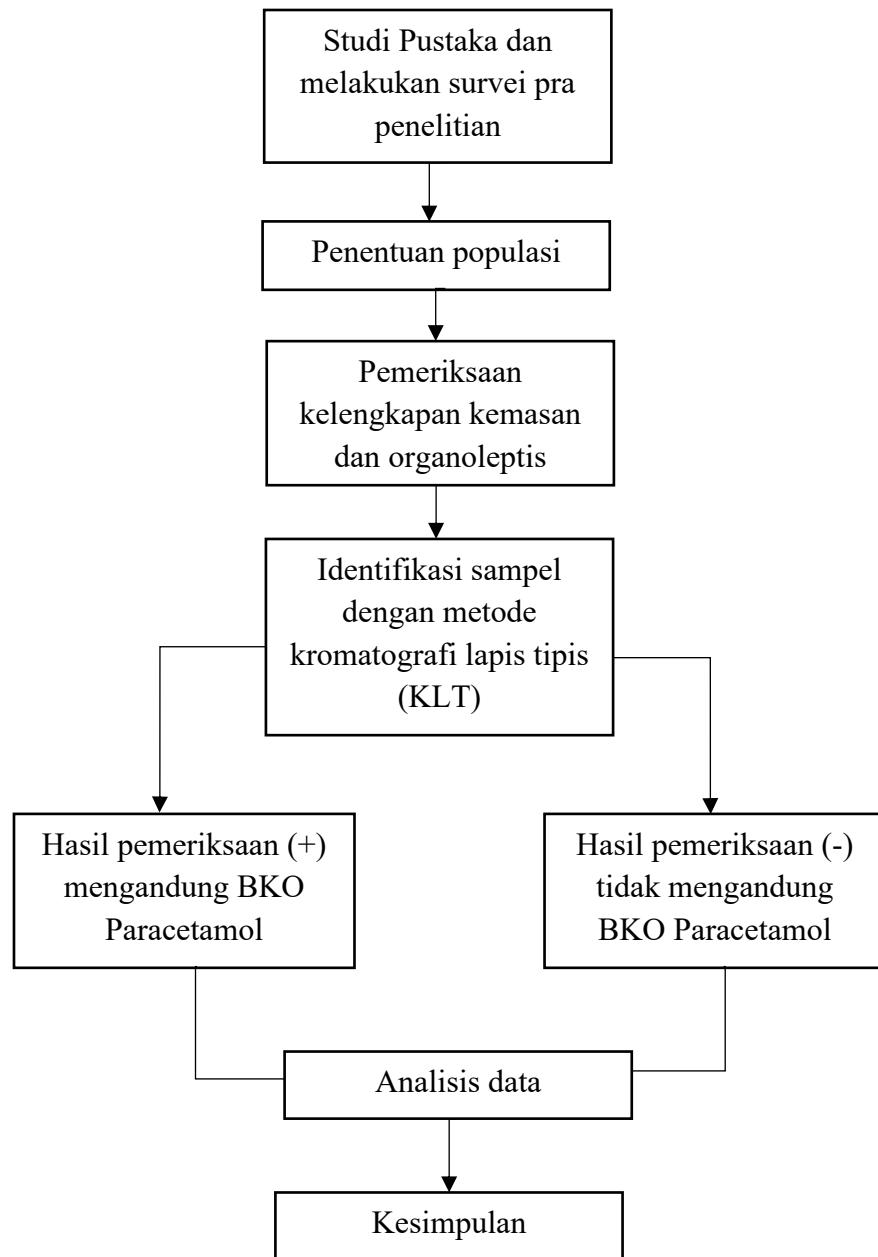


LAMPIRAN

Lampiran 1. Alur Penelitian

Lampiran 2. Perhitungan Volume Eluen

A. Perhitungan eluen

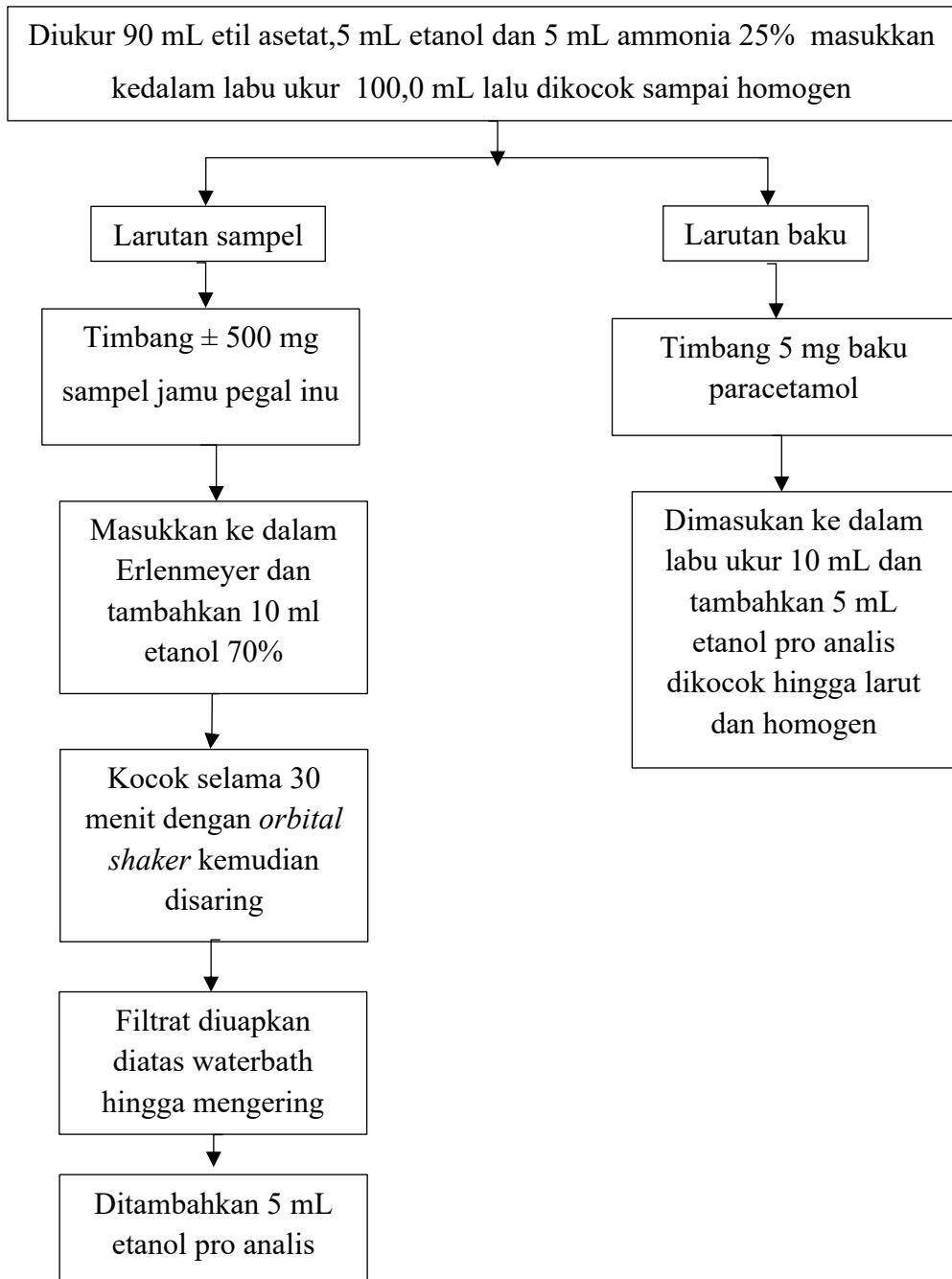
Perhitungan eluen yang digunakan dengan campuran etil asetat pro analis : etano pro analis: ammonia 25% perbandingan 90 : 5 : 5 sebanyak 100 mL sehingga volume larutan yang diperlukan:

1. Etil asetat pro analis $= \frac{90}{100} \times 100 \text{ mL} = 90 \text{ mL}$
2. Etanol pro analis $= \frac{5}{100} \times 100 \text{ mL} = 5 \text{ mL}$
3. Amonia 25% $= \frac{5}{100} \times 100 \text{ mL} = 5 \text{ mL}$

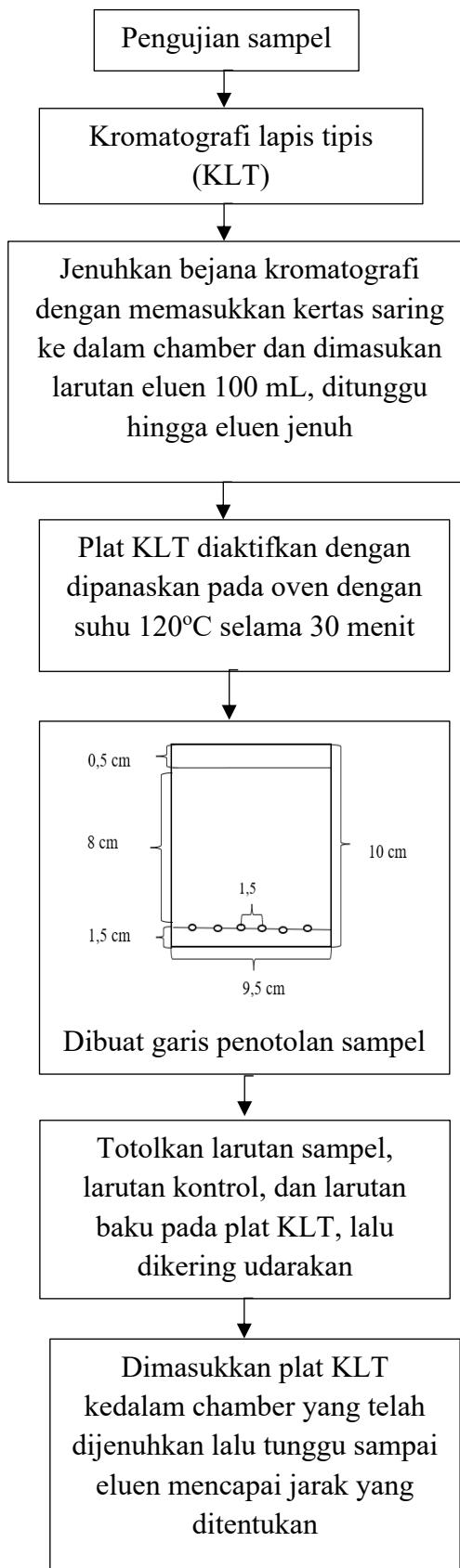
Lampiran 3. Skema Kerja

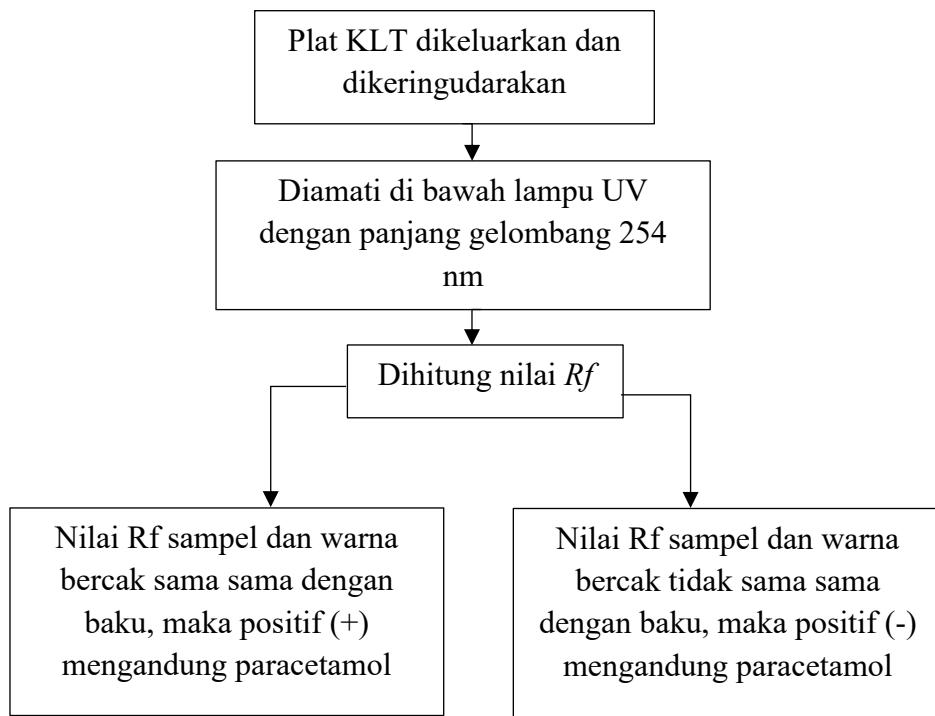
A. Skema Kerja

1. Preparasi Sampel



B. Pengujian Sampel





Lampiran 4. Bahan-bahan yang digunakan



Ethanol Pro Analis



Amonia 25%



Etil Asetat Pro Analis



Ethanol 70%



Paracetamol BPFI (baku
parasetamol farmakope
Indonesia)

Lampiran 5. Sertifikat Parasetamol BPFI (Baku Parasetamol Farmakope Indonesia)

 Hefei Joye Import & Export Co. Ltd Road 1006, building 2, Xihuanzhongxin Plaza, Shushan District, Hefei, Anhui, China																																																
CERTIFICATE OF ANALYSIS																																																
Product	Paracetamol (Acetaminophen)	Pack	25 kgs / sack																																													
Batch No.	AY-623001	Total	60 sacks = 1500 kgs																																													
Man. Date	07 25 2022	Expired	07 26 2025																																													
Spec.	USP 40, BP 2020																																															
Additional Spec.	Powder																																															
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">1 Description</td> <td>White odorless, crystal or crystalline powder, possesing a slightly bitter taste</td> <td>White odorless, crystal or crystalline powder, possesing a slightly bitter taste</td> </tr> <tr> <td>2 Identification</td> <td>B. must comply UV C. must comply TLC</td> <td>complies complies</td> </tr> <tr> <td>3 Melting Point (°C)</td> <td>168-172</td> <td>168.8</td> </tr> <tr> <td>4 Sulfide (%)</td> <td>Negative</td> <td>complies</td> </tr> <tr> <td>5 Chloride (%)</td> <td>0.014 max</td> <td>< 0.002</td> </tr> <tr> <td>6 Sulfate (%)</td> <td>0.02 max</td> <td>< 0.005</td> </tr> <tr> <td>7 Heavy Metals (%)</td> <td>0.001 max</td> <td>< 0.001</td> </tr> <tr> <td>8 Residue on ignition (%)</td> <td>0.1 max</td> <td>0.008</td> </tr> <tr> <td>9 Readily carbonable substances</td> <td>must comply</td> <td>complies</td> </tr> <tr> <td>10 Organic volatile impurities</td> <td>N/A *</td> <td>N/A *</td> </tr> <tr> <td>11 Free p-aminophenol (%)</td> <td>0.005 max</td> <td>< 0.00025</td> </tr> <tr> <td>12 p- chloroacetanilide (%)</td> <td>0.001 max</td> <td>< 0.001</td> </tr> <tr> <td>13 Clarity and color of solution</td> <td>must comply</td> <td>complies</td> </tr> <tr> <td>14 Water (%)</td> <td>0.5 max</td> <td>0.069</td> </tr> <tr> <td>15 Assay (%)</td> <td>98.0 - 101.0</td> <td>99.91</td> </tr> </table>				1 Description	White odorless, crystal or crystalline powder, possesing a slightly bitter taste	White odorless, crystal or crystalline powder, possesing a slightly bitter taste	2 Identification	B. must comply UV C. must comply TLC	complies complies	3 Melting Point (°C)	168-172	168.8	4 Sulfide (%)	Negative	complies	5 Chloride (%)	0.014 max	< 0.002	6 Sulfate (%)	0.02 max	< 0.005	7 Heavy Metals (%)	0.001 max	< 0.001	8 Residue on ignition (%)	0.1 max	0.008	9 Readily carbonable substances	must comply	complies	10 Organic volatile impurities	N/A *	N/A *	11 Free p-aminophenol (%)	0.005 max	< 0.00025	12 p- chloroacetanilide (%)	0.001 max	< 0.001	13 Clarity and color of solution	must comply	complies	14 Water (%)	0.5 max	0.069	15 Assay (%)	98.0 - 101.0	99.91
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Conclusion : Acetaminophen of this batch number complies																																																
* Note : Organic Volatile Impurities is not applicable No organic solvent class 1 & 2 used in process																																																
QA manager  Zhin Huan S.																																																
Hefei Joye Import & Export Co. Ltd Address : Baishengyuan Shushan District, Hefei, Anhui, China Tel : 86 551 65865820, 86 18956049971																																																

Lampiran 6. Sertifikat Etanol Pro Analis

 PT. SMART-LAB INDONESIA MANUFACTURER OF ANALYTICAL REAGENTS	 <small>Cert. No : IZ013-J-0140</small>																																																																																					
CERTIFICATE OF ANALYSIS																																																																																						
<table> <tr> <td>Product Name</td> <td>: Ethanol (Absolute)</td> <td>Molecular Weight</td> <td>: 46.07 g/mol</td> </tr> <tr> <td>Catalog No.</td> <td>: A-1035</td> <td>Batch No.</td> <td>: 230322003</td> </tr> <tr> <td>Grade</td> <td>: Analytical Reagent</td> <td>Manufacturing Date</td> <td>: March 23, 2022</td> </tr> <tr> <td>Formula</td> <td>: C₂H₅OH</td> <td>Expire Date</td> <td>: March, 2027</td> </tr> <tr> <td>Cas No</td> <td>: 64-17-5</td> <td></td> <td></td> </tr> </table>		Product Name	: Ethanol (Absolute)	Molecular Weight	: 46.07 g/mol	Catalog No.	: A-1035	Batch No.	: 230322003	Grade	: Analytical Reagent	Manufacturing Date	: March 23, 2022	Formula	: C ₂ H ₅ OH	Expire Date	: March, 2027	Cas No	: 64-17-5																																																																			
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<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center; padding: 5px;">NO</th> <th style="text-align: center; padding: 5px;">ITEM TEST</th> <th style="text-align: center; padding: 5px;">UNITS</th> <th style="text-align: center; padding: 5px;">SPECIFICATION</th> <th style="text-align: center; padding: 5px;">RESULT</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 5px;">1.</td> <td style="text-align: center; padding: 5px;">Appearance</td> <td style="text-align: center; padding: 5px;">—</td> <td style="text-align: center; padding: 5px;">Clear colorless liquid</td> <td style="text-align: center; padding: 5px;">Clear colorless liquid</td> </tr> <tr> <td style="text-align: center; padding: 5px;">2.</td> <td style="text-align: center; padding: 5px;">Assay (Alcoholmeter)</td> <td style="text-align: center; padding: 5px;">wt %</td> <td style="text-align: center; padding: 5px;">min 99.7</td> <td style="text-align: center; padding: 5px;">99.897</td> </tr> <tr> <td style="text-align: center; padding: 5px;">3.</td> <td style="text-align: center; padding: 5px;">Wt. Per ml at 20 °C</td> <td style="text-align: center; padding: 5px;">g/cm³</td> <td style="text-align: center; padding: 5px;">0.789 – 0.792</td> <td style="text-align: center; padding: 5px;">0.790</td> </tr> <tr> <td style="text-align: center; padding: 5px;">4.</td> <td style="text-align: center; padding: 5px;">Colour</td> <td style="text-align: center; padding: 5px;">Hazen</td> <td style="text-align: center; padding: 5px;">max 10</td> <td style="text-align: center; padding: 5px;">< 10</td> </tr> <tr> <td style="text-align: center; padding: 5px;">5.</td> <td style="text-align: center; padding: 5px;">Refractive Index</td> <td style="text-align: center; padding: 5px;">n²⁰_D</td> <td style="text-align: center; padding: 5px;">1.358 – 1.363</td> <td style="text-align: center; padding: 5px;">1.360</td> </tr> <tr> <td style="text-align: center; padding: 5px;">6.</td> <td style="text-align: center; padding: 5px;">Water (H₂O)</td> <td style="text-align: center; padding: 5px;">wt %</td> <td style="text-align: center; padding: 5px;">max 0.2</td> <td style="text-align: center; padding: 5px;">0.1264</td> </tr> <tr> <td style="text-align: center; padding: 5px;">7.</td> <td style="text-align: center; padding: 5px;">Non-volatile matter</td> <td style="text-align: center; padding: 5px;">wt %</td> <td style="text-align: center; padding: 5px;">max 0.001</td> <td style="text-align: center; padding: 5px;">0.00081</td> </tr> <tr> <td style="text-align: center; padding: 5px;">8.</td> <td style="text-align: center; padding: 5px;">Acidity (CH₃COOH)</td> <td style="text-align: center; padding: 5px;">wt %</td> <td style="text-align: center; padding: 5px;">max 0.0006</td> <td style="text-align: center; padding: 5px;">0.00022</td> </tr> <tr> <td style="text-align: center; padding: 5px;">9.</td> <td style="text-align: center; padding: 5px;">Alkalinity (NH₃)</td> <td style="text-align: center; padding: 5px;">wt %</td> <td style="text-align: center; padding: 5px;">max 0.0002</td> <td style="text-align: center; padding: 5px;">0.00013</td> </tr> <tr> <td style="text-align: center; padding: 5px;">10.</td> <td style="text-align: center; padding: 5px;">Acetone, isopropyl alcohol</td> <td style="text-align: center; padding: 5px;">—</td> <td style="text-align: center; padding: 5px;">passes test</td> <td style="text-align: center; padding: 5px;">passes test</td> </tr> <tr> <td style="text-align: center; padding: 5px;">11.</td> <td style="text-align: center; padding: 5px;">Methanol (CH₃OH)</td> <td style="text-align: center; padding: 5px;">wt %</td> <td style="text-align: center; padding: 5px;">max 0.1</td> <td style="text-align: center; padding: 5px;">NIL</td> </tr> <tr> <td style="text-align: center; padding: 5px;">12.</td> <td style="text-align: center; padding: 5px;">Iron (Fe)</td> <td style="text-align: center; padding: 5px;">wt %</td> <td style="text-align: center; padding: 5px;">max 0.00002</td> <td style="text-align: center; padding: 5px;">< 0.00002</td> </tr> <tr> <td style="text-align: center; padding: 5px;">13.</td> <td style="text-align: center; padding: 5px;">Lead (Pb)</td> <td style="text-align: center; padding: 5px;">wt %</td> <td style="text-align: center; padding: 5px;">max 0.00005</td> <td style="text-align: center; padding: 5px;">< 0.00005</td> </tr> <tr> <td style="text-align: center; padding: 5px;">14.</td> <td style="text-align: center; padding: 5px;">Solubility in water</td> <td style="text-align: center; padding: 5px;">—</td> <td style="text-align: center; padding: 5px;">passes test</td> <td style="text-align: center; padding: 5px;">passes test</td> </tr> <tr> <td style="text-align: center; padding: 5px;">15.</td> <td style="text-align: center; padding: 5px;">Substances darkened (by H₂SO₄)</td> <td style="text-align: center; padding: 5px;">—</td> <td style="text-align: center; padding: 5px;">passes test</td> <td style="text-align: center; padding: 5px;">passes test</td> </tr> <tr> <td style="text-align: center; padding: 5px;">16.</td> <td style="text-align: center; padding: 5px;">Substances Reducing KMnO₄</td> <td style="text-align: center; padding: 5px;">—</td> <td style="text-align: center; padding: 5px;">passes test</td> <td style="text-align: center; padding: 5px;">passes test</td> </tr> </tbody> </table>		NO	ITEM TEST	UNITS	SPECIFICATION	RESULT	1.	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Result : The above product corresponds to AR Grade																																																																																						
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PT. SMART LAB INDONESIA																																																																																						
 																																																																																						
<u>SUDIRO S.Si.</u> Head QC																																																																																						
<small>Ruko Boulevard TamanTekno Blok E No.10 - 11 BSD Sektor XI Sepong, Tangerang - Indonesia Telp : (62-21) 7588 0205, Fax : (62-21) 7588 0198 Website: www.smartlab.co.id Email : sales@smartlab.co.id</small>																																																																																						

Lampiran 7. Sertifikat Etil Asetat Pro Analis

	PT. SMART-LAB INDONESIA MANUFACTURER OF ANALYTICAL REAGENTS	 CERTIFICATE NO: 2101220123456		
CERTIFICATE OF ANALYSIS				
Product Name : Ethyl Acetate Molecular Weight : 88.11 g/mol Catalog No. : A-1038 Batch No. : 310322002 Grade : Analytical Reagent Manufacturing Date : March 31,2022 Formula : CH ₃ COOC ₂ H ₅ Expire Date : March , 2027 Cas No : 141-78-6				
NO.	ITEM TEST	UNITS	SPECIFICATION	RESULT
1.	Appearance	—	Clear colorless liquid	Clear colorless liquid
2.	Assay (GC)	wt %	min 99.5	99.916
3.	Wt. Per ml at 20 °C	g/cm ³	0.899 – 0.901	0.901
4.	Colour	Hazen	max 10	10
5.	Refractive Index	n_{D}^{20}	1.372 – 1.373	1.373
6.	Water (H ₂ O)	wt %	max 0.05	0.0262
7.	Non-volatile matter	wt %	max 0.001	0.00082
8.	Acidity (CH ₃ COOH)	wt %	max 0.005	0.0033
9.	Methyl acetate (GC)	wt %	max 0.1	NIL
10.	Ethanol (GC)	wt %	max 0.1	NIL
11.	Methanol (GC)	wt %	max 0.1	NIL
12.	Copper (Cu)	wt %	max 0.000002	< 0.000002
13.	Iron (Fe)	wt %	max 0.00002	< 0.00002
14.	Lead (Pb)	wt %	max 0.000005	< 0.000005
15.	Organic impurities	—	passes test	Passes test

Result : The above product corresponds to AR Grade

Reference or standard of product specification to Analar standard specification

PT. SMART LAB INDONESIA



SUDIRO S.Si.
 Head QC

Ruko Boulevard Taman Tekno Blok E No.10-11BSD Sektor XI Sepong Tangerang - Indonesia
 Telp: (62-21) 7588 0205, Fax : (62-21) 7588 0198 Website: www.smartlab.co.id Email : sales@smartlab.co.id

Lampiran 8. Sertifikat Plat KLT

Certificate of Analysis				
1.05554.0001 TLC Silica gel 60 F ₂₅₄ 25 Aluminium sheets 20 x 20 cm Batch HX14897654				
Specifications		Batch values		
Specific surface area (according to BET; 5-PI, measurement)	480 - 540	m ² /g	513	m ² /g
Pore volume (N ₂ -isolherm)	0.74 - 0.84	ml/g	0.77	ml/g
d ₅₀ (laser diffraction, size distribution)	9.5 - 11.5	µm	11.0	µm
Layer thickness	175 - 225	µm	200	µm
Deviation of layer thickness per plate	≤ 30	µm	20	µm
hRf-values		hRf-values		
A) Colour test				
Bleu VIF Organol	11 - 25		14	
Ceres black	34 - 48		35	
Ceres violet BRN	52 - 67		52	
Separation number	≥ 10.5		11.9	
hRf-values		hRf-values		
B) Steroid test				
Hydrocortisone	25 - 37		28	
Reichstein S	37 - 49		38	
Methyltestosterone	42 - 54		43	
Typical value determined on a conditioned sheet Eluent A) Toluene (45% rel.humidity) Eluent B) Ethyl acetate/Toluene (95/5 v/v; 20% rel.humidity)				
Date of release (DD.MM.YYYY) 20.01.2021 Minimum shelf life (DD.MM.YYYY) 31.01.2031				
<u>Tom Kupfer</u> <small>Responsible laboratory manager quality control</small>				
This document has been produced electronically and is valid without a signature.				
Merck KGaA, Frankfurter Straße 250, 64293 Darmstadt (Germany); +49 6151 72-0 EMD Millipore Corporation - a subsidiary of Merck KGaA, Darmstadt, Germany 400 Summit Drive, Burlington, MA 01803, USA, Phone +1 (781) 533-6000 SALSA Version 1035482/990000811676// Date: 20.01.2021				Page 1 of 1

Lampiran 9. Lembar Ceklis

Sampel Obat Tradisional Jamu Pegal Linu						
NO	Penandaan Label Kemasan	A	B	C	D	E
1	Nama Obat Tradisional	√	√	√	√	√
2	Komposisi	√	√	√	√	√
3	Bobot, isi atau jumlah obat tiap wadah	√	√	√	√	√
4	Dosis pemakaian	√	√	√	√	√
5	Khasiat dan kegunaan	√	√	√	√	√
6	kontraindikasi	√	✗	✗	✗	✗
7	Tanggal kadaluwarsa	√	√	√	√	√
8	Nomor registrasi	√	√	√	√	√
9	Nomor kode produksi	√	√	√	√	√
10	Nama dan alamat industri pemberi lisensi	√	√	√	√	√

Lampiran 10. Sampel Yang Digunakan

Sampel	Kemasan Jamu	Serbuk Jamu
A	 <p>Pegal Linu herbal Membantu Meredakan Pegal Linu dan Nyeri Otot Dibuat dari bahan alami berkualitas dan diproses secara modern SIDOMUNCUL Semarang 50552 - Indonesia</p> <p>Pegal Linu Untuk Pria atau Wanita (For Men & Women) Membantu meredakan pegal linu dan nyeri otot Komposisi: Tiap sachet mengandung: Makleusa leucadenda Fructus 0,7 g, Piper retrofractum Fructus 0,7 g, Zingiber aromaticae Rhizoma 0,7 g, Languas galanga Rhizoma 0,6 g, Boesenbergia Rhizoma 0,49 g, Baeskea frutescens Folium, Kaempferia galanga Rhizoma, Zingiber officinale Rhizoma, Phylanthus amarus Herba, Cyperus rotundus Rhizoma, Mentha arvensis Herba, Foeniculum vulgare Fructus, Alyxula reineckii Cortex, Usnea misaminiensis Thallus, Dioscorea hispida Tuber. Khasiat dan Kegunaan: Secara tradisional digunakan untuk meredakan pegal linu dan nyeri otot.</p> <p>No. Reg. DEP. 24/PER/USBN Diproduksi oleh: Perusahaan Jamu Dan Farmasi SABDO PALON® Tbk Semarang - Indonesia www.sidomuncul.com</p>	
B	 <p>KEJULANG Untuk Pria & Wanita Pegal linu Nyeri sendi Berat bersih: 6 gram Pendistribueran Jamu SABDO PALON Sukoharjo Solo Jamu Brand Indonesia</p> <p>KEJULANG Untuk Pria & Wanita KOMPOSISI: -Piperis Nigris Fructus 1,50 gram -Retrofracti Fructus 1,00 gram -Zingiberis Aromaticae Rhizoma 1,00 gram -Phyllant Herba 1,00 gram -Zingiberis Rhizoma 1,00 gram -Parkiae Semen 0,50 gram KHASIAT & KEGUNAAN: Secara tradisional membantu meredakan pegal linu dan nyeri sendi. ATURAN MINUM: Satu bungkus diseduh dengan 1/2 gelas air matang hangat (\pm100 ml) dapat ditambah sirup nipis dan madu. Minumlah secara teratur sehari 1 bungkus. SIMPAN DI TEMPAT KERING Prod. Code: 0082215 Exp. Date: 01.03.2026</p> <p>Herbal Power</p>	
C	 <p>PEGAL LINU untuk pria & wanita Berat bersih: 6 gram POM TR. 073.27.321 Pendistribueran Jamu SABDO PALON® Sukoharjo Solo</p> <p>PEGAL LINU untuk pria & wanita KOMPOSISI: - Zingiberis Aromaticae Rhizoma 1,50 gram - Zingiberis Rhizoma 1,00 gram - Languas Rhizoma 0,75 gram - Retrofracti Fructus 0,75 gram - Boesenbergiae Rhizoma 0,50 gram - Parkiae Semen 0,50 gram KHASIAT DAN KEGUNAAN: Membantu meredakan pegal linu. ATURAN MINUM: Satu bungkus diseduh dengan 1/2 gelas (\pm100 ml) air matang hangat. Minum secara teratur sehari 1 (satu) bungkus. SIMPAN DI TEMPAT KERING Kadaluarsa: 10.03.2026 Kode produksi: 010103 Diproduksi oleh: Perusahaan Jamu SABDO PALON® Sukoharjo Solo</p>	

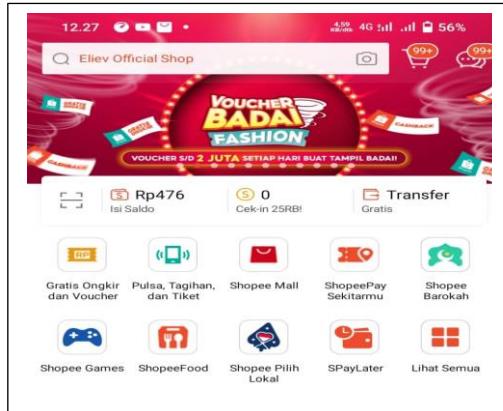
Sampel	Kemasan Jamu	Serbuk Jamu																
D	 <p>CLENG MAREM JAMU</p> <p>Khasiat dan Kegunaan : Membantu meredakan pegal linu.</p> <p>Cara Pemakaian : Sirup sachet isi (2.6 gram) diaduk dengan air panas 1/2 gelas (99cc). Seminggu dua kali satu bukus.</p> <p>Pembuat : Wanita hamil sebaiknya tidak minum jamu ini.</p> <p>BPMI RI : Usaha Abdikadir KUDUS</p> <p>Caranya : Untuk nyeri akibat yang sejuk dan kering disarankan untuk dilakukan terapi "bagusung".</p> <p>ED 180724 052202014 No.Kode Produk</p>	 <p>CLENG MAREM</p> <p>Komposit :</p> <table border="1"> <tr><td>Tiap sachet mengandung :</td><td>2400 mg</td></tr> <tr><td>Piperis Nigrif Fructus</td><td>1200 mg</td></tr> <tr><td>Zingiberis officinale rhizoma</td><td>600 mg</td></tr> <tr><td>Cinnamomum burmanii cortex</td><td>600 mg</td></tr> <tr><td>Curcumae xanthorrhizae rhizoma</td><td>600 mg</td></tr> <tr><td>Guazumae umbrifolia folium</td><td>600 mg</td></tr> </table> <p>Khasiat dan Kegunaan :</p> <p>Cara Pemakaian :</p> <p>Pembuat :</p> <p>Caranya :</p>	Tiap sachet mengandung :	2400 mg	Piperis Nigrif Fructus	1200 mg	Zingiberis officinale rhizoma	600 mg	Cinnamomum burmanii cortex	600 mg	Curcumae xanthorrhizae rhizoma	600 mg	Guazumae umbrifolia folium	600 mg				
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Cinnamomum burmanii cortex	600 mg																	
Curcumae xanthorrhizae rhizoma	600 mg																	
Guazumae umbrifolia folium	600 mg																	
E	 <p>sendi® UNTUK NYERI AKIBAT ENOK PEGAL LINU For stiffness, muscle and joint pain</p> <p>KHASIAT DAN KEGUNAAN : - Membantu meredakan nyeri akibat enok, pegal linu. - Membantu menyegarkan dan melembabkan badan.</p> <p>CARA PEMAKAIAN : Tepi bungkus dicuci dengan air mendidih ½ gelas (± 100 cc), dengan beberapa tetes madu. Minumlah secara teratur 1 – 2 kali sehari @ 1 bungkus jemu, atau menurut kebutuhan.</p> <p>Simpan di tempat yang dingin dan terhindar dari sinar matahari langsung. Simpan pada suhu dibawah 30°C.</p> <p>Batch No./Exp. : 0200V12 / RPR 2024</p> <p>Layanan Konsumen / Consumer Service : +62-812 7050 5000 +62-24-7608888 +62-24-7605553 order@pondoturherbal.com</p> <p>CPOTB/GMP Portofolio Ges Pasien Obat Terpatu</p> <p>020 S</p> <p>sendi®</p> <p>Untuk nyeri akibat enok, pegal linu. For stiffness, muscle and joint pain.</p> <p>INGREDIENTS</p> <table border="1"> <tr><td>Curcumae longae Rhizome</td><td>1200 mg</td></tr> <tr><td>Cinnamomum zeylanicum Fructus</td><td>1200 mg</td></tr> <tr><td>Curcumae longae Rhizome</td><td>1200 mg</td></tr> <tr><td>Curcumae xanthorrhizae Rhizome</td><td>1200 mg</td></tr> </table> <p>INDICATIONS : Help To relieve stiffness, muscle and joint pain. To refresh and warm the body.</p> <p>DIRECTIONS : Mix a sachet (500mg) in a half glass of hot water ± 100 cc. Add few drops of lime juice and honey. Take regularly once or twice a day @ 1 sachet or according to prescribed needs.</p> <p>Storage : Store in a dry place and away from direct sunlight. Store in room temperature (under 30°C).</p> <p>Barcode : 8 99278 1400204</p>	Curcumae longae Rhizome	1200 mg	Cinnamomum zeylanicum Fructus	1200 mg	Curcumae longae Rhizome	1200 mg	Curcumae xanthorrhizae Rhizome	1200 mg	 <p>sendi®</p> <p>Untuk nyeri akibat enok, pegal linu. For stiffness, muscle and joint pain.</p> <p>INGREDIENTS</p> <table border="1"> <tr><td>Curcumae longae Rhizome</td><td>1200 mg</td></tr> <tr><td>Cinnamomum zeylanicum Fructus</td><td>1200 mg</td></tr> <tr><td>Curcumae longae Rhizome</td><td>1200 mg</td></tr> <tr><td>Curcumae xanthorrhizae Rhizome</td><td>1200 mg</td></tr> </table> <p>INDICATIONS : Help To relieve stiffness, muscle and joint pain. To refresh and warm the body.</p> <p>DIRECTIONS : Mix a sachet (500mg) in a half glass of hot water ± 100 cc. Add few drops of lime juice and honey. Take regularly once or twice a day @ 1 sachet or according to prescribed needs.</p> <p>Storage : Store in a dry place and away from direct sunlight. Store in room temperature (under 30°C).</p> <p>Barcode : 8 99278 1400204</p>	Curcumae longae Rhizome	1200 mg	Cinnamomum zeylanicum Fructus	1200 mg	Curcumae longae Rhizome	1200 mg	Curcumae xanthorrhizae Rhizome	1200 mg
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Cinnamomum zeylanicum Fructus	1200 mg																	
Curcumae longae Rhizome	1200 mg																	
Curcumae xanthorrhizae Rhizome	1200 mg																	

Lampiran 11. Komposisi Sampel Jamu Pegal Linu

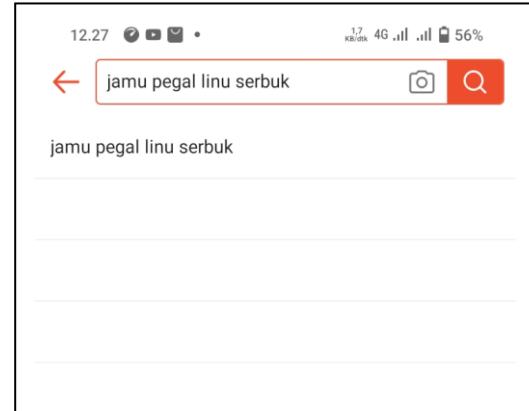
No	Nama Sampel	Komposisi	
		Nama Simplisia	Nama Indonesia
1.	Sidomuncul	Melaleuca Leucadendra Fructus	Buah kayu putih
		Piper Retrofractum Fructus	Buah cabai jawa
		Zingiber Aromatic Rhizoma	Rimpang lempuyang
		Languas Galanga Rhizoma	Rimpang lengkuas
		Curcuma Xanthorrhiza Rhizoma	Rimpang temulawak
		Baeckea Frutescens Folium	Daun ujung atap
		Kaempferia Galanga Rhizoma	Rimpang kencur
		Zingiberis Rhizoma	Rimpang jahe
		Blumea Balsamifera Folium	Daun sembung
		Phyllanthus Niruri Herba	Herba meniran hijau
		Cyperus Rotundus Rhizoma	Umbi rumput teki
		Mentha Arvensitis Herba	Herba mint
		Feoniculum Vulgare Herba	Herba adas
		Alyxia Reinwardtii Cortex	Kulit batang pulosari
2.	Kejulang	Usnea Misaminensis Thallus	Kayu angin
		Dioscorea Hispida Tubera	Umbi gadung
		Piperis Nigri Fructus	Buah lada hitam
		Retrofracti Fructus	Buah cabai jawa
		Zingiberis Aromaticae Rhizoma	Rimpang lempuyang
		Phyllanti Herba	Herba meniran
3.	Sabdo Palon	Zingiberis Rhizoma	Rimpang jahe
		Parkiae Semen	Biji kadawung
		Zingiberis Aromaticae Rhizoma	Rimpang lempuyang
		Zinguatis Rhizoma	Rimpang lengkuas
		Piper Retrofractum Fructus	Buah cabai jawa
		Boesenbergiae Rhizoma	Rimpang temu kunci
4.	Cleng Marem	Parkiae Semen	Biji kadawung
		Piperis Nigri Fructus	Buah lada hitam
		Zingiberis Rhizoma	Rimpang jahe
		Cinnamomum Burmanii Cortex	Kulit kayu manis
		Curcuma Xanthorrhiza Rhizoma	Rimpang temulawak
5.	Sendi	Guazumae Ulmifolia Folium	Daun jati belanda
		Zingiber Rhizoma	Rimpang jahe
		Curcuma Domestica Rhizoma	Rimpang kunyit
		Piper Retrofractum Fructus	Buah cabai jawa
		Eurycoma Longifolia Radix	Akar pasak bumi
		Kaempferia Galanga Rhizoma	Rimpang kencur

Lampiran 12. Pengambilan Sampel pada Marketplace Shopee

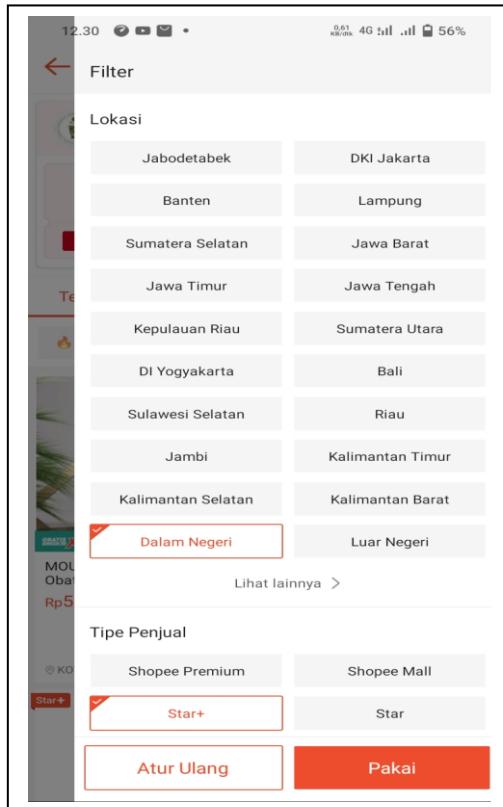
1. Dibuka aplikasi shopee



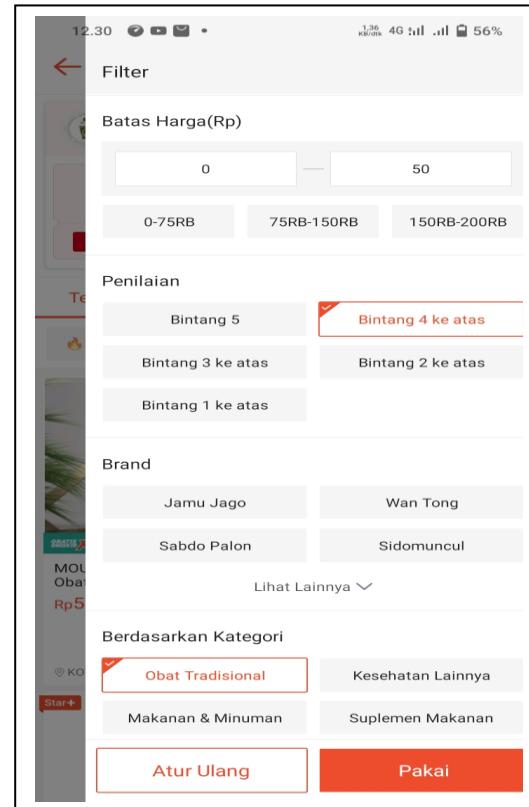
2. Ketik kata kunci “jamu pega linu serbuk” pada kolom pencarian



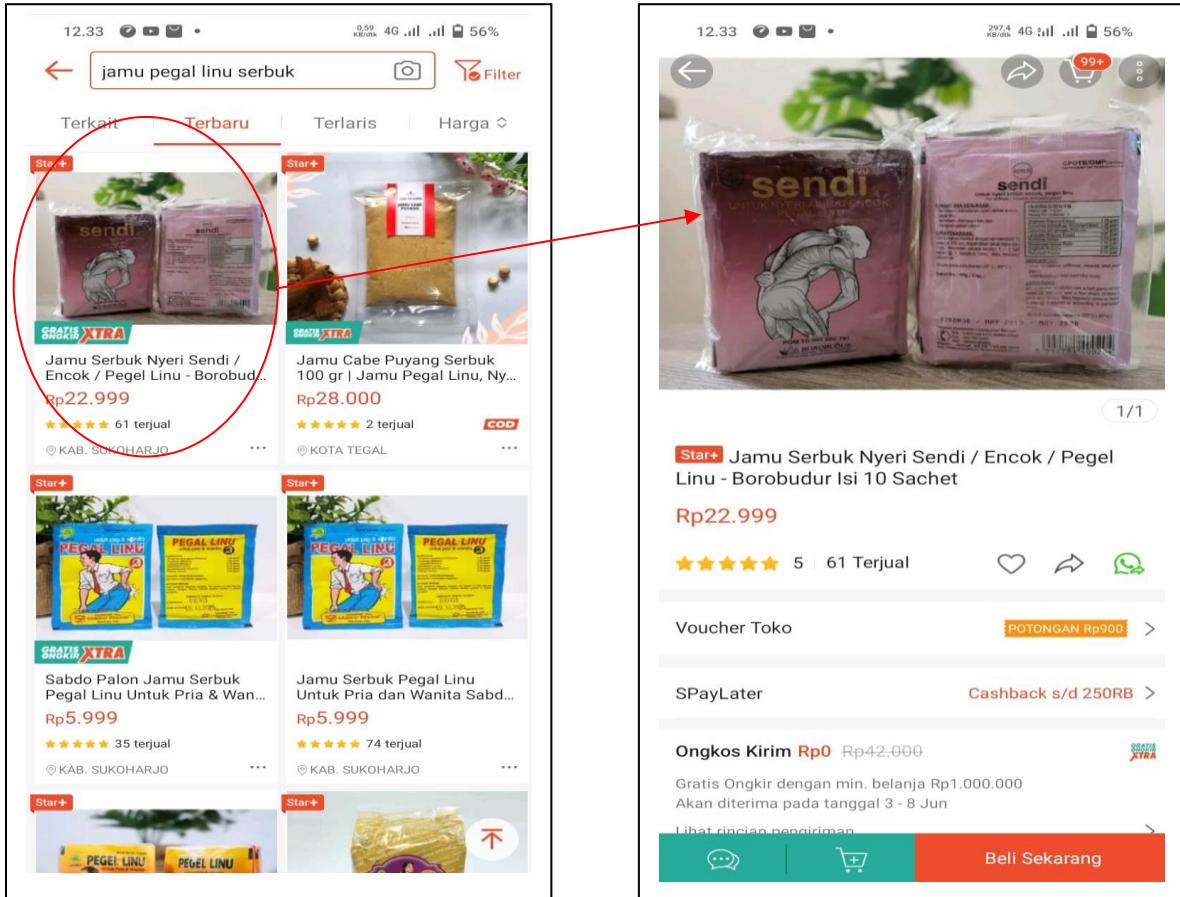
3. Masuk ke menu filter dan pilih lokasi dalam negeri dengan tipe penjual star +



4. Pilih rentang harga 0-50RB, penilaian bintang 4 keatas, dan kategori obat tradisional



5. Pilih sampel jamu pegal linu yang masuk dalam kriteria inklusi



Lampiran 13. Pengecekan Nomor Registrasi pada Cek BPOM

- Ketik url <http://cekbpom.pom.go.id> pada goegle, masukkan nomor registrasi sampel lalu klik cari

The screenshot shows the homepage of the Cek Produk BPOM website. At the top, there is a search bar with the URL "cekbpom.pom.go.id". Below the search bar, the logo "Cek Produk BPOM" and "BADAN POM" is displayed. The main content area features a search form with a dropdown for "Nomor Registrasi" containing "063253721" and a "Cari" button. To the right of the search form is a chart titled "Statistik Produk Yang Mendapat Persetujuan Izin Edar" showing monthly registration statistics from December 2022 to April 2023. The chart has two bars per month: blue for Desember 2022 (5,310) and Januari 2023 (5,176), green for Januari 2023 (8,322) and Februari 2023 (7,300), and orange for Februari 2023 (1,000). To the right of the chart, there is a summary of registered products by category for the year 2021:

Kategori	Jumlah
Makanan & Minuman	285.561
Obat Tradisional	423.195
Kosmetika	8.467
Suplemen Makanan	27.326
Obat	19.915

*) Jumlah Produk Terregistrasi 5 (Lima) Tahun Terakhir

- Klik produk maka akan keluar uraian tentang produk tersebut

The screenshot shows a detailed product information page for registration number TR063263721. The page title is "Detail Produk". The product details include:

- Nomor Registrasi:** TR063263721
- Tanggal Terbit:** 15-09-2021
- Diterbitkan Oleh:** e-Registration Obat Tradisional & Suplemen Makanan (ASTRO)
- Produk:** Obat Tradisional
- Klaim:** Secara tradisional digunakan untuk membantu meredakan pegal linu dan nyeri sendi
- Nama Produk:** JAMU KEJULANG
- Komposisi:**
 - Parkia Roxburghii Semen
 - Phyllanthi Niruri Herba
 - Piper Nigrum Fructus
 - Piper Retrofractum Fructus
 - Zingiber Aromaticus Rhizome
 - Zingiber Officinale Rhizoma
- Merk:** -
- Kemasan:** Dus, 10 bungkus @ 8 gram
- Pendaftar:** PT SABDO PALON ~ Kab. Sukoharjo, Jawa Tengah
- Pabrik:** PT SABDO PALON ~ Kab. Sukoharjo, Jawa Tengah

At the bottom right of the modal window is a "Close" button.

Lampiran 14. Preparasi Sampel



1. Ditimbang sampel sebanyak 500 mg



2. Dimasukkan sampel kedalam Erlenmeyer dan ditambahkan etanol 70% sebanyak 10 mL



3. Dihomogenkan dengan bantuan orbital shaker selama 30 menit



4. Diaktifkan plat KLT GF254 di oven selama 30 menit dengan suhu 120°C



5. Disaring larutan dengan menggunakan kertas saring



6. Diuapkan dengan waterbath suhu 70°C hingga mengering dan ditambahkan 5 mL etanol pro analis

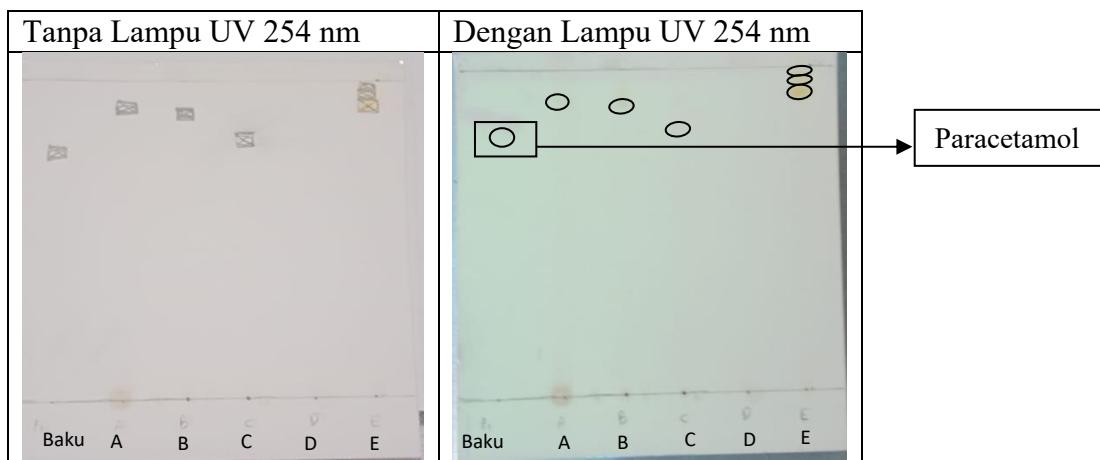


7. Sampel
ditotolkan pada
Plat KLT

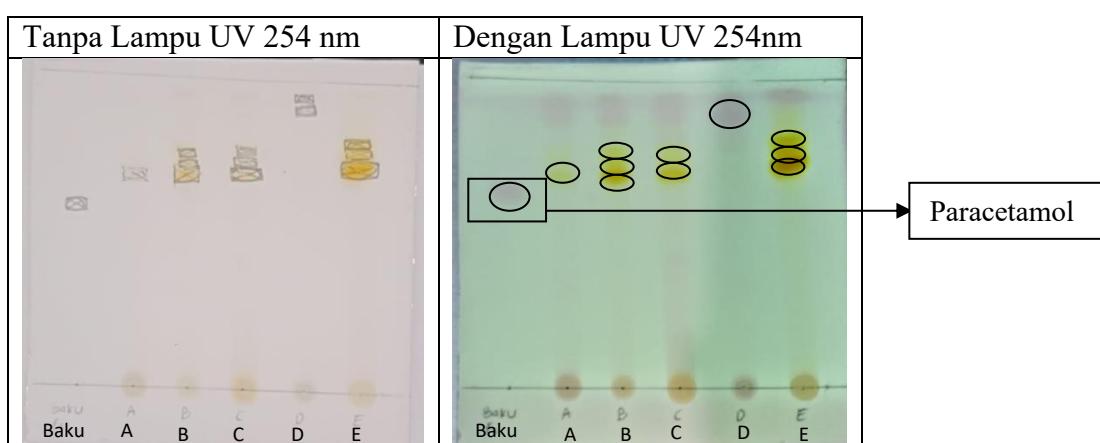
8. Plat dielusikan
dalam chamber

Lampiran 15. Hasil Kromatografi Lapis Tipis

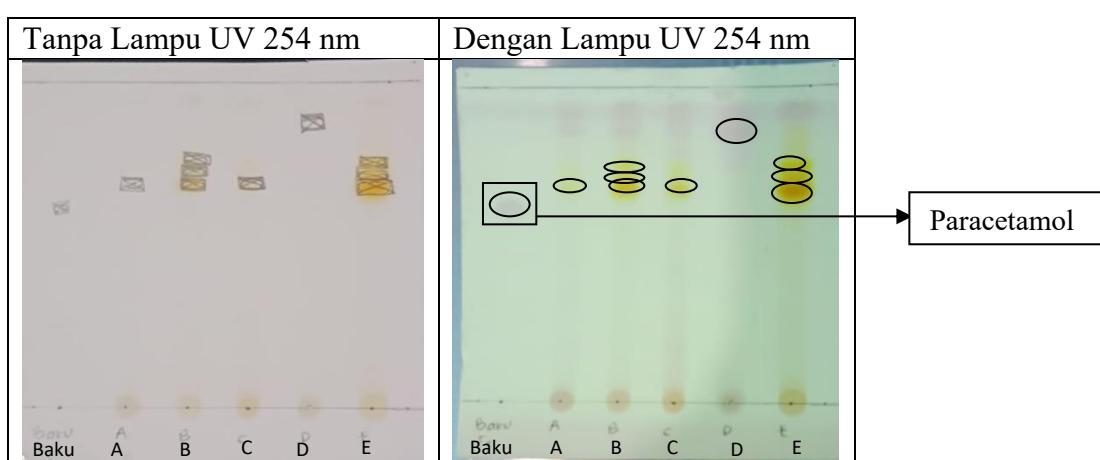
a. Percobaan Pertama



b. Percobaan Kedua



c. Percobaan Ketiga



Lampiran 16. Lembar Konsultasi

LEMBAR KONSULTASI LAPORAN TUGAS AKHIR

NAMA MAHASISWA : Riris Arisa
NIM : 2048401017
DOSEN PEMBIMBING : Endah Ratnasari Mulatasih, M. Si.

NO	TANGGAL	KEGIATAN		PARAF	
		MASALAH	PENYELESAIAN	DOSEN	MHS
1.	26-09-2022	Diskusi terkait judul	mencari literatur	<i>af</i> <i>af</i>	<i>Hulu</i>
2.	30-09-2022	Diskusi terkait judul (TA)	mencari kasus dari BPOM	<i>af</i> <i>af</i>	<i>Hulu</i>
3.	07-10-2022	Diskusi terkait kasus	ACC judul, lanjut BAB I	<i>af</i> <i>af</i>	<i>Hulu</i>
4.	18-10-2022	Pengajuan BAB I	REVISI BAB I, lanjut BAB II, III	<i>af</i> <i>af</i>	<i>Hulu</i>
5.	26-10-2022	Pengajuan BAB I, II, III	REVISI latar belakang	<i>af</i> <i>af</i>	<i>Hulu</i>
6.	28-10-2022	Pengajuan BAB I, II, III	REVISI BAB I, III, BAB I (penggalan obat tradisional, Cerita tentang Samu, & Bko) BAB III (perkembang protesur identifikasi, kct)	<i>af</i> <i>af</i>	<i>Hulu</i>
7.	6-12-2022	Pengajuan BAB I, II, III	REVISI Latar Belakang (Prin Kementerian 2017, dasar aturan BKO dilarang)	<i>af</i> <i>af</i>	<i>Hulu</i>

8.	12 - 12-2022	Diskusi terkait dasar BKO dilarang dalam obat tradisional	Percusai literatur terkait peraceman dilarang ditambah dalam obat tradisional	<i>✓</i> <i>✓</i>	<i>Hari</i>
9.	14-12-2022	Pengajuan Sempro	ACC.	<i>✓</i> <i>✓</i>	<i>Hari</i>
10.	1 - 02-2023	Revisi proposal	bantuk ke pembimbing 2	<i>✓</i> <i>✓</i>	<i>Hari</i>
11.	31 - 05 - 2023	konsultasi bab 4-	Revisi bab 4	<i>✓</i> <i>✓</i>	<i>Hari</i>
12.	5 - 06 - 2023	Konsultasi bab 4-5 , Lampiran	revisi bab 4-5	<i>✓</i> <i>✓</i>	<i>Hari</i>
13.	6 - 6' - 2023	konsultasi LTA dari awal	revisi abstrak, pembahasan.	<i>✓</i> <i>✓</i>	<i>Hari</i>
14.	7 - 6 - 2023	Cek revisi lampiran	cek revisi lampiran	<i>✓</i> <i>✓</i>	<i>Hari</i>
15.	8 - 6 - 2023	Pengumpulan revisi	ACC Semhas	<i>✓</i> <i>✓</i>	<i>Hari</i>
16.	26 - 6 - 2023	Pengumpulan Revisi Laporan	Acc referik	<i>✓</i> <i>✓</i>	<i>Hari</i>

LEMBAR KONSULTASI LAPORAN TUGAS AKHIR

NAMA MAHASISWA : Riris Arisa
NIM : 2048401017
DOSEN PEMBIMBING : Dra. Pudji Rahayu, Apt., M.Kes

NO	TANGGAL	KEGIATAN		PARAF	
		MASALAH	PENYELESAIAN	DOSEN	MHS
1.	30 -01 -2023	mengumpulkan Revisi proposal	Revisi Penulisan Daftar pustaka	JL	Hafiz
2.	31 -01 -2023	mengumpulkan Revisi penulisan	Acc	JL	Hafiz
3.	15 -06 -2023	mengumpulkan LTA	Revisi penulisan kata pengantar, daftar isi ,daftar pustaka .	JL	Hafiz
4	16 -06 -2023	mengumpulkan Revisi	Acc	JL	Hafiz
5.	26 -06 -2023	mengumpulkan Revisi Semihafiz		JL	Hafiz
6.	09 -07 -2023	Bimbingan Pengeccekan LTA	Acc cetak	JL	Hafiz

Lampiran 17. Lembar Perbaikan

LEMBAR PERBAIKAN SEMINAR HASIL TUGAS AKHIR

Hari / Tanggal : Selasa / 20 Juni 2023
 Nama Mahasiswa : Liris Arisa
 Judul Tugas Akhir : Identifikasi Bahan Kimia Obat (BKO) Paracetamol pada Jamu Pegal (mu yang Dijual di salah Satu Marketplace Shopee dengan Metode Kromatografi Lapis Tipis .

HASIL MASUKAN :

Pengaji 1 :

- Hal 5 → rawan lekup
- seluruh yg abn muncul
- Teknik sampel yg & Penenilisan
- alat lekup spesifik
- tambahan saran bahan + sampel
- Pembahasan + apakah benar

Pengaji 2 :

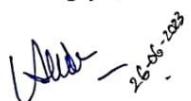
- explore penelitian terdahulu klt
- Ada peraturan yg bukan dalam ulm yang berhubungan dg klt
- Spasi Daftar Isi
- Saran Ambil gamu tsb teregistrasi
- Hal 59 ≠ Hal 20
- spesial

Pengaji 3 :

- * akibah perbaikan 2 sampel yg cepat → wlah ambil sampel & saat ini
- * Produsen sama tp varian beda bagaimana ??
- * Saran bagaimana ??
- * Setelah dalam lepasan bagaimana ?

Mengetahui

Pengaji 1,


26-06-2023

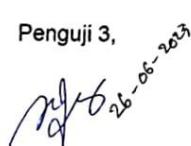
Dra. Dua Ardini, A.P., M.T.A
NIP. 196601271993122001

Pengaji 2


26-06-2023

Dra. Pudji Rahayu, A.t., M.kes
NIP. 196502071991012001

Pengaji 3,


26-06-2023

Endah Patrasari Muktaashih M.Si
NIP. 198808292015032003

Lampiran 18. Surat Keterangan Selesai Penelitian



**KEMENTERIAN KESEHATAN REPUBLIK INDONESIA
DIREKTORAT JENDERAL TENAGA KESEHATAN
POLITEKNIK KESEHATAN TANJUNGPUR**

Jalan Soekarno - Hatta No.6 Bandar Lampung
Telp. : 0721 - 783 852 Faxsimile : 0721 - 773918



E-mail : direktorat@poltekkes-tjk.c.id

Website : <http://poltekkes-tjk.ac.id>

**SURAT KETERANGAN
Nomor. UM.01.05/VIII/ 167.6 /2023**

Yang bertanda tangan di bawah ini :

Nama	:	Dra. Pudji Rahayu, Apt., M.Kes.
NIP	:	196502071991012001
Pangkat/Golongan	:	Penata Tk. I / IIId
Jabatan	:	Ketua Jurusan Farmasi
Unit Kerja	:	Jurusan Farmasi Polkestanka

Menerangkan bahwa nama mahasiswa yang tersebut dibawah ini :

Nama	:	Riris Arisa
NIM	:	2048401017
Judul LTA	:	Identifikasi Bahan Kimia Obat (BKO) Paracetamol pada Jamu Pegal Linu yang dijual salah satu Marketplace Shopee dengan Metode Kromatografi Lapis Tipis

telah melaksanakan penelitian di Laboratorium Jurusan Farmasi pada bulan Januari s.d Mei 2023.

Demikian Surat Keterangan ini dibuat, untuk dapat digunakan sebagaimana mestinya dan penuh tanggung jawab.

Bandar Lampung, 15 Juni 2023



**Dra. Pudji Rahayu, Apt., M.Kes.
NIP.196502071991012001**