BAB V
KESIMPULAN DAN SARAN

A. Kesimpulan

Berdasarkan dari hasil penelitian yang telah dilakukan dapat diperoleh kesimpulan bahwa :

Pertama, *myricetin* dapat ditingkatkan kelarutannya melalui teknik solubilisasi menggunakan penghantaran variasi konsentrasi *poloxamer F127*. Kadar kelarutan *myricetin* paling tinggi sebesar 66,46 ppm pada proporsi *poloxamer F127* satu setengah diatas cmc.

Kedua, *Myricetin* dengan sistem solubilisasi *poloxamer F127* pada formula 1, formula 2 dan formula 3 memberikan kenaikan kelarutan *myricetin* yang baik. Kelarutan *myricetin* meningkat seiring dengan meningkatnya jumlah *poloxamer F127*. Sehingga nilai tiga variasi konsentrasi *myricetin* yang diperoleh ini dapat disimpulkan baik.

B. Saran

Penelitian ini masih banyak kekurangan, maka perlu dilakukan penelitian lebih lanjut mengenai :

Pertama, perlu dilakukan optimasi poloxamer yang lebih beragam.

Kedua, pengembangan dalam bentuk sediaan.

DAFTAR PUSTAKA

Adawiah, Sukandar D, Muawanah A. 2015. Aktivitas antioksidan dan kandungan komponen bioaktif sari buah Namnam. *Jurnal Kimia Valensi*. 1(2).

Alakhov V, Klinski E, Li S, Pietrzynski G, Venne A, et al. (1999) Block copolymer-based formulation of doxorubicin. From cell screen to clinical trials. Coll surf B Biointerfaces, 16: 113-134.

Becher, P., "Emulsions: Theory and practice," Reinhold publishing corp., New York, 1957, pp. 188-199.

Chan CC, Herman L, Lee YC, Zhang XM. 2003. Analitical Method Validation and Instrument Performance Verification. New Jersey : Inc Publication.

Chen, X. M., Tait, A. R., & Kitts, D. D. (2004). Flavonoid composition of orange peel and its association with antioxidant and anti-inflammatory activities. *Food Chemistry, 218*, 15–21.

Chen XQ, Antman MD, Gesenberq C, Gudmundsson OS, 2006, *Discovery pharmaceutics–challenges and opportunities,* AAPS J 8: E402–408.

Chu, Donald. A. 1996. Jumping into Plyometrics. Champaign, Illinois: Human Kinetics Pub.

Comoglio A, Tomasi A, Malandrino S, Poli G, Albano E. 1995. Scavenging effect of silipide, a new silybin-phospholipid complex, on ethanol-derived free radicals. Biochem Pharmacol. 50:1313-1316. Comoglio A, Tomasi A, Malandrino S, Poli G, Albano E. 1995. Scavenging effect of silipide, a new silybin-phospholipid complex, on ethanol-derived free radicals. Biochem Pharmacol. 50:1313-1316.

Croy SR, Kwon GS. The effects of Pluronic block copolymers on the aggregation state of nystatin. J Control Release 2004; 95: 16171.

Devi, K.P., Rajavel, T., Habtemariam, S., Nabavi, S.F and Nabavi. 2013. *Molecular mechanisms underlying anticancer effects of myricetin*. Life sciences, 142:p. 19-25.

El-Gawad AH, Soliman OA, Shams MEE, Maria DN. 2014. Formulation and In Vitro Evaluation of Loratadine Gels for Ophthalmic Use. RGUHS J Pharm Sci4.

Escobar-Chavez, JJ Lopez-Cervantes, M,; Naik, A,; et al (2006). Applications of the thermoreversiblepluronic F-127 gels in pharmaceutical formulation.

Journal of pharmacy and pharmaceutical sciences; Vol. 9, No 3, (November 2006), pp. 339-58 ISSN 1482-1826.

Gaber DM, Nafee N, Abdallah OY. 2017. Myricetin solid lipid nanoparticles: stability assurance from system preparation to site of action. *European Journal of Pharmaceutical sciences.*

Gao L, Wang X, He F:Sol-gel synthesis of N-doped mesoporous TiO2with high crystallinity and high visible light photocatalytic activity. Applied Mechanics and Materials 2013, Vol.217-219:857-861.

Harmita. 2004. Petunjuk Pelaksanaan Validasi Metode Dan Cara Perhitungannya. Majalah Ilmu Kefarmasian, Vol. I, No.3, Desember, 117 – 135.

Harvey D. 2000. *Modern Analytic Chemistry*. McGraw-Hill,USA. Hlm 579.

Hong C, Dang Y, Lin G, Yao Y, Li G, Ji G, Shen H, Xie Y. 2014. Effects of Stabilizing Agents on The Development of Myricetin Nanosuspension and its Characterization: An in Vitro and in Vivo Evaluation, International Journal of Pharmaceutics, 477: 251–260.

Hu-Jun X, Wang-Shu M, Fu-Rong, L, Jie-Hui X, QunFang L, Wen-Jun F. 2013. Radical Scavenging Activity of Myricetin, Acta Phys. -Chim. Sin , 29 (7): 14211432.

Karbanov., and A. V. Korotkova, E.I., Y. A. Shevchuk. 2002. Study of Antioxidant Properties by Voltammetri. Journal of Electronical Chemistry.

Khan N, Deeba N. Syed, Nihal A, Hasan M. 2013. Fisetin: a dietary for health promotion. Antioxidants and Redox Signaling. 19(2).

Landi librandi, Melkisedek. (2011). Pengaruh Program Peer Assisted Learning dalam Meningkatkan keterampilan klinik mahasiswa. Jurnal Kedokteran UGM.

Lipinski, C, 2002. Poor Aqueous Solubility –An Industry Wide Problem in Drug Discovery, Am. Pharm.Rev, 5: 82-85.

Mohanraj VJ, Chen Y. 2006. Nanoparticles – A Review.. Evidence Does Not Support Absorption Of Intact Solid Lipid Nanoparticles Via Oral Delivery. *Trop J Pharm Res*.5:561–73.

Murakami, M. Ikeda, Akiyama, M., K. K. Iwatsuki, S. Kokubo, A. Wada, K. Tokuno, M. Onishi, H. Iwabuchi, and K. Tanaka. (2005). Characterization

of Flavor Compounds Released During Grinding of Roasted Robusta Coffee Beans. Food Sci. Technol. Res., 11 (3) 298-307.

Nagariya K, Nakamura S, Horimoto M. 2010. Synthesis of Modified Hydroxyapatite (HAP) Substituted with Fe ion for DDS Aplication. Osaka: IEEE Transactions on Magnetic 43 (6): 2465-2467. Dalam: Hapsari BW. 2009. Sintesis Nanosfer Berbasis Ferrofluid dan Polylactic Acid (PLA) dengan Metode Sonikasi [skripsi]. Bogor: Fakultas Matematika dan Ilmu Pengetahuan Alam, Institut Pertanian Bogor.

Nagarajan, M., Rajasekaran, S. & Ganesh, S., 1999, Antibacterial Activity of Lawsonia inermis L., International Journal of Modern Biology and Medicine, 4 (3), 169-175.

Odeh F, Al-Jaber H, Khater D. 2014. Application of Nanotechnology in Drug Delivery, InTech, New York, 344-368.

Patel, M. J., Patel, N. M., Patel, R. B., dan Patel, R. P., 2009, Formulation and Evaluation of Self-Microemulsifying Drug Delivery System of Lovastatin, Asian. J. Pharm. Sci.,5(6), 266-267.

Patel SM, Patel RP, Prajapati BG. Solubility enhancement of benfotiamine, a lipid derivative of thiamine by solid dispersion technique. Journal of Pharmacy & Bioallied Sciences. 2012;4:104-S105.

Pirhayati F H, Shayanfar A, Rahimpour E, Jalali M B, Martinez F, Jouyban A. 2017. Solubility of Sildenefil Citrate in Polyethylene glycol 400 + Water Mixtures at Various Temperatures, Journal of Molecular Liquids, 240: 268-272.

Price C. Micelle formation by block copolymer in organic solvents. Pure and Appl Chem 1983; 55: 1563-72.

Procházková D, Boušová I, Wilhelmová N. 2011. Antioxidant and Prooxidant Properties of Flavonoids, Fitoterapia, 82.513–523.

Rakshit AK, Palepu RM. Additive effects on nonionic surfactant molecular assemblies: a review. Recent Dev Coll Interface Res 2003; 1: 203-19.

Ross JA, Kasum CM. 2002. Dietary flavonoids: bioavailability, metabolic effects, and safety. Annual Review of Nutrition. 22: 19–34.

Santosa, B.A., et al "Characteristics of extrudate from four varieties of corn with aquadest addition ." Indonesian Journal of Agriculture 1.2 (2008): 85-94.

Savjani, K.T., Gajjar, A.K., and Savjani, J.K., 2012. Drug solubility: importance and enhancement techniques. ISRN pharmaceutics, 2012 (100 mL), 195727.

Shargel, L., Yu, A., and Wu, S., 2005, Biofarmasetika dan Farmakokinetika Terapan, Edisi kedua, Airlangga University Press, Surabaya. 167 – 187.

Sultana, B., Anwar, F., and Przybylskii, R., Antioxidant Activity of phenolic components present in barks of Azadirachta indica, Terminalia asrjuna, Acacia nilotica, and Eugenia jambolana Lam. Treets, Food Chem., 2007, 1004 (3), 1106-1114.

ten Tije AJ, Verweij J, Loos WJ, Sparreboom A. Pharmacological effects of formulation vehicles: implications for cancer chemotherapy. Clin Pharmacokinet 2003; 42: 665-85.

Utama RB, I Gusti. 2016. Korelasi linier dan berganda. Universitas Dhyana Pura, Bali.

Vemula V.R., V.Lagishetty, dan S.Lingala. Solubility Enhancement Techniques. International Journal of Pharmaceutical Science Review and Research. 2010;5(1):41 – 51.

Wagh, P., & Zubaidha, P., 2012, An improved and Eco- friendly method for the synthesis of flavanone by the cyclization of 2'- hydroxy chalcone using methane sulphonic acid as catalyst, Chemistry Journa, 2(3), 106-110.

Wang Y., Xu K., Lin L., Pan Y. and Zheng X., 2012, Geranyl flavonoids from the leaves of Artocarpus altilis, Phytochemistry, 68, 1300–1306.

Wanka G, Hoffman H, Ulbricht W. Phase diagrams and aggregation behavior of poly(oxyethylene)-poly(oxypropylene)-poly(oxyethylene) triblock copolymers in aqueous solutions. Macromolecules 1994; 27: 4145-59.

Xie Y, Dang Y, Duan JZ, Ma P, Li GW, Ji G, et al. 2014. Quantitative determination of myricetin in rat plasma by ultra performance liquid chromatography tandem mass spectrometry and its absolute bioavailability. Drug Res. 64: 516-522.

Xue M, Zhao Y, Li X-J, Jiang Z-Z, Zhang L, Liu S-H, *Et Al*. 2015, Comparison Of Toxicokinetic And Tissue Distribution Of Triptolide-Loaded Solid Lipid Nanoparticles Vs Free Triptolide In Rats. Eur J Pharm Sci..47(4):713–7.

Yang SF, Yang L, Zheng H, 2006, *Hypolipidemic And Antioxidant Effects Of Mulberry (Morus Alba L.) Fruit In Hyperlipidaemia Rats*. Food Chem Toxicol.;48:2374–9.

Yao Y, Lin G, Xie Y, Ma P, Li G, Meng Q, Wu T. 2013. Preformulation Studies of Myricetin: a Natural Antioxidant Flavonoid, Pharmazie 69: 19-26.

Yashu Y, et al. 2014. Preformulation studies of myricetin: a natural antioxidant flavonoid. Pharmazie. 69: 19-26.

Yeh M K, Chang L C, Chiou A H J, 2009. Improving Tenoxicam Solubility and Bioavailability by Cosolvent System, AAPS PharmSciTech, 10(1):166–171.

Yuan Y, Xing J, Wang L, Yao J, Wang X. 2014. Study On The Pharmacokanetic Behavior Of *Dracocephalum Moldavica L*. Flavonoids In Rat. *J Shehezi Univ*.;32:69–72. Chinese.

Yulia 2010 " Validasi Metode" Diktat Validasi Metode, Pusat Penelitian Kimia-LIPI, Bandung.

Zhang, M. et al., 2010. Phenolic profiles and antioxidant activity of black rice bran of different commercially available varieties. J Agric Food Chem, 58, pp.7580–7587.

L A M P I R A N

Lampiran 1. Sertifikat analisis myricetin

TOCRIS
a bio-techne brand

Print Date: Jul 20th 2017

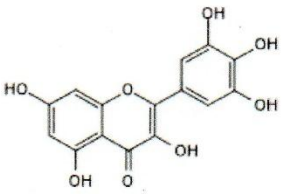
Certificate of Analysis

www.tocris.com

Product Name: **Myricetin** **Catalog No.: 6189** **Batch No.: 1**
CAS Number: 529-44-2
IUPAC Name: 3,5,7-Trihydroxy-2-(3,4,5-trihydroxyphenyl)-4*H*-1-benzopyran-4-one

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{15}H_{10}O_8 \cdot H_2O$
Batch Molecular Weight: 336.26
Physical Appearance: Yellow solid
Solubility: DMSO to 100 mM
ethanol to 50 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 97.7% purity
^{1}H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	53.58	3.6	
Found	53.6	3.57	

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel:+1 612 379 2956

TOCRIS
a bio-techne brand

Print Date: Jul 20th 2017

Product Information

www.tocris.com

Product Name: **Myricetin** **Catalog No.: 6189** **Batch No.: 1**

CAS Number: 529-44-2

IUPAC Name: 3,5,7-Trihydroxy-2-(3,4,5-trihydroxyphenyl)-4*H*-1-benzopyran-4-one

Description:

Irreversible TrxR inhibitor (IC_{50} = 0.62 µM). Exhibits concentration-, time- and NADH-dependent TrxR inhibition. Results in the oxidation of Trx and reduced TrxR activity in vitro in addition to the accumulation of cells in sub-G_1 phase. Reduces neoplastic transformation and induces cell death in cancer cell lines. Chemotherapeutic.

Physical and Chemical Properties:

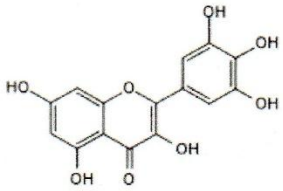
Batch Molecular Formula: $C_{15}H_{10}O_8.H_2O$

Batch Molecular Weight: 336.26

Physical Appearance: Yellow solid

Minimum Purity: >97%

Batch Molecular Structure:



Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

DMSO to 100 mM
ethanol to 50 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Devi *et al* (2015) Molecular mechanisms underlying anticancer effects of myricetin. Life.Sci. ***142*** 19. PMID: 26455550.

Lu & Holmgren *et al* (2009) Selenoproteins. J.Biol.Chem. ***284*** 723. PMID: 18757362 .

Lu *et al* (2006) Inhibition of mammalian thioredoxin reductase by some flavonoids: implications for myricetin and quercetin anticancer activity. Cancer.Res. ***66*** 4410. PMID: 16618767.

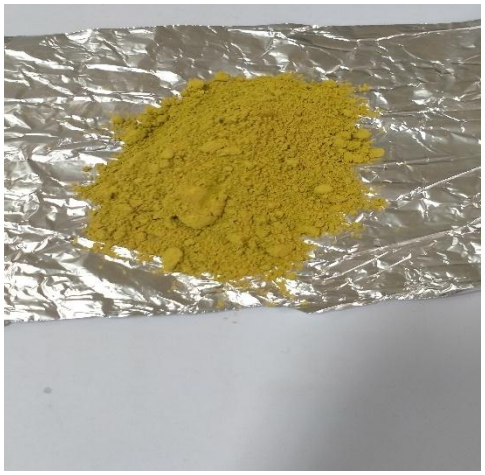
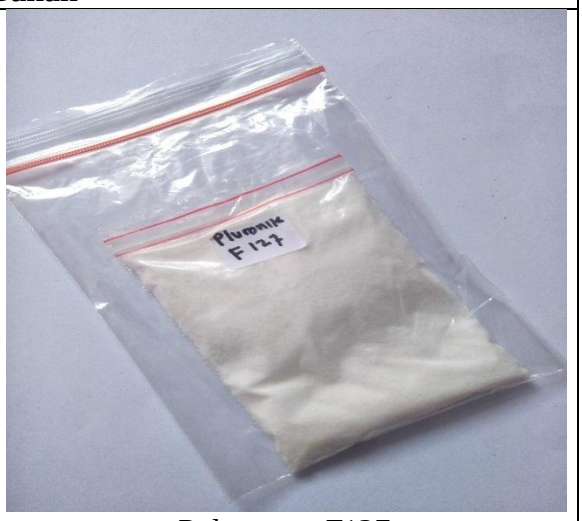
Ko *et al* (2005) Mitochondrial-dependent, reactive oxygen species-independent apoptosis by myricetin: roles of protein kinase C, cytochrome c, and caspase cascade. Biochem.Pharmacol. ***69*** 913. PMID: 15748703.

Ong & Khoo *et al* (1997) Biological effects of myricetin. Gen.Pharmacol. ***29*** 121. PMID: 9251891.

Lampiran 2. Gambar alat dan bahan penelitian

<table>
<tr><th colspan="2">Alat</th></tr>
<tr><td> 
Neraca analitik</td><td> 
Spektro UV-Vis</td></tr>
<tr><td> 
Shaking Thermostatic Water Bath</td><td> 
Pipet Tetes</td></tr>
</table>

Alat	
 Pipet Volume	 Botol Vial
 Batang Pengaduk	 Sendok Tanduk

<table>
<tr><th colspan="2">Bahan</th></tr>
<tr><td> 
Serbuk Myricetin</td><td> 
Poloxamer F127</td></tr>
<tr><td colspan="2"> 
Aquadest</td></tr>
</table>

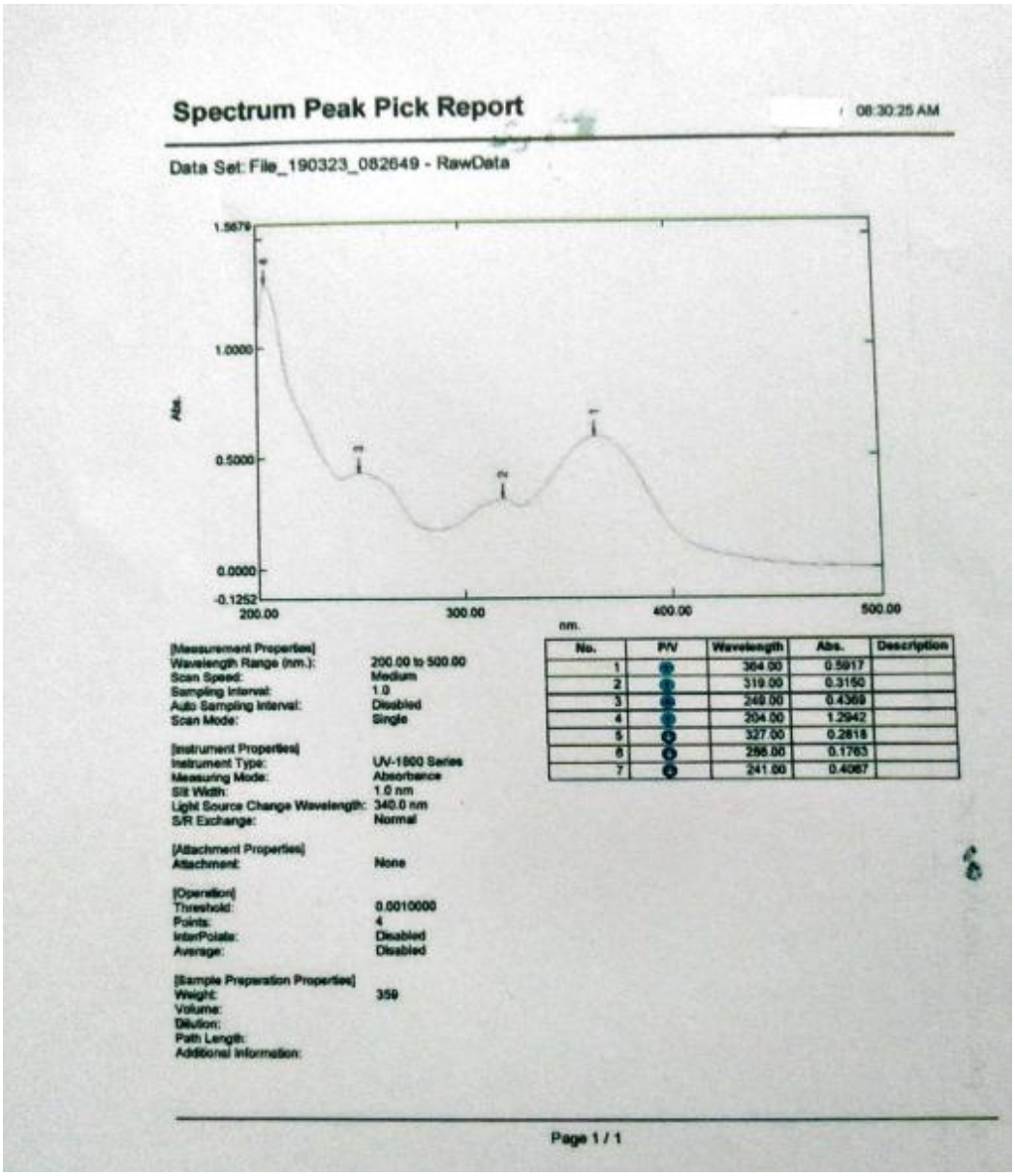
Lampiran 3. Formula *Myricetin*

A. Formula *Myricetin* Setelah di *Shaker*

B. Formula *Myricetin* Setelah Penyaringan Filtrat

Lampiran 4. Pembuatan kurva kalibrasi dan validasi metode

1. Penentuan panjang gelombang



Spectrum Peak Pick Report

08:30:25 AM

Data Set: File_190323_082649 - RawData

No.	P/V	Wavelength	Abs.	Description
1	P	364.00	0.5917	
2	V	319.00	0.3150	
3	P	249.00	0.4369	
4	V	304.00	1.2942	
5	P	327.00	0.2818	
6	V	286.00	0.1763	
7	P	241.00	0.4067	

[Measurement Properties]
Wavelength Range (nm.): 200.00 to 500.00
Scan Speed: Medium
Sampling Interval: 1.0
Auto Sampling Interval: Disabled
Scan Mode: Single

[Instrument Properties]
Instrument Type: UV-1800 Series
Measuring Mode: Absorbance
Slit Width: 1.0 nm
Light Source Change Wavelength: 340.0 nm
S/R Exchange: Normal

[Attachment Properties]
Attachment: None

[Operation]
Threshold: 0.0010000
Points: 4
InterPolate: Disabled
Average: Disabled

[Sample Preparation Properties]
Weight: 359
Volume:
Dilution:
Path Length:
Additional Information:

Page 1 / 1

2. Operating Time Myricetin

Kinetics Data Print Report

03/11/2020 04:13:17 PM

Time (Minute)	RawData ...
0.000	0.417
1.000	0.418
2.000	0.417
3.000	0.417
4.000	0.417
5.000	0.418
6.000	0.418
7.000	0.418
8.000	0.418
9.000	0.418
10.000	0.418
11.000	0.417
12.000	0.418
13.000	0.418
14.000	0.418
15.000	0.418
16.000	0.418
17.000	0.418
18.000	0.418
19.000	0.419
20.000	0.418
21.000	0.419
22.000	0.419
23.000	0.418
24.000	0.418
25.000	0.418
26.000	0.418
27.000	0.418
28.000	0.418
29.000	0.418
30.000	0.418

3. Linieritas

Penimbangan *myricetin* :

Kertas kosong : 0,2812 g

Kertas kosong + isi : 0,2921 g

Kertas sisa : 0,2815 g

Zat aktif : 0,0106 g

Membuat larutan induk sebesar 106 ppm dengan menimbang 10,6 mg *myricetin* ditambahkan aquadestilata sampai 100 mL, selanjutnya dibuat seri konsentrasi :

1) 4 ppm

V1 x C1 = V2 x C2

0,4 ml x 100 ppm = 10 ml x C2

C2 = 4 ppm

2) 6 ppm

V1 x C1 = V2 x C2

0,6 ml x 100 ppm = 10 ml x C2

C2 = 6 ppm

3) 8 ppm

V1 x C1 = V2 x C2

0,8 ml x 100 ppm = 10 ml x C2

C2 = 8 ppm

4) 10 ppm

V1 x C1 = V2 x C2

1,0 ml x 100 ppm = 10 ml x C2

C2 = 10 ppm

5) 12 ppm

V1 x C1 = V2 x C2

1,2 ml x 100 ppm = 10 ml x C2

C2 = 12 ppm

Konsentrasi standar (ppm)	Absorbansi
4	0,355
6	0,465
8	0,58
10	0,682
12	0,793

Persamaan regresi linier antara konsentrasi (ppm) dan serapan diperoleh :

a = 0,1378

b = 0,0547

r = 0,9999

y = 0,1378 + 0,0547x

keterangan :

x = Konsentrasi (ppm)

y = Serapan

4. Akurasi

KONSENTRASI	REPLIKASI	ABS	KONSENTRASI	SEBENARNYA	%		
	1	0,603	8,0992	8	101%		
	2	0,605	8,1264	8	102%	101,52%	
80%	3	0,606	8,1400	8	102%		
	1	0,761	10,2504	10	103%		
	2	0,763	10,2777	10	103%	102,82%	101,11%
100%	3	0,766	10,3185	10	103%		
	1	0,89	12,0068	12	100%		
	2	0,87	11,7345	12	98%	99,00%	
120%	3	0,882	11,8979	12	99%		

$$\%\ recovery \frac{konsentrasi\ terukur}{konsentrasi\ sebenarnya} \times 100\%$$

Hasil dari akurasi didapatkan rata-rata % recovery yaitu 101,52%, 102,82% dan 99,00%.

Rata-rata % yaitu 101,11%.

5. Presisi

KONSENTRASI (PPM)	ABS	KONSENTRASI
6	0,602	8,0856
6	0,608	8,1673
6	0,612	8,2217
6	0,617	8,2898
6	0,621	8,3443
6	0,628	8,4396
	RATA-RATA	8,258044
	SD	0,127044
	CV	0,015384

$$SD = \sqrt{\frac{\Sigma(x - \bar{x})^2}{n - 1}}$$

$$CV = \frac{SD}{X}$$

Hasil presisi didapatkan nilai SD sebesar 0,1270 dan nilai CVnya 0,01%.

6. Penentuan LOD dan LOQ

Konsentrasi (ppm)	Absorbansi (abs)	Y'	Y-Y'	(Y-Y')2
4	0,355	0,356400	-0,0014	0,000001960
6	0,465	0,465700	-0,0007	0,000000490
8	0,580	0,575000	0,0050	0,000025000
10	0,682	0,684300	-0,0023	0,000005290
12	0,793	0,793600	-0,0006	0,000000360
			TOTAL	0,00003310

Nilai y’ diperoleh dari substitusi konsentrasi dalam persamaan y’= 0,1131 + 0,0543x dengan x adalah konsentrasi (ppm) dan y’ adalah serapan.

1. $\hat{y}$ = 0,1378 + 0,0547x
   $\hat{y}$ = 0,1378 + 0,0547 x 4
   $\hat{y}$ = 0,3566

2. $\hat{y}$ = 0,1378 + 0,0547x
   $\hat{y}$ = 0,1378 + 0,0547 x 6
   $\hat{y}$ = 0,466

3. $\hat{y}$ = 0,1378 + 0,0547x

ŷ = 0,1378 + 0,0547 x 8
ŷ = 0,5754

4. ŷ = 0,1378 + 0,0547x
   ŷ = 0,1378 + 0,0547 x 10
   ŷ = 0,6848

5. ŷ = 0,1378 + 0,0547x
   ŷ = 0,1378 + 0,0547 x 12
   ŷ = 0,7942

Sx/y $= \frac{\sqrt{\sum(y-\hat{y})2}}{n-2}$

Sx/y = Simpangan baku residual

$\sum (y- \hat{y})^2$ = Jumlah kuadrat total residual

N = Jumlah data

Sx/y $= \frac{\sqrt{0,00003310}}{5-2}$

$= 0,0033$

LOD $= 3,3\ x\ \frac{Sx/y}{b}$

$= 3,3\ x\ \frac{0,0033}{0,0547}$

= 0,1990 ppm

y = a + bx

= 0,1378 + 0,0547x

= 0,1378 + 0,0547 (0,1990)

= 0,1378 + 0,0108

= 0,1486

Serapan LOD = 0,1486

LOQ $= 10\ x\ \frac{Sx/y}{b}$

$= 10\ x\ \frac{0,0033}{0,0547}$

= 0,6032 ppm

y = a + bx

= 0,1378 + 0,0547x

= 0,1378 + 0,0547 (0,6032)

= 0,1378 + 0,0329

= 0,1707

Serapan LOQ = 0,1707

Lampiran 5. Kadar *myricetin* terlarut dalam air

Penimbangan *myricetin* :

Kertas kosong : 0,2812 g

Kertas kosong + isi : 0,5812 g

Kertas sisa : 0,2815 g

Zat aktif : 0,300 g

Membuat *myricetin* dengan pelarut air 3000 ppm dengan menimbang 0,300 gram *myricetin* ditambahkan aquadest sampai 100 mL, selanjutnya dibaca absorbansinya :

Hasil : 0,234 (Abs)

$y = a + bx$

$0,234 = 0,1131 + 0,0543x$

$x = \frac{0,234-0,1131}{0,0543}$

$x = 2,2265$ ppm

Lampiran 6. Kadar *myricetin* terlarut dalam perbandingan campuran

Kadar zat terlarut			
Aquadest	*Pluronic F127* (gram)	*Myricetin* (gram)	Kadar (ppm)
Ad 100	0,017	0,300	5,191
Ad 100	0,035	0,300	6,591
Ad 100	0,052	0,300	6,646

Kadar zat terlarut *myricetin* :

V1 x C1 = V2 x C2

5 ml x 3000 ppm = 10 ml x C2

C2 = 1.500 ppm

Formula 1 : (Abs = 0,395)

y = a + bx

0,395 = 0,1131 + 0,0543x

$x = \frac{0,395-0,1131}{0,0543}$

x = 5,1915 ppm

Formula 2 : (Abs = 0,471)

y = a + bx

0,471 = 0,1131 + 0,0543x

$x = \frac{0,471-0,1131}{0,0543}$

x = 6,5911 ppm

Formula 3 : (Abs = 0,474)

y = a + bx

0,474 = 0,1131 + 0,0543x

$x = \frac{0,474-0,1131}{0,0543}$

x = 6,6464 ppm

Lampiran 6. Data analisis *One Way* ANOVA hasil solubilisasi

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Absorbansi	9	,4469	,03899	,39	,48

One-Sample Kolmogorov-Smirnov Test

		Absorbansi
N		9
Normal Parameters[a,b]	Mean	,4469
	Std. Deviation	,03899
Most Extreme Differences	Absolute	,373
	Positive	,237
	Negative	-,373
Kolmogorov-Smirnov Z		1,118
Asymp. Sig. (2-tailed)		,164

a. Test distribution is Normal.

b. Calculated from data.

ANOVA

absorbansi

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,012	2	,006	1476,027	,000
Within Groups	,000	6	,000		
Total	,012	8			

Test of Homogeneity of Variances

absorbansi

Levene Statistic	df1	df2	Sig.
1,061	2	6	,403