACh M₃) Otot Polos Ileum

1. Data Respon Kontraksi Otot Polos Ileum Akibat Pemberian Seri Konsentrasi Asetilkolin (Kontrol)

Log	% Respon Kontraksi Otot Polos Ileum*												Mean	SEM
	1	2	3	4	5	6	7	8	9	10	11	12		
-10.0	2.56	0.00	2.78	2.86	3.70	3.33	0.00	3.85	3.45	3.45	0.00	3.23	2.43	0.44
-9.5	2.56	0.00	2.78	2.86	3.70	3.33	0.00	3.85	3.45	3.45	3.33	3.23	2.71	0.38
-9.0	3.85	2.56	2.78	5.71	3.70	3.33	3.03	3.85	3.45	3.45	3.33	3.23	3.52	0.23
-8.5	5.90	5.13	5.56	5.71	3.70	6.67	3.03	7.69	3.45	6.90	3.33	6.45	5.29	0.45
-8.0	6.41	10.26	8.33	8.57	7.41	10.00	3.03	7.69	6.90	6.90	6.67	6.45	7.38	0.55
-7.5	15.38	17.95	16.67	11.43	14.81	16.67	9.09	11.54	10.34	10.34	10.00	9.68	12.83	0.93
-7.0	23.08	23.08	27.78	17.14	29.63	30.00	15.15	15.38	17.24	20.69	16.67	19.35	21.27	1.57
-6.5	38.46	38.46	41.67	28.57	48.15	43.33	33.33	23.08	27.59	44.83	30.00	38.71	36.35	2.25
-6.0	58.97	58.97	55.56	42.86	70.37	66.67	57.58	42.31	48.28	68.97	53.33	58.06	56.83	2.66
-5.5	76.92	74.36	75.00	65.71	81.48	83.33	75.76	69.23	68.97	82.76	73.33	77.42	75.36	1.60
-5.0	89.74	92.31	86.11	85.71	88.89	93.33	90.91	88.46	86.21	89.66	86.67	93.55	89.30	0.81
-4.5	97.44	100	94.44	97.14	96.30	100	100	100	96.55	96.55	96.67	100	97.92	0.57
-4.0	100	100	100	100	100	100	100	100	100	100	100	100	100	0.00
-3.5	100	100	100	100	100	100	100	100	100	100	100	100	100	0.00

Keterangan

* : % Respon kontraksi dihitung berdasarkan kontraksi otot polos ileum maksimal yang dicapai oleh seri konsentrasi asetilkolin (kontrol)

2. Data Respon Kontraksi Otot Polos Ileum pada Uji Reversibilitas Minyak
 Atsiri Jahe 1 ppm (*part per million*) pada Reseptor ACh M₃

Log Konsentrasi	% Respon Kontraksi Otot Polos Ileum*						Mean	SEM
	1	2	3	4	5	6		
-10.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-9.5	0.00	2.56	0.00	0.00	0.00	0.00	0.43	0.43
-9.0	1.28	2.56	2.50	3.23	3.85	3.45	2.81	0.37
-8.5	2.56	2.56	2.50	3.23	3.85	3.45	3.02	0.23
-8.0	2.56	5.13	5.00	6.45	3.85	3.45	4.41	0.57
-7.5	5.13	7.69	7.50	6.45	3.85	6.90	6.25	0.61
-7.0	10.26	12.82	12.50	9.68	11.54	10.34	11.19	0.53
-6.5	20.51	17.95	17.50	16.13	26.92	17.24	19.38	1.62
-6.0	30.77	30.77	25.00	22.58	46.15	31.03	31.05	3.35
-5.5	51.28	51.28	37.50	41.94	61.54	48.28	48.64	3.41
-5.0	69.23	74.36	60.00	58.06	73.08	68.97	67.28	2.76
-4.5	87.18	94.87	75.00	80.65	84.62	89.66	85.33	2.84
-4.0	97.44	100.00	92.50	90.32	92.31	100.00	95.43	1.73
-3.5	100.00	100.00	100.00	100.00	100.00	100.00	100.00	0.00

Keterangan

* : % Respon kontraksi dihitung berdasarkan kontraksi otot polos ileum maksimal yang dicapai oleh seri konsentrasi asetilkolin (kontrol) Media: Larutan *buffer tyrode*, Uji reversibilitas dilakukan setelah uji pengaruh minyak atsiri jahe 1 ppm terhadap kontraksi otot polos ileum yang diinduksi oleh seri konsentrasi asetilkolin, dimana organ ileum dicuci dengan larutan *buffer tyrode* selama 30 menit sebelum uji reversibilitas dimulai.

3. Data Respon Kontraksi Otot Polos Ileum pada Uji Reversibilitas Minyak
 Atsiri Jahe 1,25 ppm (*part per million*) pada Reseptor ACh M₃

Log Konsentrasi	% Respon Kontraksi Otot Polos Ileum*						Mean	SEM
	1	2	3	4	5	6		
-10.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-9.5	0.00	3.23	0.00	0.00	0.00	0.00	0.54	0.54
-9.0	0.00	3.23	0.00	3.23	0.00	3.70	1.69	0.76
-8.5	0.00	3.23	4.35	3.23	3.45	3.70	2.99	0.62
-8.0	3.33	3.23	4.35	6.45	3.45	3.70	4.09	0.50
-7.5	6.67	6.45	4.35	9.68	3.45	7.41	6.33	0.91
-7.0	10.00	6.45	8.70	9.68	6.90	11.11	8.81	0.75
-6.5	13.33	9.68	13.04	12.90	13.79	18.52	13.54	1.16
-6.0	23.33	19.35	21.74	32.26	27.59	37.04	26.88	2.76
-5.5	50.00	45.16	43.48	58.06	51.72	55.56	50.66	2.33
-5.0	70.00	67.74	65.22	80.65	68.97	74.07	71.11	2.25
-4.5	90.00	90.32	86.96	93.55	86.21	92.59	89.94	1.20
-4.0	100.00	100.00	100.00	100.00	100.00	100.00	100.00	0.00
-3.5	100.00	100.00	100.00	100.00	100.00	100.00	100.00	0.00

Keterangan

* : % Respon kontraksi dihitung berdasarkan kontraksi otot polos ileum maksimal yang dicapai oleh seri konsentrasi asetilkolin (kontrol) Media: Larutan *buffer tyrode*, Uji reversibilitas dilakukan setelah uji pengaruh minyak atsiri jahe 1,25 ppm terhadap kontraksi otot polos ileum yang diinduksi oleh seri konsentrasi asetilkolin, dimana organ ileum dicuci dengan larutan *buffer tyrode* selama 30 menit sebelum uji reversibilitas dimulai.

**Lampiran 4. Hasil Uji Statistik terhadap Kontraksi Otot Polos Ileum
Menggunakan Aplikasi SPSS**

Case Processing Summary

		Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
pD2	Seri	12	100.0%	0	0.0%	12	100.0%
	Jahe 200	6	100.0%	0	0.0%	6	100.0%
	Jahe 250	6	100.0%	0	0.0%	6	100.0%
	Seri Atropin	12	100.0%	0	0.0%	12	100.0%
	Seri DMSO	6	100.0%	0	0.0%	6	100.0%
	Atropin 100	6	100.0%	0	0.0%	6	100.0%
	Atropin 500	6	100.0%	0	0.0%	6	100.0%
	DMSO	6	100.0%	0	0.0%	6	100.0%

Descriptives

Dosis		Statistic	Std. Error
pD2	Seri	Mean	6.1708
		95% Confidence Interval for Mean	
		Lower Bound	6.0412
		Upper Bound	6.3004
		5% Trimmed Mean	6.1715
		Median	6.2150
		Variance	.042
		Std. Deviation	.20398
		Minimum	5.85
		Maximum	6.48
		Range	.63
		Interquartile Range	.35
		Skewness	-.279
Kurtosis	-.754	1.232	
Jahe 200		Mean	5.3202
		95% Confidence Interval for Mean	
		Lower Bound	5.1104
		Upper Bound	5.5300
		5% Trimmed Mean	5.3108
		Median	5.3057
Variance	.040		

	Std. Deviation		.19991	
	Minimum		5.13	
	Maximum		5.68	
	Range		.55	
	Interquartile Range		.29	
	Skewness		1.299	.845
	Kurtosis		2.039	1.741
Jahe 250	Mean		5.1860	.08274
	95% Confidence Interval for Mean	Lower Bound	4.9733	
		Upper Bound	5.3986	
	5% Trimmed Mean		5.1857	
	Median		5.2050	
	Variance		.041	
	Std. Deviation		.20268	
	Minimum		4.94	
	Maximum		5.44	
	Range		.50	
	Interquartile Range		.37	
	Skewness		-.044	.845
	Kurtosis		-2.273	1.741
Seri Atropin	Mean		4.1933	.19472
	95% Confidence Interval for Mean	Lower Bound	3.7648	
		Upper Bound	4.6219	
	5% Trimmed Mean		4.1787	
	Median		4.1100	
	Variance		.455	
	Std. Deviation		.67453	
	Minimum		3.13	
	Maximum		5.52	
	Range		2.39	
	Interquartile Range		.58	
	Skewness		.648	.637
	Kurtosis		.561	1.232
Seri DMSO	Mean		4.2833	.45277
		Lower Bound	3.1194	

	95% Confidence Interval for Mean	Upper Bound	5.4472	
	5% Trimmed Mean		4.2304	
	Median		4.0150	
	Variance		1.230	
	Std. Deviation		1.10907	
	Minimum		3.26	
	Maximum		6.26	
	Range		3.00	
	Interquartile Range		1.78	
	Skewness		1.317	.845
	Kurtosis		1.649	1.741
Atropin 100	Mean		3.5617	.13101
	95% Confidence Interval for Mean	Lower Bound	3.2249	
		Upper Bound	3.8984	
	5% Trimmed Mean		3.5780	
	Median		3.6700	
	Variance		.103	
	Std. Deviation		.32090	
	Minimum		2.95	
	Maximum		3.88	
	Range		.93	
	Interquartile Range		.35	
	Skewness		-1.747	.845
	Kurtosis		3.700	1.741
Atropin 500	Mean		2.7083	.14952
	95% Confidence Interval for Mean	Lower Bound	2.3240	
		Upper Bound	3.0927	
	5% Trimmed Mean		2.7087	
	Median		2.7550	
	Variance		.134	
	Std. Deviation		.36625	
	Minimum		2.26	
	Maximum		3.15	
	Range		.89	

	Interquartile Range		.73	
	Skewness		-.166	.845
	Kurtosis		-2.063	1.741
DMSO	Mean		4.2200	.41071
	95% Confidence Interval for Mean	Lower Bound	3.1642	
		Upper Bound	5.2758	
	5% Trimmed Mean		4.1722	
	Median		4.0000	
	Variance		1.012	
	Std. Deviation		1.00604	
	Minimum		3.17	
	Maximum		6.13	
	Range		2.96	
	Interquartile Range		1.12	
	Skewness		1.677	.845
	Kurtosis		3.709	1.741

Tests of Normality

Dosis	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
pD2 Seri	.159	12	.200 [†]	.941	12	.507
Jahe 200	.274	6	.178	.873	6	.237
Jahe 250	.246	6	.200 [†]	.907	6	.419
Seri Atropin	.219	12	.118	.936	12	.454
Seri DMSO	.222	6	.200 [†]	.886	6	.296
Atropin 100	.287	6	.134	.807	6	.068
Atropin 500	.200	6	.200 [†]	.921	6	.512
DMSO	.317	6	.059	.825	6	.098

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

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

pD2

Levene Statistic	df1	df2	Sig.
3.056	7	52	.009

ANOVA

pD2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	66.175	7	9.454	26.915	.000
Within Groups	18.264	52	.351		
Total	84.439	59			

Multiple Comparisons

Dependent Variable: pD2

	(I) Dosis	(J) Dosis	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
						LSD	
	Seri	Jahe 200	.85059*	.29632	.006	.2560	1.4452
		Jahe 250	.98488*	.29632	.002	.3903	1.5795
	Seri	Atropin	1.97750*	.24195	.000	1.4920	2.4630
	Seri	DMSO	1.88750*	.29632	.000	1.2929	2.4821
		Atropin 100	2.60917*	.29632	.000	2.0145	3.2038
		Atropin 500	3.46250*	.29632	.000	2.8679	4.0571
		DMSO	1.95083*	.29632	.000	1.3562	2.5455
	Jahe 200	Seri	-.85059*	.29632	.006	-1.4452	-.2560
		Jahe 250	.13428	.34217	.696	-.5523	.8209
		Seri	1.12691*	.29632	.000	.5323	1.7215
		Seri	1.03691*	.34217	.004	.3503	1.7235
		Atropin 100	1.75857*	.34217	.000	1.0720	2.4452
		Atropin 500	2.61191*	.34217	.000	1.9253	3.2985
		DMSO	1.10024*	.34217	.002	.4136	1.7868
	Jahe 250	Seri	-.98488*	.29632	.002	-1.5795	-.3903
		Jahe 200	-.13428	.34217	.696	-.8209	.5523

	Seri		.99262*	.29632	.002	.3980	1.5872
	Atropin						
	Seri		.90262*	.34217	.011	.2160	1.5892
	DMSO						
	Atropin		1.62429*	.34217	.000	.9377	2.3109
	100						
	Atropin		2.47762*	.34217	.000	1.7910	3.1642
	500						
	DMSO		.96596*	.34217	.007	.2793	1.6526
Seri	Seri		-1.97750*	.24195	.000	-2.4630	-1.4920
Atropin	Jahe 200		-1.12691*	.29632	.000	-1.7215	-.5323
	Jahe 250		-.99262*	.29632	.002	-1.5872	-.3980
	Seri		-.09000	.29632	.763	-.6846	.5046
	DMSO						
	Atropin		.63167*	.29632	.038	.0370	1.2263
	100						
	Atropin		1.48500*	.29632	.000	.8904	2.0796
	500						
	DMSO		-.02667	.29632	.929	-.6213	.5680
Seri	Seri		-1.88750*	.29632	.000	-2.4821	-1.2929
DMSO	Jahe 200		-1.03691*	.34217	.004	-1.7235	-.3503
	Jahe 250		-.90262*	.34217	.011	-1.5892	-.2160
	Seri		.09000	.29632	.763	-.5046	.6846
	Atropin						
	Atropin		.72167*	.34217	.040	.0351	1.4083
	100						
	Atropin		1.57500*	.34217	.000	.8884	2.2616
	500						
	DMSO		.06333	.34217	.854	-.6233	.7499
Atropin	Seri		-2.60917*	.29632	.000	-3.2038	-2.0145
100	Jahe 200		-1.75857*	.34217	.000	-2.4452	-1.0720
	Jahe 250		-1.62429*	.34217	.000	-2.3109	-.9377
	Seri		-.63167*	.29632	.038	-1.2263	-.0370
	Atropin						
	Seri		-.72167*	.34217	.040	-1.4083	-.0351
	DMSO						

	Atropin 500	.85333*	.34217	.016	.1667	1.5399
	DMSO	-.65833	.34217	.060	-1.3449	.0283
Atropin 500	Seri	-3.46250*	.29632	.000	-4.0571	-2.8679
	Jahe 200	-2.61191*	.34217	.000	-3.2985	-1.9253
	Jahe 250	-2.47762*	.34217	.000	-3.1642	-1.7910
	Seri Atropin	-1.48500*	.29632	.000	-2.0796	-.8904
	Seri DMSO	-1.57500*	.34217	.000	-2.2616	-.8884
	Atropin 100	-.85333*	.34217	.016	-1.5399	-.1667
	DMSO	-1.51167*	.34217	.000	-2.1983	-.8251
	DMSO					
DMSO	Seri	-1.95083*	.29632	.000	-2.5455	-1.3562
	Jahe 200	-1.10024*	.34217	.002	-1.7868	-.4136
	Jahe 250	-.96596*	.34217	.007	-1.6526	-.2793
	Seri Atropin	.02667	.29632	.929	-.5680	.6213
	Seri DMSO	-.06333	.34217	.854	-.7499	.6233
	Atropin 100	.65833	.34217	.060	-.0283	1.3449
	Atropin 500	1.51167*	.34217	.000	.8251	2.1983

*. The mean difference is significant at the 0.05 level.

T-Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Kontrol	4.2833	6	1.10907	.45277
	DMSO	4.2200	6	1.00604	.41071

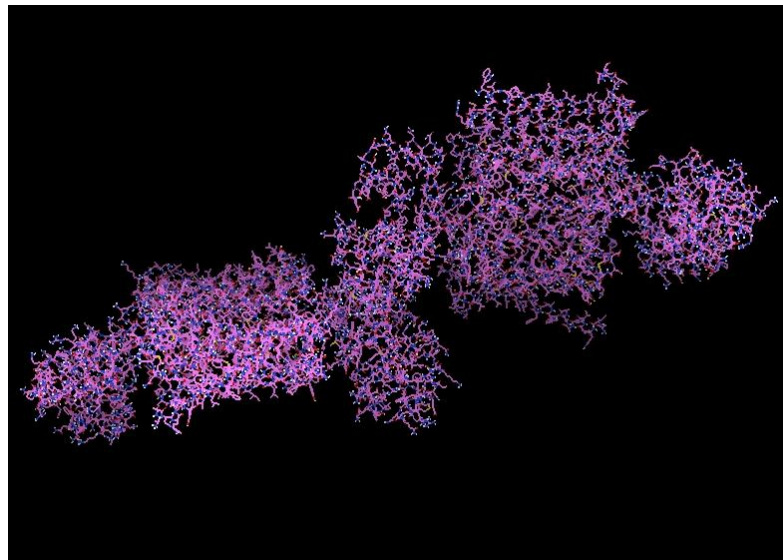
Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Kontrol & DMSO	6	.968	.002

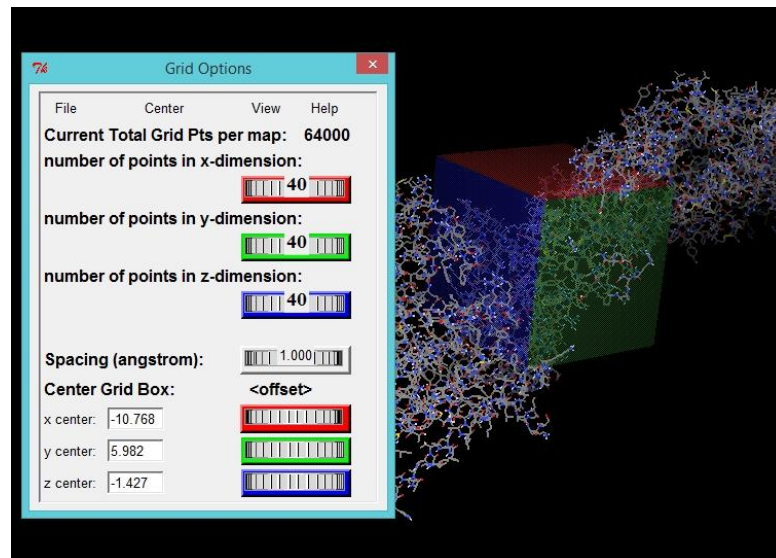
Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Kontrol - DMSO	.06333	.28800	.11758	-.23891	.36558	.539	5	.613

Lampiran 5. Penambahan atom *Hydrogen* pada residu protein



Lampiran 6. Proses preparasi parameter *grid* reseptor ACh M₃



Lampiran 7. Hasil skor *docking* pada reseptor ACh M₃

1. Validasi *docking* ligan asli (Tiotropium) pada reseptor ACh M₃

```
log - Notepad
File Edit Format View Help
Detected 4 CPUs
Reading input ... done.
Setting up the scoring function ... done.
Analyzing the binding site ... done.
Using random seed: 329543504
Performing search ... done.
Refining results ... done.

mode | affinity | dist from best mode
      | (kcal/mol) | rmsd l.b. | rmsd u.b.
-----+-----+-----+-----
1     | -9.2      | 0.000    | 0.000
2     | -9.1      | 0.913    | 1.189
3     | -8.3      | 1.629    | 2.119
4     | -8.3      | 9.279    | 11.946
5     | -8.1      | 8.242    | 9.329
6     | -8.0      | 1.133    | 1.786
7     | -7.9      | 8.918    | 11.222
8     | -7.4      | 8.813    | 11.219
9     | -7.0      | 2.632    | 5.771
Writing output ... done.
```

2. Validasi *docking* senyawa uji (*Zingiberene*) pada reseptor ACh M₃

```
log - Notepad
File Edit Format View Help

Detected 4 CPUs
Reading input ... done.
Setting up the scoring function ... done.
Analyzing the binding site ... done.
Using random seed: -381387140
Performing search ... done.
Refining results ... done.

mode |  affinity | dist from best mode
      | (kcal/mol) | rmsd l.b. | rmsd u.b.
-----+-----+-----+-----
  1   |    -8.1   |    0.000   |    0.000
  2   |    -8.0   |    1.048   |    4.973
  3   |    -7.7   |    2.013   |    5.242
  4   |    -7.6   |    1.985   |    5.358
  5   |    -7.6   |    1.765   |    4.787
  6   |    -7.3   |    2.074   |    4.672
  7   |    -7.3   |    1.835   |    5.530
  8   |    -7.2   |    2.303   |    4.799
  9   |    -7.0   |    9.034   |   11.158

Writing output ... done.
```

3. Validasi *docking* senyawa pembanding (*Atropine Sulfate*) pada reseptor ACh M₃

```
log - Notepad
File Edit Format View Help

Reading input ... done.
Setting up the scoring function ... done.
Analyzing the binding site ... done.
Using random seed: 1867113384
Performing search ... done.
Refining results ... done.

mode |  affinity | dist from best mode
      | (kcal/mol) | rmsd l.b. | rmsd u.b.
-----+-----+-----+-----
  1   |    -7.2   |    0.000   |    0.000
  2   |    -6.3   |    1.498   |    2.276
  3   |    -5.5   |    8.899   |   11.054
  4   |    -5.5   |    8.836   |   10.786
  5   |    -5.4   |   73.535   |   75.987
  6   |    -5.2   |   96.287   |   98.537
  7   |    -5.1   |   80.240   |   82.128
  8   |    -5.1   |   73.756   |   76.204
  9   |    -5.0   |   83.638   |   86.037

Writing output ... done.
```

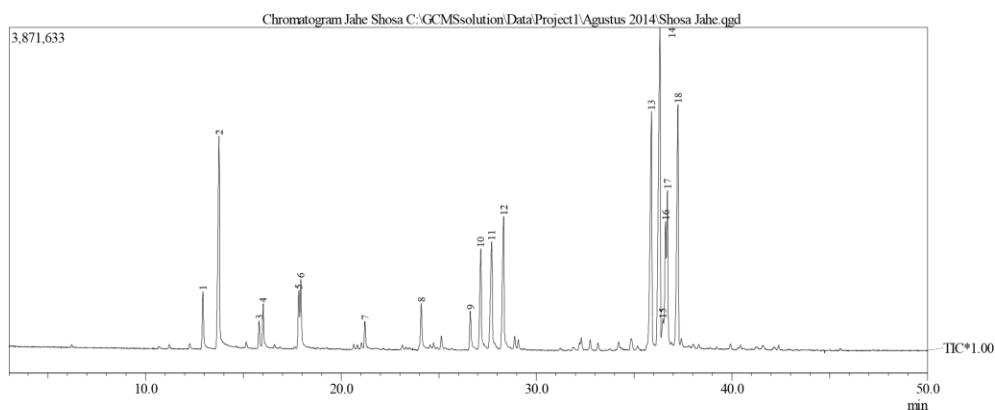
Lampiran 8. Data GC Minyak Atsiri Jahe



Lab. Kimia Organik FMIPA - UGM

Sample Information

Analyzed by : Admin
 Sample Name : Jahe
 Sample ID :
 Data File : C:\GCMSsolution\Data\Project1\Agustus 2014\Jahe.qgd
 Method File : C:\GCMSsolution\Data\Project1\Agustus 2014\Atsiri hp5.qgm
 Tuning File : C:\GCMSsolution\System\Tune1\februari 2015.qgt



Peak Report TIC

Peak#	R.Time	I.Time	F.Time	Area	Area%	Height	Name
1	12.929	12.833	13.025	2870044	2.25	612324	
2	13.756	13.592	13.842	13400520	10.49	2306153	
3	15.803	15.733	15.892	1237383	0.97	296752	
4	16.004	15.908	16.092	1923625	1.51	455286	
5	17.836	17.733	17.883	3132269	2.45	625344	
6	17.938	17.883	18.033	3220556	2.52	733429	
7	21.219	21.142	21.317	1312800	1.03	290531	
8	24.103	24.008	24.217	2320000	1.82	472803	
9	26.615	26.525	26.725	2033197	1.59	414729	
10	27.147	27.017	27.250	5838598	4.57	1072022	
11	27.706	27.542	27.800	7200878	5.63	1146364	
12	28.320	28.158	28.408	8682446	6.79	1423013	
13	35.881	35.683	35.975	16685386	13.06	2600417	
14	36.317	36.100	36.383	25358805	19.84	3559722	
15	36.450	36.383	36.517	1805857	1.41	286503	
16	36.602	36.517	36.642	6893275	5.39	1383884	
17	36.699	36.642	36.825	7845261	6.14	1725659	
18	37.238	37.067	37.325	16042618	12.55	2679899	
				127803518	100.00	2208483	