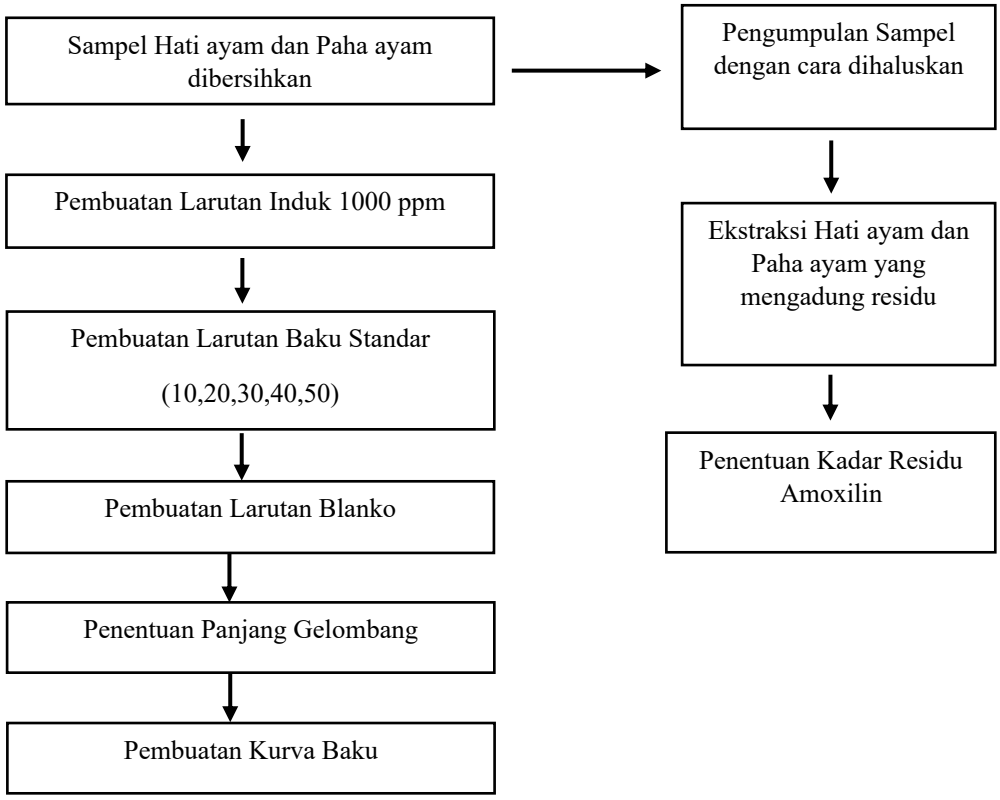
LAMPIRAN

Lampiran 1. Alur Penelitian



Lampiran 2. Perhitungan Pembuatan Larutan Baku 1000 ppm

Perhitungan :

$$\text{ppm} = \frac{\text{m (mg)}}{\text{V (L)}}$$

$$100\ ppm = \frac{\text{m (mg)}}{0{,}1\ \text{L}}$$

$$m\ (mg) = 100\ \text{mg}$$

Lampiran 3. Perhitungan Pengeceran Seri Kosentrasi

Pengenceran 10 ppm :

$$M1\ x\ V1 = M2\ x\ V2$$

$$1000\ ppm\ x\ V1 = 10\ ppm\ x\ 25\ mL$$

$$V1 = \frac{250}{1000}$$

$$V1 = 0{,}25\ mL$$

Pengenceran 20 ppm :

$$M1\ x\ V1 = M2\ x\ V2$$

$$1000\ ppm\ x\ V1 = 20\ ppm\ x\ 25\ mL$$

$$V1 = \frac{500}{1000}$$

$$V1 = 0{,}5\ mL$$

Pengenceran 30 ppm :

$$M1\ x\ V1 = M2\ x\ V2$$

$$1000\ ppm\ x\ V1 = 30\ ppm\ x\ 25\ mL$$

$$V1 = \frac{750}{1000}$$

$$V1 = 0{,}75\ mL$$

Pengenceran 40 ppm :

$$M1\ x\ V1 = M2\ x\ V2$$

$$1000\ ppm\ x\ V1 = 40\ ppm\ x\ 25\ mL$$

$$V1 = \frac{1000}{1000}$$

$$V1 = 1\ mL$$

Pengenceran 50 ppm :

$$M1\ x\ V1 = M2\ x\ V2$$

$$1000\ ppm\ x\ V1 = 50\ ppm\ x\ 25\ mL$$

$$V1 = \frac{1250}{1000}$$

$$V1 = 1{,}25\ mL$$

Lampiran 4. Perhitungan Kadar Residu Amoxicilin

$$\text{Kadar} = \frac{C_x \times \text{Faktor Pengenceran} \times \quad V}{W}$$

Keterangan:

Cx : Konsentrasi (ppm) atau (mg/kg)

V : Volume total ekstrak (mL)

Fp : Faktor pengenceran

W : Berat sampel (gram)

B2 Hati

$$\begin{aligned} y &= 0{,}15x + 0{,}04 \\ 0{,}4270 &= 0{,}15x + 0{,}04 \\ 0{,}15x &= 0{,}4270 - 0{,}04 \\ 0{,}15x &= 0{,}3870 \\ x\ (C_x) &= \frac{0{,}3870}{0{,}15} \\ C_x &= \mathbf{2{,}5800}\ \boldsymbol{\mu}\text{g/mL} \end{aligned}$$

$$\begin{aligned} \text{Kadar} &= \frac{2{,}5800 \times 1 \times 10}{5} \\ &= \frac{25{,}800}{5} \\ &= \mathbf{5{,}1600}\ \text{mg/kg} \end{aligned}$$

C2 Hati

$$\begin{aligned} y &= 0{,}15x + 0{,}04 \\ 0{,}3133 &= 0{,}15x + 0{,}04 \\ 0{,}15x &= 0{,}3133 - 0{,}04 \\ 0{,}15x &= 0{,}2733 \\ x\ (C_x) &= \frac{0{,}2733}{0{,}15} \\ C_x &= \mathbf{1{,}8220}\ \boldsymbol{\mu}\text{g/mL} \end{aligned}$$

$$\begin{aligned} \text{Kadar} &= \frac{1{,}8220 \times 1 \times 10}{5} \\ &= \frac{18{,}220}{5} \\ &= \mathbf{3{,}6440}\ \text{mg/kg} \end{aligned}$$

E2 Hati

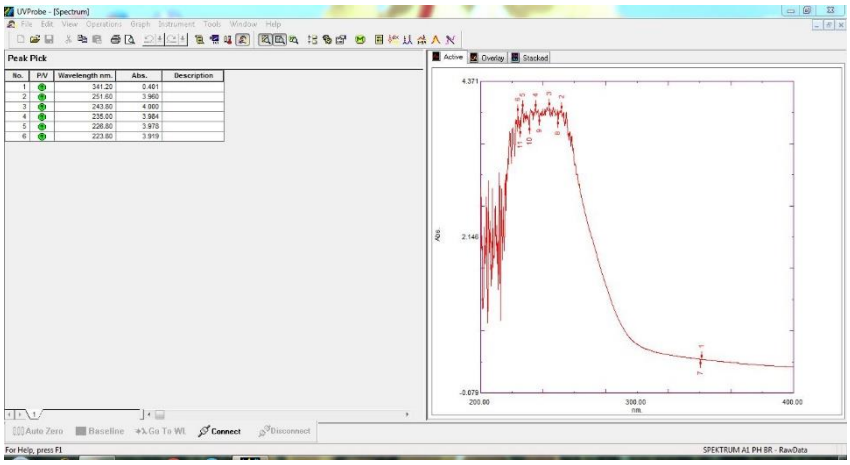
$$y = 0{,}15x + 0{,}04$$
$$0{,}1200 = 0{,}15x + 0{,}04$$
$$0{,}15x = 0{,}1200 - 0{,}04$$
$$0{,}15x = 0{,}0800$$
$$x\ (C_x) = \frac{0{,}0800}{0{,}15}$$
$$C_x = \mathbf{0{,}5333}\ \boldsymbol{\mu}\text{g/mL}$$

$$\text{Kadar} = \frac{0{,}5333 \times 1 \times 10}{5}$$
$$= \frac{5{,}333}{5}$$
$$= \mathbf{1{,}0666}\ \text{mg/kg}$$

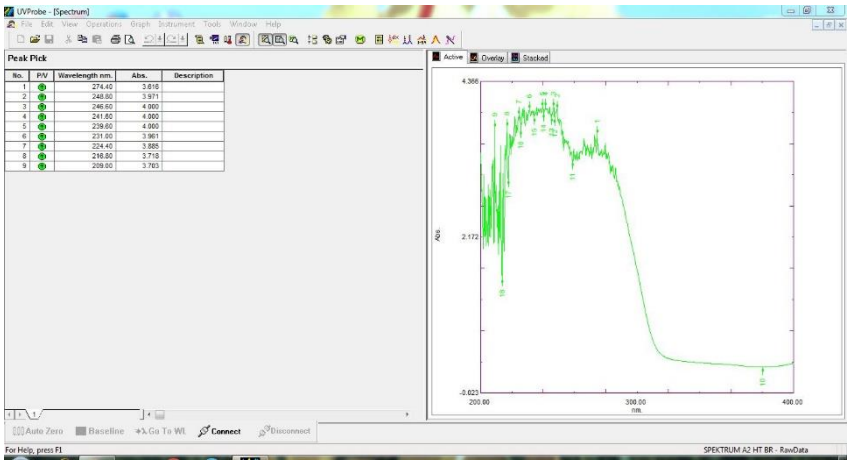
Lampiran 5. Hasil Sampel

Kode Sampel	Jenis Sampel	Panjang Gelombang (nm)	Jumlah Kadar (mg/kg)	Keterangan
A1	Paha	-	-	Negatif (-)
A2	Hati	-	-	Negatif (-)
B1	Paha	-	-	Negatif (-)
B2	Hati	289.40 nm	5,1	Positif (+)
C1	Paha	-	-	Negatif (-)
C2	Hati	289.80 nm	3,6	Positif (+)
D1	Paha	-	-	Negatif (-)
D2	Hati	-	-	Negatif (-)
E1	Paha	-	-	Negatif (-)
E2	Hati	289.00 nm	1,0	Positif (+)

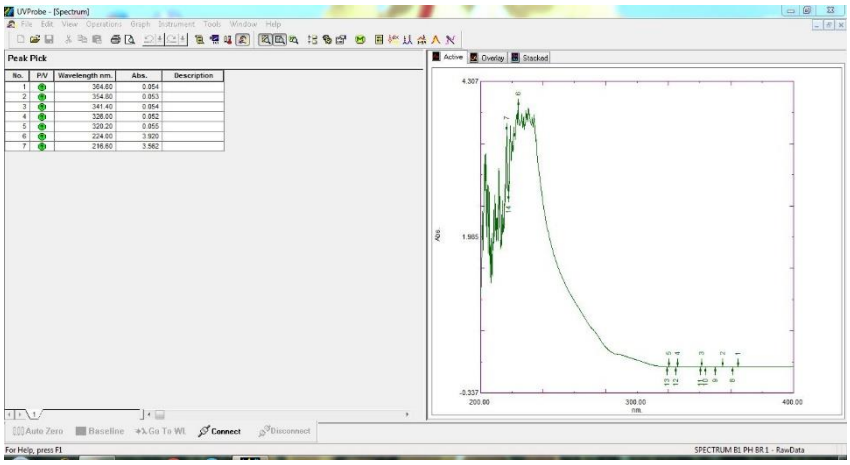
Lampiran 6. Spektrum sampel



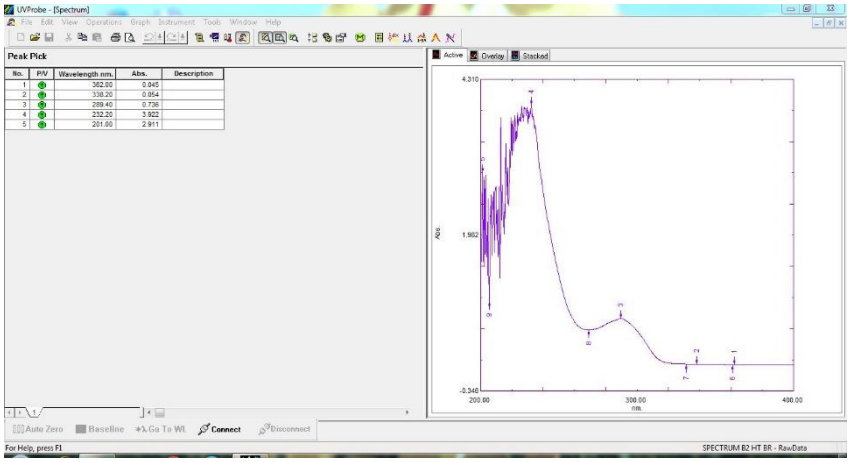
Sampel A1 Paha



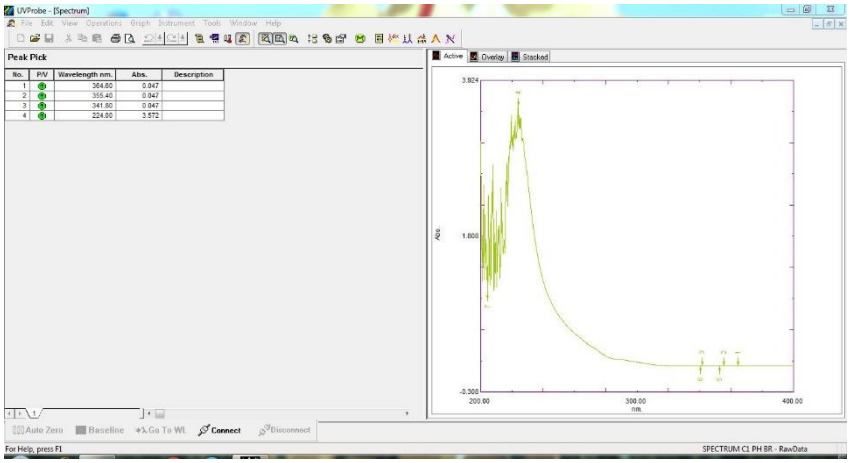
Sampel A2 Hati



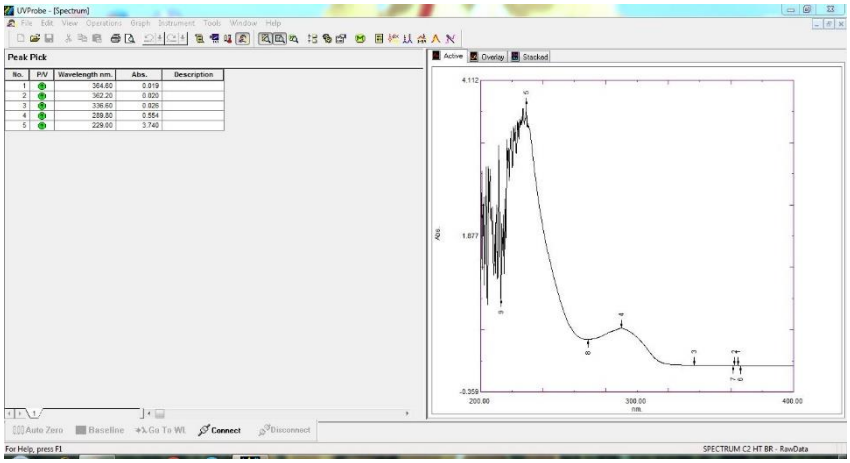
Sampel B1 Paha



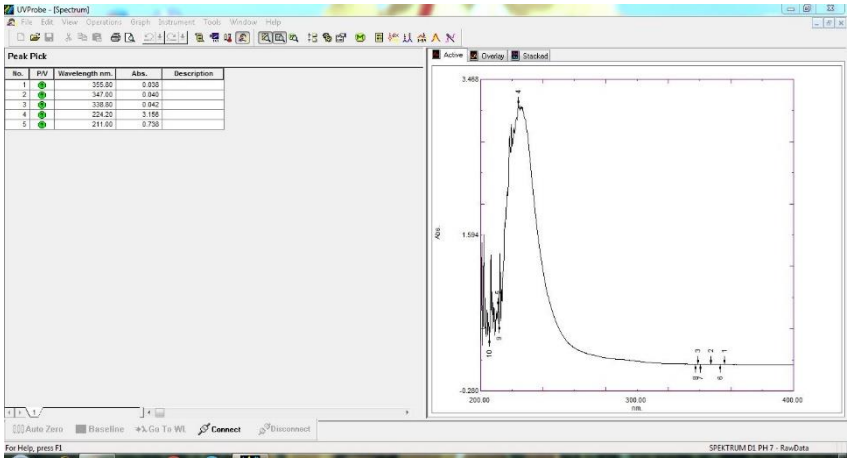
Sampel B2 Hati



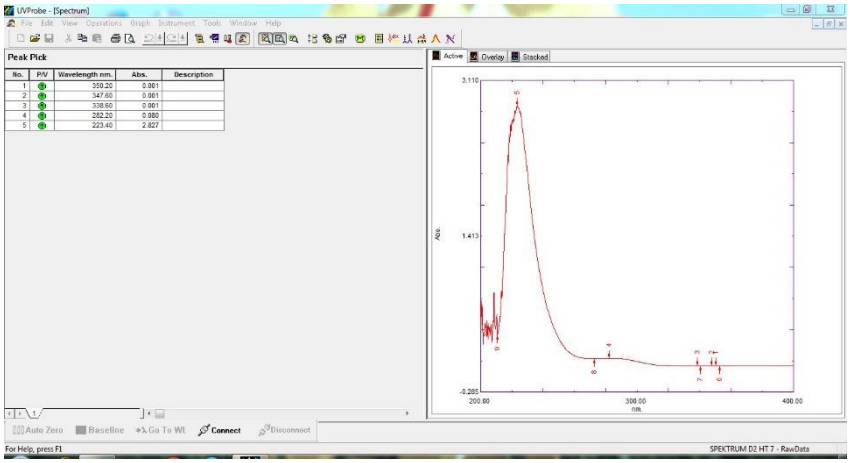
Sampel C1 Paha



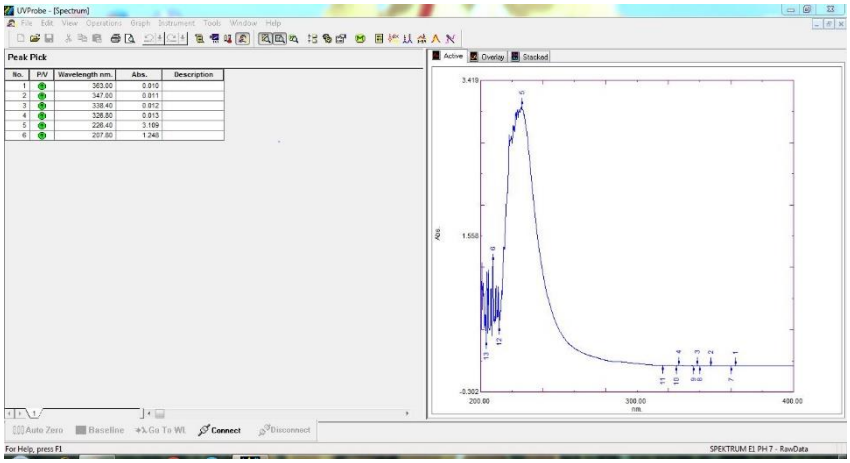
Sampel C2 Hati



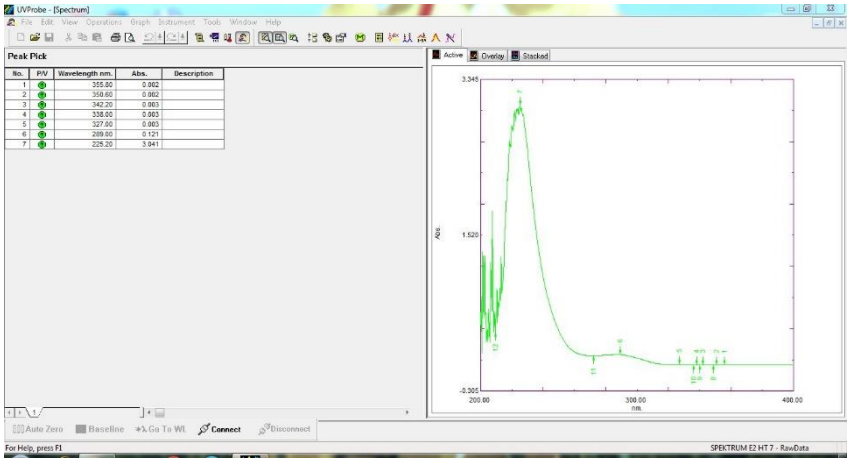
Sampel D1 Paha



Sampel D2 Hati



Sampel E1 Paha

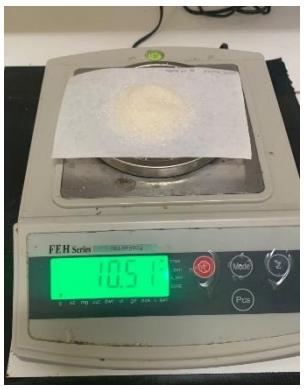


Sampel E2 Hati

Lampiran 7. Bahan Penelitian

Gambar	Keterangan
	Dinatrium hydrogen fosfat anhidrat
	Dinatrium EDTA dihidrat
	Asam sitrat Monohidrat
	Natrium Hidroksida

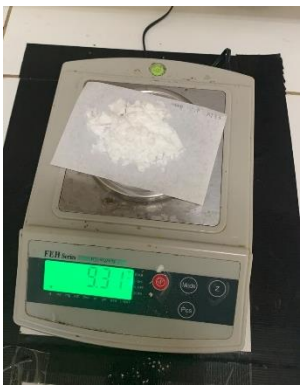
Lampiran 8. Pembuatan Larutan Buffer Mcllvaine-EDTA (pH 4)



Penimbangan Asam Sitrat 0,1 M



Penimbangan Dinatrium Fosfat 0,2 M



Penimbangan Serbuk EDTA



Homogenkan serbuk EDTA



Pengecekan pH



Larutan buffer Mcllvaine-EDTA (pH 4)

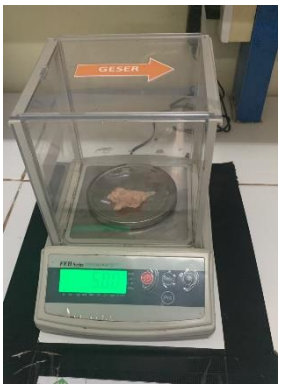
Lampiran 9. Proses Pengerjaan sampel



Pengambilan sampel



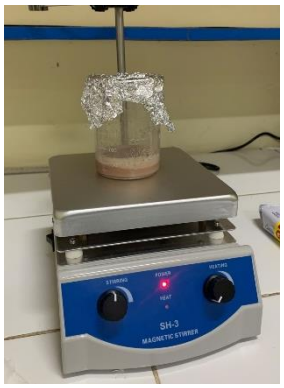
Pembersihan sampel dan penghalusan sampel



Penimbangan Sampel



Sampel yang halus



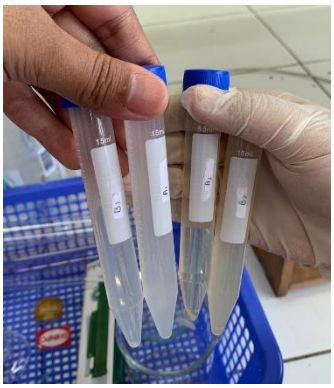
Pencampuran dengan `menggunakan magnetic stirrer



Sentrifugasi dengan kecepatan 3500 Rpm selama 10 menit



Diambil supernatant lalu



Hasil supernatan jernih disentrifugasi lagi



Sampel yang akan diuji

Lampiran 10. Sertifikat Baku Amoxicilin

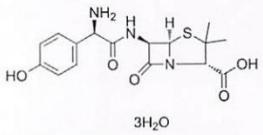
BADAN POM

BADAN PENGAWAS OBAT DAN MAKANAN

Jl. Percetakan Negara No. 23 Jakarta Pusat 10560 Indonesia
Telp. (021) 424 4691, 424 4819, 424 5075, Fax : 424 5150, 420 1427
Email : ppomn@pom.go.id; sekretariatkappomn@gmail.com Website : www.pom.go.id

SERTIFIKAT ANALISIS

NAMA ZAT : **AMOXICILLIN TRIHYDRATE / AMOKSISILIN TRIHIDRAT BPFI**



CAS No. : 61336-70-7
NO KONTROL : AB0425017
FORMULA : $C_{16}H_{19}N_3O_5S.3H_2O$
BOBOT MOLEKUL : 419,45 g/mol

TUJUAN PENGGUNAAN :
- Identifikasi secara spektrofotometri inframerah
- Identifikasi secara kromatografi cair kinerja tinggi
- Uji kemurnian secara kromatografi cair kinerja tinggi
- Penetapan kadar

WADAH DAN PENYIMPANAN : Dalam wadah tertutup rapat, terlindung dari cahaya, disimpan pada suhu 2 - 8°C.

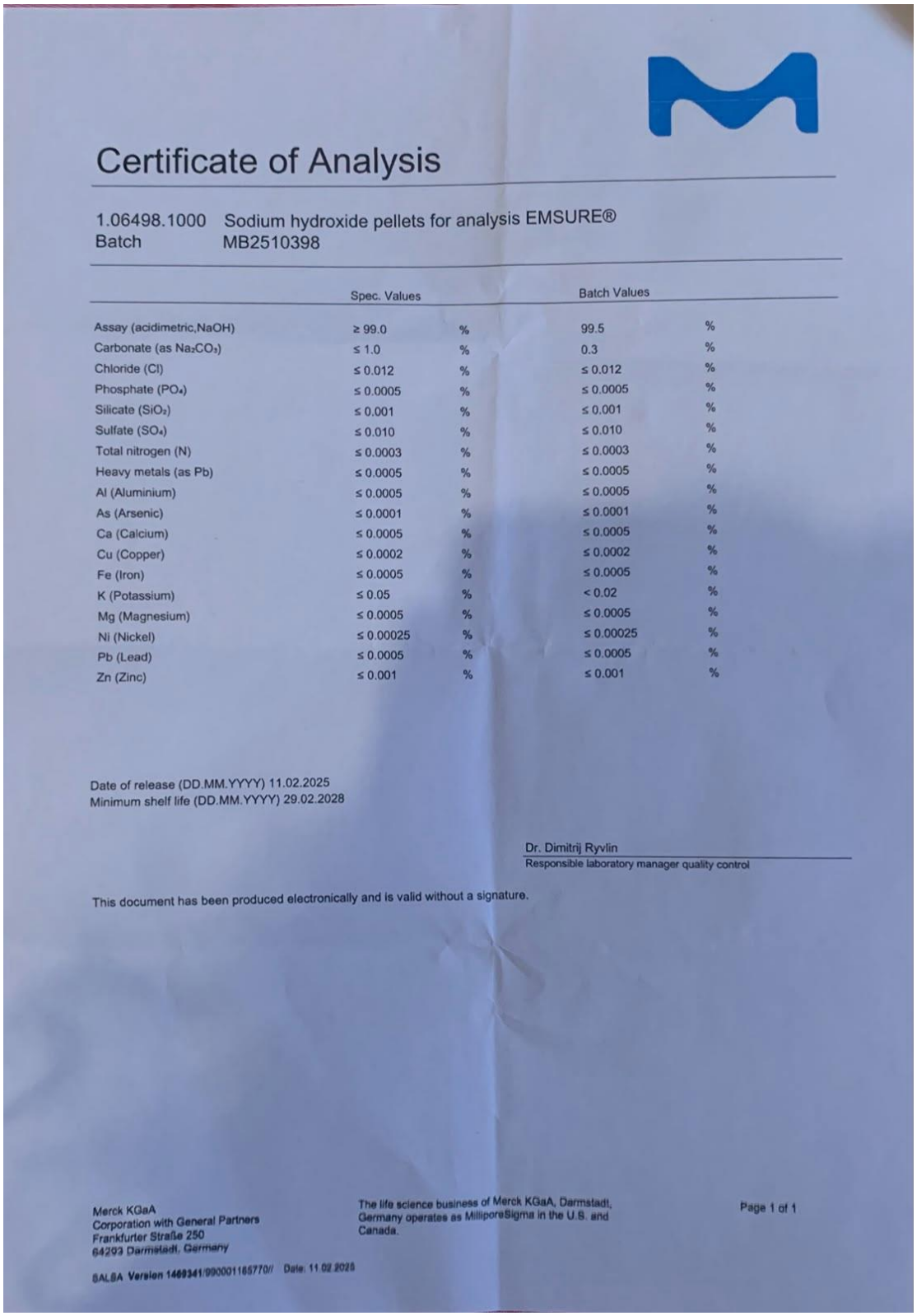
PENGUJIAN	METODE	SPESIFIKASI	HASIL
Pemerian	-	Serbuk hablur warna putih	Memenuhi syarat
Identifikasi	Spektrofotometri inframerah	Sesuai baku primer *Amoxicllin* USPRS	Memenuhi syarat
	Kromatografi cair kinerja tinggi	- Kromatogram pelarut tidak menunjukkan puncak dengan waktu retensi yang sama dengan larutan uji dan baku - Waktu retensi puncak utama pada kromatogram larutan uji sesuai dengan larutan baku	Memenuhi syarat
Titik lebur	DSC (*Differential Scanning Calorimetry)*	-	Titik lebur = 192,04°C (n = 6; RSD = 0,16%)
Kadar Air	Karl Fischer	11,5 – 14,5 %	13,53% (n = 12, SD = 0,02%)
Sisa pemijaran	Gravimetri	-	0% (n = 6, SD = 0,00%)
Uji kemurnian	Kromatografi cair kinerja tinggi	-	Cemaran total = 1,49%
Kadar yang ditetapkan *(assigned value)* 85,18% dengan ketidakpastian *U* = 1,29%; k = 2			

Kepala Pusat Pengembangan Pengujian Obat dan Makanan Nasional
u.b. Ketua Tim Pengembangan Baku Pembanding

Dr. Suyanto, S.P., M.Si
Tanggal adopsi : 17 Desember 2025

Sertifikat tidak diperkenankan untuk direproduksi tanpa izin tertulis dari PPPOMN

Lampiran 11. Gambar Certificate of Analysis (COA) Natrium Hidroksida



Certificate of Analysis

1.06498.1000 Sodium hydroxide pellets for analysis EMSURE®
Batch MB2510398

	Spec. Values		Batch Values	
Assay (acidimetric,NaOH)	≥ 99.0	%	99.5	%
Carbonate (as Na_2CO_3)	≤ 1.0	%	0.3	%
Chloride (Cl)	≤ 0.012	%	≤ 0.012	%
Phosphate (PO_4)	≤ 0.0005	%	≤ 0.0005	%
Silicate (SiO_2)	≤ 0.001	%	≤ 0.001	%
Sulfate (SO_4)	≤ 0.010	%	≤ 0.010	%
Total nitrogen (N)	≤ 0.0003	%	≤ 0.0003	%
Heavy metals (as Pb)	≤ 0.0005	%	≤ 0.0005	%
Al (Aluminium)	≤ 0.0005	%	≤ 0.0005	%
As (Arsenic)	≤ 0.0001	%	≤ 0.0001	%
Ca (Calcium)	≤ 0.0005	%	≤ 0.0005	%
Cu (Copper)	≤ 0.0002	%	≤ 0.0002	%
Fe (Iron)	≤ 0.0005	%	≤ 0.0005	%
K (Potassium)	≤ 0.05	%	< 0.02	%
Mg (Magnesium)	≤ 0.0005	%	≤ 0.0005	%
Ni (Nickel)	≤ 0.00025	%	≤ 0.00025	%
Pb (Lead)	≤ 0.0005	%	≤ 0.0005	%
Zn (Zinc)	≤ 0.001	%	≤ 0.001	%

Date of release (DD.MM.YYYY) 11.02.2025
Minimum shelf life (DD.MM.YYYY) 29.02.2028

Dr. Dimitrij Ryvlin
Responsible laboratory manager quality control

This document has been produced electronically and is valid without a signature.

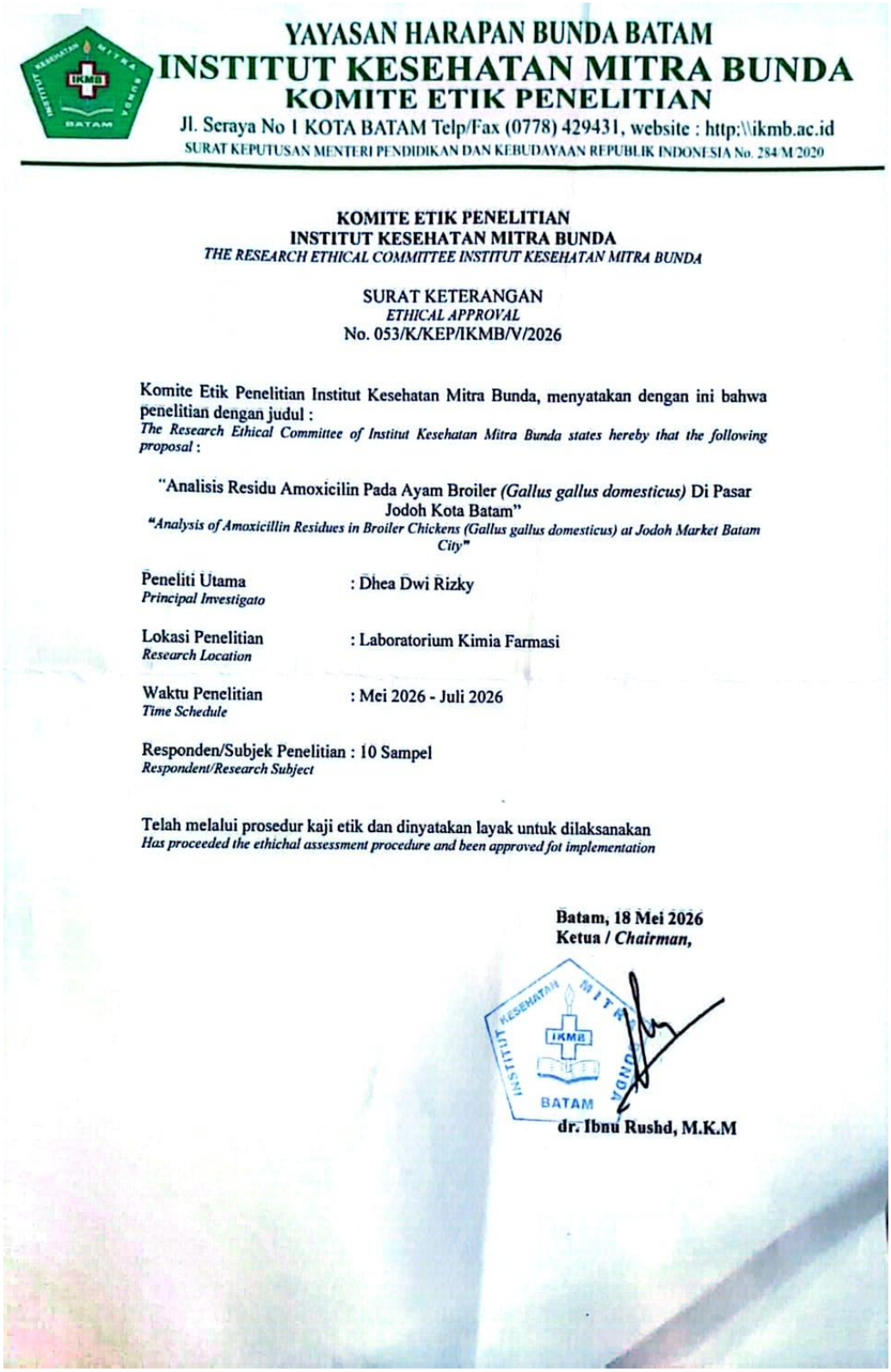
Merck KGaA
Corporation with General Partners
Frankfurter Straße 250
64293 Darmstadt, Germany

The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the U.S. and Canada.

Page 1 of 1

SALSA Version 1469341/990001165770// Date: 11.02.2025

Lampiran 12. Lembar Etik Penelitian



YAYASAN HARAPAN BUNDA BATAM
INSTITUT KESEHATAN MITRA BUNDA
KOMITE ETIK PENELITIAN
Jl. Seraya No 1 KOTA BATAM Telp/Fax (0778) 429431, website : http:\\ikmb.ac.id
SURAT KEPUTUSAN MENTERI PENDIDIKAN DAN KEBUDAYAAN REPUBLIK INDONESIA No. 284/M/2020

KOMITE ETIK PENELITIAN
INSTITUT KESEHATAN MITRA BUNDA
THE RESEARCH ETHICAL COMMITTEE INSTITUT KESEHATAN MITRA BUNDA

SURAT KETERANGAN
ETHICAL APPROVAL
No. 053/K/KEP/IKMB/V/2026

Komite Etik Penelitian Institut Kesehatan Mitra Bunda, menyatakan dengan ini bahwa penelitian dengan judul :
The Research Ethical Committee of Institut Kesehatan Mitra Bunda states hereby that the following proposal :

"Analisis Residu Amoxicilin Pada Ayam Broiler *(Gallus gallus domesticus)* Di Pasar Jodoh Kota Batam"
"Analysis of Amoxicillin Residues in Broiler Chickens (Gallus gallus domesticus) at Jodoh Market Batam City"

Peneliti Utama : Dhea Dwi Rizky
Principal Investigato

Lokasi Penelitian : Laboratorium Kimia Farmasi
Research Location

Waktu Penelitian : Mei 2026 - Juli 2026
Time Schedule

Responden/Subjek Penelitian : 10 Sampel
Respondent/Research Subject

Telah melalui prosedur kaji etik dan dinyatakan layak untuk dilaksanakan
Has proceeded the ethichal assessment procedure and been approved fot implementation

Batam, 18 Mei 2026
Ketua / *Chairman,*

dr. Ibnu Rushd, M.K.M