

LAMPIRAN

Lampiran 1. Sertifikat Analisis Bahan

A. CoA Atorvastatin-Ca dari PT.Etercon Semarang

Quality Reliability Sustainability

SINOCEM DSM
DSM Sinochem Pharmaceutical

Certificate of Analysis

ATORVASTATIN CALCIUM TRIHYDRATE ✓
GRADE: CRYSTALLINE

Batch / Lot No: MT10383 Mfg. Lic. No: 1879-OSP
Mfg. Date: September 2017 Expiry/Retest Date: August 2022 Batch / Lot size: 365 kg
Release Date: 09.10.2017

Character: White or almost white powder, very slightly soluble in water, slightly soluble in ethanol (95%), practically insoluble in methylene chloride.

Tests	Specifications	Units	Results
Identificator	A. Atorvastatin Calcium IR B. Calcium C. XRD - Characteristic 2θ values 02.15, 04.17, 10.265, 10.36, 11.602, 12.136, 17.075, 19.485, 21.626, 21.980, 22.746, 23.316, 23.734		Complies with test Complies with test 2θ values must be within ± 0.2 of the standard values
Assay (in anhydrous basis)	97.0 to 102.0	%w/w	98.0
Sodium tartrate dihydrate substance	Not more than 0.4	%	0.10
Heavy metals	Not more than 20	ppm	Less than 20
Specified impurities			
Desferal (Impurity A)	Not more than 0.3	%	0.05
3S SR isomer (Impurity B)	Not more than 0.3	%	0.05
Others (Impurity C)	Not more than 0.15	%	Not detected
Others (Impurity D)	Not more than 0.15	%	Not detected
Any unspecified impurity	Not more than 0.10	%	Less than 0.05
Other detectable			
Amide (Impurity F)	Not more than 0.15	%	0.05
3-O-methyl (Impurity G)	Not more than 0.15	%	0.05
Lactone (Impurity H)	Not more than 0.15	%	Less than 0.05
Total impurities (Impurity E Not included)	Not more than 1.0	%	0.22
Impurity E (not atorvastatin)	Not more than 0.3	%	0.03
Water	5.5 to 6.0	%w/w	4.5
Residual solvent			
Methyl acet. Butyl ether	Not more than 5000	ppm	495
Methanol	Not more than 2000	ppm	Not detected
Particle Size Distribution (Dry Method)			
D50	< 20 µm	µm	0
D50	< 5 µm	µm	1
D10	< 3 µm	µm	1

Pharmacopoeia quality: Complies with Ph. Eur. monograph 2181
Manufactured according to ICH Q7 GMP for APIs
Compliance to CEP: R1-CEP0210 090 (R1-30)
* Analysis performed as per USP Method
Storage: Store less than 30°C

Approved by _____
Quality Assurance

Date of issue: 13.10.2017

This certificate is valid only for the specific material and analysis described herein. It does not constitute a guarantee of quality for any other material or analysis. The certificate is not valid if it is altered or tampered with. The certificate is not valid if it is used for any other purpose than the one for which it was issued. The certificate is not valid if it is used for any other purpose than the one for which it was issued. The certificate is not valid if it is used for any other purpose than the one for which it was issued.

Lampiran 2. Data Uji Sifat Alir dan Sifat Fisik Tablet Atorvastatin

A. Data Uji Sifat Alir Serbuk Atorvastatin-Ca

1. Uji Kecepatan Alir

Formula	Replikasi						Rata-rata ± SD
	1		2		3		
	detik	g/detik	detik	g/detik	detik	g/detik	
1	1.4	36,35	1.46	37,74	1.39	35,61	36,57 ± 1,08
2	1.21	27,25	1.28	25,18	1.23	26,87	26,43 ± 1,10
3	1.15	22,98	1.06	24,93	1.09	24,21	24,04 ± 0,99
4	0.88	20,28	0.85	21,05	0.81	19,16	20,16 ± 0,95

2. Uji Sudut Diam

LS	REPLIKASI									RATA-RATA ± SD
	1			2			3			
	H (cm)	r (cm)	Sudut Diam	H (cm)	r (cm)	Sudut Diam	H (cm)	r (cm)	Sudut Diam	
I	2,7	6,25	23.36	2,5	7,25	19.02	2,6	7,1	20.11	20.36 ± 0,64
II	2,3	5,75	16.57	2,1	6,15	17.9	2,2	7,55	17.41	17.29 ± 0,67
III	1,8	8	11.95	2,1	6,5	15.52	1,9	7,3	18.17	15.21 ± 0,44
IV	2,8	6,5	14.12	2,5	7,05	16.67	2,7	14,5	15.84	15.54 ± 0,47

Contoh perhitungan Kecepatan alir dan sudut diam :

Diketahui Berat Serbuk : 50 gram, h : 2,7 cm, r : 6,25

$$\text{Kecepatan Alir} : \frac{50}{\text{detik}} = \frac{50 \text{ gram}}{1,4} = 36,35 \text{ g/detik}$$

$$\text{Sudut Diam} : \tan \alpha = \frac{h}{r} = \frac{2,7}{6,25}$$

$$\alpha = 23,36^\circ$$

3. Uji Kompresibilitas

LS	REPLIKASI									RATA- RATA ± SD
	1			2			3			
	V ₁ (ml)	V ₂ (ml)	% IK	V ₁ (ml)	V ₂ (ml)	% IK	V ₁ (ml)	V ₂ (ml)	% IK	
I	100	92	8	100	86	14	100	87	13	13.67 ± 0,58
II	81	67	12	81	68	11	81	66	12	11.67 ± 0,58
III	78	66	13	78	70	12	78	68	12	12.33 ± 0,58
IV	85	65	13.9	79	64	18,6	79	64	11.63	14.71 ± 0,48

Contoh Perhitungan Indeks Kompresibilitas

Diketahui : Volume Awal = 100 ml, Volume Mampat = 92 ml

$$\% \text{ IK} = \frac{\text{Volume awal} - \text{volume mampat}}{\text{Volume awal}} \times 100\% = \frac{100 - 92}{100} \times 100\% = 8\%$$

B. Data Uji Sifat Fisik Table Atorvastatin-Ca

1. Keseragaman Bobot

FI											
Replikasi 1				Replikasi 2				Replikasi 3			
No	Bobot Tablet (mg)	No	Bobot Tablet (mg)	No	Bobot Tablet (mg)	No	Bobot Tablet (mg)	No	Bobot Tablet (mg)	No	Bobot Tablet (mg)
1	767	11	764	1	758	11	757	1	755	11	752
2	762	12	772	2	770	12	745	2	758	12	755
3	757	13	770	3	772	13	771	3	765	13	773
4	757	14	765	4	765	14	744	4	765	14	765
5	752	15	764	5	751	15	748	5	744	15	758
6	765	16	758	6	749	16	770	6	766	16	754
7	767	17	765	7	769	17	761	7	763	17	745
8	750	18	764	8	755	18	765	8	761	18	769
9	744	19	758	9	765	19	746	9	764	19	768

10	759	20	765	10	758	20	764	10	757	20	771
Rata-Rata		761.25		Rata-Rata		759.15		Rata-Rata		760.4	
SD		6.92		SD		9.43		SD		8.00	

FII											
Replikasi 1				Replikasi 2				Replikasi 3			
No	Bobot Tablet (mg)	No	Bobot Tablet (mg)	No	Bobot Tablet (mg)	No	Bobot Tablet (mg)	No	Bobot Tablet (mg)	No	Bobot Tablet (mg)
1	399	11	392	1	388	11	391	1	391	11	393
2	398	12	390	2	391	12	399	2	399	12	399
3	398	13	399	3	388	13	391	3	398	13	401
4	388	14	399	4	399	14	394	4	401	14	400
5	389	15	395	5	400	15	395	5	400	15	397
6	399	16	401	6	398	16	398	6	398	16	394
7	394	17	390	7	395	17	388	7	394	17	392
8	396	18	391	8	399	18	389	8	392	18	390
9	398	19	392	9	390	19	390	9	390	19	399
10	400	20	392	10	392	20	390	10	389	20	388
Rata-Rata		395		Rata-rata		393.25		Rata-rata		395.25	
SD		4.18		SD		4.27		SD		4.39	

FIII											
Replikasi 1				Replikasi 2				Replikasi 3			
No	Bobot Tablet (mg)	No	Bobot Tablet (mg)	No	Bobot Tablet (mg)	No	Bobot Tablet (mg)	No	Bobot Tablet (mg)	No	Bobot Tablet (mg)
1	261	11	260	21	251	31	254	41	245	51	255
2	248	12	258	22	261	32	256	42	255	52	247
3	245	13	261	23	245	33	261	43	254	53	245
4	257	14	245	24	255	34	255	44	261	54	249
5	255	15	261	25	255	35	254	45	247	55	256
6	261	16	245	26	257	36	257	46	256	56	245
7	246	17	251	27	248	37	246	47	255	57	254
8	249	18	259	28	261	38	261	48	253	58	245
9	251	19	254	29	245	39	247	49	258	59	257
10	248	20	259	30	251	40	260	50	256	60	255
Rata-Rata		253.7		Rata-Rata		254		Rata-Rata		252.4	
SD		6.19		SD		5.55		SD		5.06	

FIV											
Replikasi 1				Replikasi 2				Replikasi 3			
No	Bobot Tablet (mg)	No	Bobot Tablet (mg)	No	Bobot Tablet (mg)	No	Bobot Tablet (mg)	No	Bobot Tablet (mg)	No	Bobot Tablet (mg)
1	198	11	197	1	197	11	198	1	201	11	196
2	199	12	201	2	200	12	199	2	199	12	198
3	200	13	198	3	198	13	199	3	198	13	195
4	199	14	200	4	196	14	194	4	198	14	195
5	200	15	200	5	201	15	191	5	195	15	194
6	200	16	201	6	199	16	197	6	197	16	201
7	200	17	199	7	195	17	199	7	200	17	201
8	200	18	199	8	198	18	197	8	201	18	200
9	198	19	197	9	200	19	195	9	194	19	207
10	201	20	195	10	200	20	200	10	195	20	193
Rata-rata		199.1		Rata-rata		197.65		Rata-rata		197.9	
SD		1.553		SD		2.477		SD		3.432	

2. Kekerasan

Replikasi	Formula (kg)				
	F1	F2	F3	F4	ATV®
1	6,4	4,9	6,7	4,8	7,9
2	6,2	4,3	5,5	4,6	8,2
3	6,8	5,0	5,6	4,6	8,1
4	6,8	4,6	4,9	4,7	7,8
5	5,9	4,5	5,0	4,7	7,9
X	6,46	4,58	5,23	4,68	7,98
SD	0,32	0,26	0,29	0,08	0,16

3. Kerapuhan

Formula	Replikasi			Rata-rata ± SD
	1	2	3	
	Bobot yang hilang (%)			Bobot yang hilang (%)
F1	0.25	0.02	0.19	0,15 ± 0,12
F2	0.18	0.16	0.15	0,16 ± 0,02
F3	0.13	0.05	0.05	0,08 ± 0,05
F4	0.05	0.22	0.35	0,21 ± 0,15
ATV®				

4. Waktu Hancur

Formula	Replikasi			Rata-rata ± SD
	1	2	3	
	menit			menit
F1	2,00	2,02	2,01	2,0 ± 0,01
F2	1,15	1,18	1,18	1,17 ± 0,02
F3	0,19	0,17	0,16	0,17 ± 0,02
F4	1,1	0,45	0,45	0,67 ± 0,38
ATV®				±

Lampiran 3. Pembacaan Spektrofotometri

1. Panjang gelombang maksimal

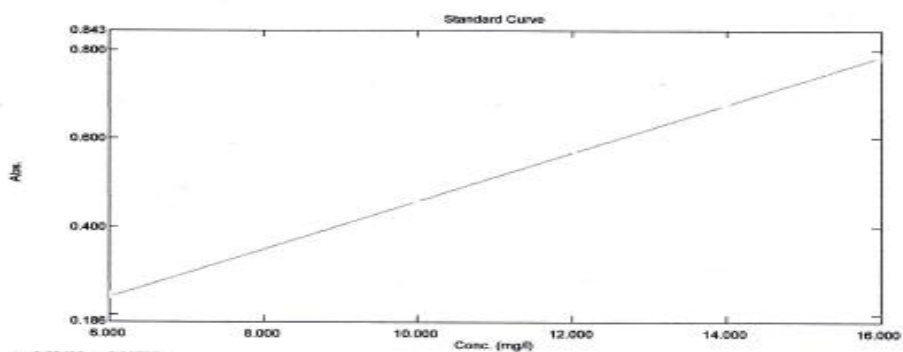
No.	Wavelength	Absorbance	Description
1	249.20	0.334	
2	247.30	0.341	
3	246.30	0.344	
4	245.50	0.347	
5	244.20	0.350	
6	240.60	0.351	lamda max
7	239.40	0.350	
8	238.60	0.348	
9	238.20	0.347	
10	237.20	0.344	
11			

2. Kurva baku atorvastatin

Standard Table Report

02/27/2018 01:08:40 PM

File Name: C:\Users\HP\Documents\File_180227_114534.pho



Sample ID	Type	Ex	Conc	WL240.6	Wgt.Factor	Comments
1	Standard		6,000	0.244	1.000	
2	Standard		8,000	0.339	1.000	
3	Standard		10,000	0.462	1.000	
4	Standard		12,000	0.575	1.000	
5	Standard		14,000	0.667	1.000	
6	Standard		16,000	0.780	1.000	
7	Standard		6,000	0.245	1.000	
8	Standard		8,000	0.337	1.000	
9	Standard		10,000	0.471	1.000	
10	Standard		12,000	0.574	1.000	
11	Standard		14,000	0.673	1.000	
12	Standard		16,000	0.780	1.000	
13	Standard		6,000	0.247	1.000	
14	Standard		8,000	0.339	1.000	
15	Standard		10,000	0.451	1.000	
16	Standard		12,000	0.580	1.000	
17	Standard		14,000	0.679	1.000	
18	Standard		16,000	0.789	1.000	

Lampiran 4. Pengujian Tablet Atorvastatin-Ca

1. Kandungan zat aktif atorvastatin

Persamaan regresi linier $y = 0,05438x - 0,08525$
 $= 0,99909$.

Formula	Absorbansi	Konsentrasi	Kadar (%)	Rata-rata kadar \pm SD (%)	CV (%)
F1	0,449	9,82	98,2	102,1 \pm 0,33	3,31
	0,479	10,37	103,7		
	0,482	10,43	104,3		
F2	0,453	9,89	98,9	100,6 \pm 0,24	2,39
	0,477	10,34	103,4		
	0,457	9,96	99,6		
F3	0,485	10,48	104,8	102,6 \pm 0,26	2,58
	0,476	10,33	103,3		
	0,457	9,96	99,6		
F4	0,478	10,36	103,6	102,3 \pm 0,19	1,86
	0,476	10,32	103,2		
	0,459	10,01	100,1		
ATV®	0,458	9,98	99,8	102,66 \pm 2,62	2,55
	0,486	10,50	105,0		
	0,475	10,30	103,0		

2. Uji disolusi atorvastatin

1. Formula 1 replikasi 1

menit	abs	kadar mcg/ml	kadar mg/ml	jumlah (mg)	faktor koreksi	jumlah terkoreksi	bobot tab	%disolusi
0	0	0	0	0	0		0	0
5	0.238	5.9443	0.0059	5.3499	0.0000	5.3499	0.9845	51.5835
15	0.378	8.5188	0.0085	7.6669	0.0297	7.6966	0.9845	74.2110
30	0.417	9.2359	0.0092	8.3123	0.0426	8.3549	0.9845	80.5586
45	0.461	10.0451	0.0100	9.0405	0.0462	9.0867	0.9845	87.6146
60	0.51	10.9461	0.0109	9.8515	0.0502	9.9017	0.9845	95.4729

2. Formula 1 replikasi 2

menit	abs	kadar mcg/ml	kadar mg/ml	jumlah (mg)	faktor koreksi	jumlah terkoreksi	bobot tab	%disolusi
0	0	0	0	0	0			
5	0.228	5.7604	0.0058	5.1844	0.0000	5.1844	0.9950	50.5209
15	0.367	8.3165	0.0083	7.4848	0.0288	7.5136	0.9950	73.2195
30	0.41	9.1072	0.0091	8.1965	0.0416	8.2381	0.9950	80.2791
45	0.443	9.7140	0.0097	8.7426	0.0455	8.7882	0.9950	85.6399
60	0.502	10.7990	0.0108	9.7191	0.0486	9.7677	0.9950	95.1849

3. Formula 1 replikasi 3

menit	abs	kadar mcg/ml	kadar mg/ml	jumlah (mg)	faktor koreksi	jumlah terkoreksi	bobot tab	%disolusi
0	0	0	0	0	0			
5	0.229	5.7788	0.0058	5.2009	0.0000	5.2009	1.0003	50.9497
15	0.364	8.2613	0.0083	7.4352	0.0289	7.4641	1.0003	73.1204
30	0.424	9.3647	0.0094	8.4282	0.0413	8.4695	1.0003	82.9699
45	0.446	9.7692	0.0098	8.7923	0.0468	8.8391	1.0003	86.5908
60	0.511	10.9645	0.0110	9.8681	0.0488	9.9169	1.0003	97.1491

4. Formula 2 replikasi 1

menit	abs	kadar mcg/ml	kadar mg/ml	jumlah (mg)	faktor koreksi	jumlah terkoreksi	bobot tab	%disolusi
0	0	0	0	0	0			
5	0.155	4.4180	0.0044	3.9762	0.0000	3.9762	0.9924	39.1960
15	0.243	6.0362	0.0060	5.4326	0.0221	5.4547	0.9924	53.7706
30	0.323	7.5074	0.0075	6.7566	0.0302	6.7868	0.9924	66.9021
45	0.375	8.4636	0.0085	7.6172	0.0375	7.6548	0.9924	75.4582
60	0.434	9.5485	0.0095	8.5937	0.0423	8.6360	0.9924	85.1310

5. Formula 2 replikasi 2

menit	abs	kadar mcg/ml	kadar mg/ml	jumlah (mg)	faktor koreksi	jumlah terkoreksi	bobot tab	%disolusi
0	0	0	0	0	0			
5	0.174	4.7674	0.0048	4.2906	0.0000	4.2906	0.9848	41.9721
15	0.259	6.3305	0.0063	5.6974	0.0238	5.7212	0.9848	55.9666
30	0.329	7.6177	0.0076	6.8559	0.0317	6.8876	0.9848	67.3759
45	0.386	8.6659	0.0087	7.7993	0.0381	7.8374	0.9848	76.6670
60	0.437	9.6037	0.0096	8.6433	0.0433	8.6867	0.9848	84.9751

6. Formula 2 replikasi 3

menit	abs	kadar mcg/ml	kadar mg/ml	jumlah (mg)	faktor koreksi	jumlah terkoreksi	bobot tab	%disolusi
0	0	0	0	0	0			
5	0.167	4.6387	0.0046	4.1748	0.0000	4.1748	0.9823	40.7338
15	0.238	5.9443	0.0059	5.3499	0.0232	5.3730	0.9823	52.4253
30	0.321	7.4706	0.0075	6.7235	0.0297	6.7532	0.9823	65.8920
45	0.397	8.8682	0.0089	7.9813	0.0374	8.0187	0.9823	78.2391
60	0.429	9.4566	0.0095	8.5109	0.0443	8.5553	0.9823	83.4747

7. Formula 3 replikasi 1

menit	abs	kadar mcg/ml	kadar mg/ml	jumlah (mg)	faktor koreksi	jumlah terkoreksi	bobot tab	%disolusi
0	0	0	0	0	0			
5	0.142	4.1789	0.0042	3.7610	0.0000	3.7610	1.0308	37.7865
15	0.233	5.8523	0.0059	5.2671	0.0209	5.2880	1.0308	53.1276
30	0.286	6.8270	0.0068	6.1443	0.0293	6.1735	1.0308	62.0244
45	0.307	7.2131	0.0072	6.4918	0.0341	6.5260	1.0308	65.5652
60	0.335	7.7280	0.0077	6.9552	0.0361	6.9913	1.0308	70.2403

8. Formula 3 replikasi 2

menit	abs	kadar mcg/ml	kadar mg/ml	jumlah (mg)	faktor koreksi	jumlah terkoreksi	bobot tab	%disolusi
0	0	0	0	0	0			
5	0.132	3.9950	0.0040	3.5955	0.0000	3.5955	1.0229	35.8469
15	0.231	5.8156	0.0058	5.2340	0.0200	5.2540	1.0229	52.3814
30	0.29	6.9005	0.0069	6.2105	0.0291	6.2395	1.0229	62.2073
45	0.303	7.1396	0.0071	6.4256	0.0345	6.4601	1.0229	64.4064
60	0.344	7.8935	0.0079	7.1042	0.0357	7.1399	1.0229	71.1835

9. Formula 3 replikasi 3

menit	abs	kadar mcg/ml	kadar mg/ml	jumlah (mg)	faktor koreksi	jumlah terkoreksi	bobot tab	%disolusi
0	0	0	0	0	0			
5	0.144	4.2157	0.0042	3.7941	0.0000	3.7941	0.9795	36.2204
15	0.209	5.4110	0.0054	4.8699	0.0211	4.8910	0.9795	46.6913
30	0.259	6.3305	0.0063	5.6974	0.0271	5.7245	0.9795	54.6481
45	0.297	7.0292	0.0070	6.3263	0.0317	6.3580	0.9795	60.6958
60	0.348	7.9671	0.0080	7.1704	0.0351	7.2055	0.9795	68.7869

10. Formula 4 replikasi 1

menit	abs	kadar mcg/ml	kadar mg/ml	jumlah (mg)	faktor koreksi	jumlah terkoreksi	bobot tab	%disolusi
0	0	0	0	0	0			
5	0.164	4.5835	0.0046	4.1251	0.0000	4.1251	0.9895	39.8817
15	0.188	5.0248	0.0050	4.5223	0.0229	4.5453	0.9895	43.9435
30	0.21	5.4294	0.0054	4.8864	0.0251	4.9116	0.9895	47.4850
45	0.229	5.7788	0.0058	5.2009	0.0271	5.2280	0.9895	50.5446
60	0.229	5.7788	0.0058	5.2009	0.0289	5.2298	0.9895	50.5615

11. Formula 4 replikasi 2

menit	abs	kadar mcg/ml	kadar mg/ml	jumlah (mg)	faktor koreksi	jumlah terkoreksi	bobot tab	%disolusi
0	0	0	0	0	0			
5	0.153	4.3812	0.0044	3.9431	0.0000	3.9431	1.0045	38.7022
15	0.179	4.8593	0.0049	4.3734	0.0219	4.3953	1.0045	43.1407
30	0.197	5.1903	0.0052	4.6713	0.0243	4.6956	1.0045	46.0882
45	0.218	5.5765	0.0056	5.0188	0.0260	5.0448	1.0045	49.5157
60	0.228	5.7604	0.0058	5.1844	0.0279	5.2122	1.0045	51.1591

12. Formula 4 replikasi 3

menit	abs	kadar mcg/ml	kadar mg/ml	jumlah (mg)	faktor koreksi	jumlah terkoreksi	bobot tab	%disolusi
0	0	0	0	0	0			
5	0.167	4.6387	0.0046	4.1748	0.0000	4.1748	0.9794	39.9520
15	0.18	4.8777	0.0049	4.3899	0.0232	4.4131	0.9794	42.2329
30	0.199	5.2271	0.0052	4.7044	0.0244	4.7288	0.9794	45.2536
45	0.222	5.6501	0.0057	5.0850	0.0261	5.1112	0.9794	48.9131
60	0.231	5.8156	0.0058	5.2340	0.0283	5.2623	0.9794	50.3588

13. ATV® replikasi 1

menit	abs	kadar mcg/ml	kadar mg/ml	jumlah (mg)	faktor koreksi	jumlah terkoreksi	bobot tab	%disolusi
0	0	0	0	0	0			
5	0.273	6.5879	0.0066	5.9291	0.0000	5.9291	0.9794	56.7405
15	0.291	6.9189	0.0069	6.2270	0.0329	6.2600	0.9794	59.9066
30	0.293	6.9557	0.0070	6.2601	0.0346	6.2947	0.9794	60.2393
45	0.347	7.9487	0.0079	7.1538	0.0348	7.1886	0.9794	68.7937
60	0.445	9.7508	0.0098	8.7757	0.0397	8.8155	0.9794	84.3627

14. ATV® replikasi 2

menit	abs	kadar mcg/ml	kadar mg/ml	jumlah (mg)	faktor koreksi	jumlah terkoreksi	bobot tab	%disolusi
0	0	0	0	0	0			
5	0.235	5.8891	0.0059	5.3002	0.0000	5.3002	0.9794	50.7220
15	0.278	6.6798	0.0067	6.0119	0.0294	6.0413	0.9794	57.8142
30	0.295	6.9925	0.0070	6.2932	0.0334	6.3266	0.9794	60.5446
45	0.332	7.6729	0.0077	6.9056	0.0350	6.9405	0.9794	66.4197
60	0.402	8.9601	0.0090	8.0641	0.0384	8.1025	0.9794	77.5390

15. ATV® replikasi 3

menit	abs	kadar mcg/ml	kadar mg/ml	jumlah (mg)	faktor koreksi	jumlah terkoreksi	bobot tab	%disolusi
0	0	0	0	0	0			
5	0.248	6.1282	0.0061	5.5154	0.0000	5.5154	0.9794	52.7810
15	0.263	6.4040	0.0064	5.7636	0.0306	5.7942	0.9794	55.4499
30	0.304	7.1580	0.0072	6.4422	0.0320	6.4742	0.9794	61.9568
45	0.328	7.5993	0.0076	6.8394	0.0358	6.8752	0.9794	65.7941
60	0.443	9.7140	0.0097	8.7426	0.0380	8.7806	0.9794	84.0292

Lampiran 5. Pengujian DE₆₀**1. Formula 1**

Replikasi	Luas Bidang	Luas Area Bidang (A+B)	DE ₆₀ (%)
1	4553,15	6000	75,89
2	4496,82	6000	74,95
3	4568,15	6000	76,14
Rata-Rata			75,66
SD			0,62

2. Formula 2

Replikasi	Luas Bidang	Luas Area Bidang (A+B)	DE ₆₀ (%)
1	3739,99	6000	62,33
2	3812,38	6000	63,54
3	3748,84	6000	62,48
Rata-Rata			62,78
SD			0,65

3. Formula 3

Replikasi	Luas Bidang	Luas Area Bidang (A+B)	DE ₆₀ (%)
1	3388,14	6000	56,47
2	3356,70	6000	55,95
3	3101,35	6000	51,69
Rata-Rata			54,70
SD			2,62

4. Formula 4

Replikasi	Luas Bidang	Luas Area Bidang (A+B)	DE ₆₀ (%)
1	2698,06	6000	44,97
2	2647,27	6000	44,12
3	2617,74	6000	43,63
Rata-Rata			44,24
SD			0,67

5. ATV®

Replikasi	Luas Bidang	Luas Area Bidang (A+B)	DE ₆₀ (%)
1	3742,60	6000	62,38
2	3589,09	6000	59,82
3	3635,46	6000	60,59
Rata-Rata			60,93
SD			1,31

Lampiran 6. Analisis Statistik Tablet Atorvastatin-Ca

1. Uji normalitas

Tests of Normality							
FORMULA		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
DE60	Formula 1	.310	3	.	.899	3	.383
	Formula 2	.344	3	.	.841	3	.218
	Formula 3	.349	3	.	.831	3	.190
	Formula 4	.237	3	.	.977	3	.706
	KONTROL POS	.269	3	.	.950	3	.568

a. Lilliefors Significance Correction

2. Uji homogenitas

Test of Homogeneity of Variances

DE60

Levene Statistic	df1	df2	Sig.
4.794	4	10	.020

3. Uji Statistik Disolusi Antar Formula dan ATV®

1. Kruskal- Wallis

Uji Statistik	Perbandingan	Sig	Keterangan
Kruskal-Wallis	Keseluruhan	0,01	Berbeda bermakna

2.Mann-Whitney

Perbandingan (a)	Perbandingan (b)	Sig.	Keterangan
Formula I	Formula II	0,049	Berbeda bermakna
	Formula III	0,049	Berbeda bermakna
	Formula IV	0,049	Berbeda bermakna
	ATV®	0,049	Berbeda bermakna
Formula II	Formula I	0,049	Berbeda bermakna
	Formula III	0,049	Berbeda bermakna
	Formula IV	0,049	Berbeda bermakna
	ATV®	0,127	Tidak berbeda
Formula III	Formula I	0,049	Berbeda bermakna
	Formula II	0,049	Berbeda bermakna
	Formula IV	0,049	Berbeda bermakna
	ATV®	0,049	Berbeda bermakna
Formula IV	Formula I	0,049	Berbeda bermakna
	Formula II	0,049	Berbeda bermakna
	Formula III	0,049	Berbeda bermakna
	ATV®	0,049	Berbeda bermakna
ATV®	Formula I	0,049	Berbeda bermakna
	Formula II	0,127	Tidak berbeda
	Formula III	0,049	Berbeda bermakna
	Formula IV	0,049	Berbeda bermakna