Lampiran 1. Data Identifikasi Bahan Natrium Diklofenak

IDENTIFIKASI NATRIUM DIKLOFENAK

Dilakukan indentifikasi bahan pati Natrium Diklofenak berupa organoleptik, kelarutan, dan spektrofotometri IR untuk bahan yang digunakan benar-benar natrium diklofenak dengan merujuk pada referensi pendukung.

a. Organoleptik

Bau : Tidak berbau

Bentuk : Serbuk halus, padat

Warna : Putih

Hasil uji identifikasi bahan natrium diklofenak dari segi ordiganoleptik, sesuai dengan referensi dimana natrium diklofenak memiliki karakteristik berbentuk sebuk kristalin yang berwarna putih hingga putih kekuningan dan bersifat sedikit higroskopis (Sweetman, 2009).

b. Kelarutan

Kelarutan dilakukan dalam larutan propilen glikol dan isopropil alkohol dengan pengadukan menggunakan *magnetic stirrer* kecepatan 1.100 rpm selama 30 menit. Hasil pengamatan disajikan dalam tabel berikut:

| Pelarut	Kelarutan	Keterangan
Propilen glikol	1 : 100	Tidak larut
Propilen glikol	1 : 250/ 40 mg/ml	Larut sebagian
Propilen glikol	1 : 500/ 20 mg/ml	Larut
Isopropil alkohol	1 : 100/ 100 mg/ml	Larut sebagian
Isopropil alkohol	1 : 250/ 40 mg/ml	Larut

Hasil uji identifikasi kelarutan bahan natrium diklofenak sesuai dengan referensi dimana natrium diklofenak memiliki kelarutan terhadap propilen glikol 27,71 ± 0,66 mg/ml (Vajir, dkk., 2012) serta sebagian larut dalam beberapa jenis alkohol, namun larut sempurna dalam metanol, etanol (96%), dan dalam aseton (British Pharmacopeia, 2009).

c. **Spektrofotometri *Infra Red* (IR)**

Pengujian dilakukan menggunakan Spektrofotometer *Infra Red* (IR) 'Shimadzu' di Laboratorium Kimia Analitik Fakultas MIPA Universitas Brawijaya. Hasil spektrum natrium diklofenak disajikan dalam gambar berikut:
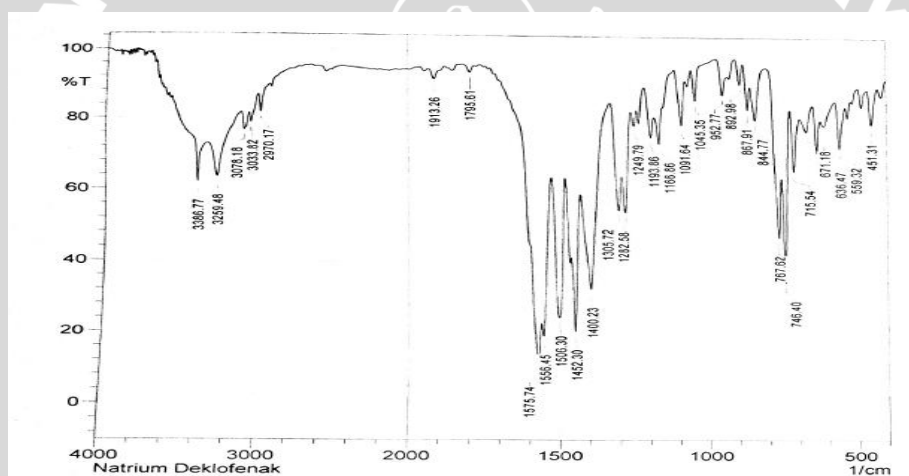
Sedangkan hasil spektrum FTIR natrium diklofenak yang dilakukan dalam penelitian Deveswaran, dkk. (2009) menunjukkan hasil seperti dalam gambar berikut:
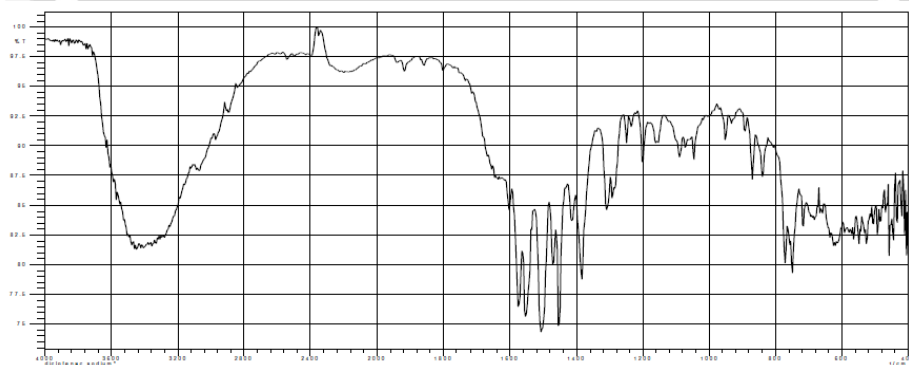
Jika hasil spektrum FTIR sampel natrium diklofenak yang diuji dibandingkan dengan spektrum FTIR natrium diklofenak pada referensi tampak sesuai dengan puncak gelombang yang hampir sama yaitu:

⊕ SHIMADZU

	Peak	Intensity	Corr. Inte	Base (H)	Base (L)	Area	Corr. Are
1	451.31	79.887	10.187	466.74	430.1	2.439	0.785
2	559.32	73.095	12.682	574.75	540.03	3.331	1.003
3	636.47	71.834	11.169	649.97	624.9	2.699	0.688
4	671.18	77.719	5.797	694.33	649.97	4.106	0.612
5	715.54	66.516	16.59	727.12	694.33	4.003	1.307
6	746.4	34.702	36.216	756.05	727.12	7.538	3.674
7	767.62	47.734	23.935	806.19	756.05	7.327	2.078
8	844.77	80.835	10.953	858.27	806.19	2.548	0.925
9	867.91	83.769	9.362	881.41	858.27	1.166	0.504
10	892.98	90.944	6.639	908.41	881.41	0.636	0.36
11	952.77	87.953	7.79	972.06	935.41	1.14	0.464
12	1045.35	86.187	9.415	1056.92	979.77	1.655	0.532
13	1091.64	79.204	14.034	1112.85	1078.14	2.164	1.164
14	1166.86	73.89	10.611	1182.29	1112.85	4.515	0.679
15	1193.86	75.6	8.839	1215.07	1182.29	2.876	0.659
16	1249.79	78.809	4.446	1259.43	1242.07	1.595	0.211
17	1282.58	54.251	16.496	1294.15	1259.43	6.189	1.492
18	1305.72	54.752	16.804	1328.87	1294.15	6.157	1.677
19	1400.23	32.566	34.432	1431.09	1330.79	24.058	9.474
20	1452.3	20.431	27.85	1463.87	1433.01	13.555	4.348
21	1506.3	24.34	39.687	1527.52	1483.16	18.103	9.512
22	1556.45	19.027	10.635	1562.24	1529.45	14.048	1.223
23	1575.74	10	18.851	1695.32	1564.16	35.841	5.201
24	1795.61	93.776	2.1	1822.61	1782.11	0.865	0.138
25	1913.26	91.671	3.289	1932.54	1878.54	1.505	0.318
26	2970.17	81.853	5.586	2983.68	2910.39	4.467	0.527
27	3033.82	78.85	3.968	3047.32	2983.68	5.292	0.561
28	3078.18	76.714	5.063	3099.4	3047.32	5.288	0.736
29	3259.48	63.493	11.878	3319.27	3101.33	29.351	4.964
30	3386.77	62.022	14.515	3560.35	3321.2	29.269	5.013

Puncak gelombang yang sama adalah (2925,21 – 2970,11 cm^{-1}) yang merupakan gugus O-H karboksilat dengan rentang frekuensi menurut literatur 3400-2400 cm^{-1}; (1506,3 - 1575,74 cm^{-1}) yang merupakan gugus C= C aromatis dengan rentang frekuensi menurut literatur 1600-1475 cm^{-1}; (3078,18 – 2093,61 cm-1) yang merupakan gugus C-H aromatis dengan rentang frekuensi menurut literatur 3150-3050 cm^{-1}; (844,77 – 852,48 cm^{-1}) yang merupakan gugus para substitusi benzene-Cl dengan rentang frekuensi 800-850 cm^{-1}; (1575,74 – 1591,16 cm-1) yang merupakan gugus C = O amida dengan rentang frekuensi menurut literatur 1680-1630 cm-1; (1305,72 – 1307,65 cm^{-1}) yang merupakan gugus C-N dengan rentang

frekuensi menurut literatur 1350-1000 cm^{-1}; 1452,3 cm^{-1} yang merupakan gugus –CH_2 alkana dengan frekuensi sekitar 1465 cm^{-1}; dan (767,72 – 761,83 cm^{-1}) yang merupakan gugus C-X klorida dengan rentang frekuensi menurut literatur 540-785 cm^{-1} (Herdiyanti, dkk., 2014).
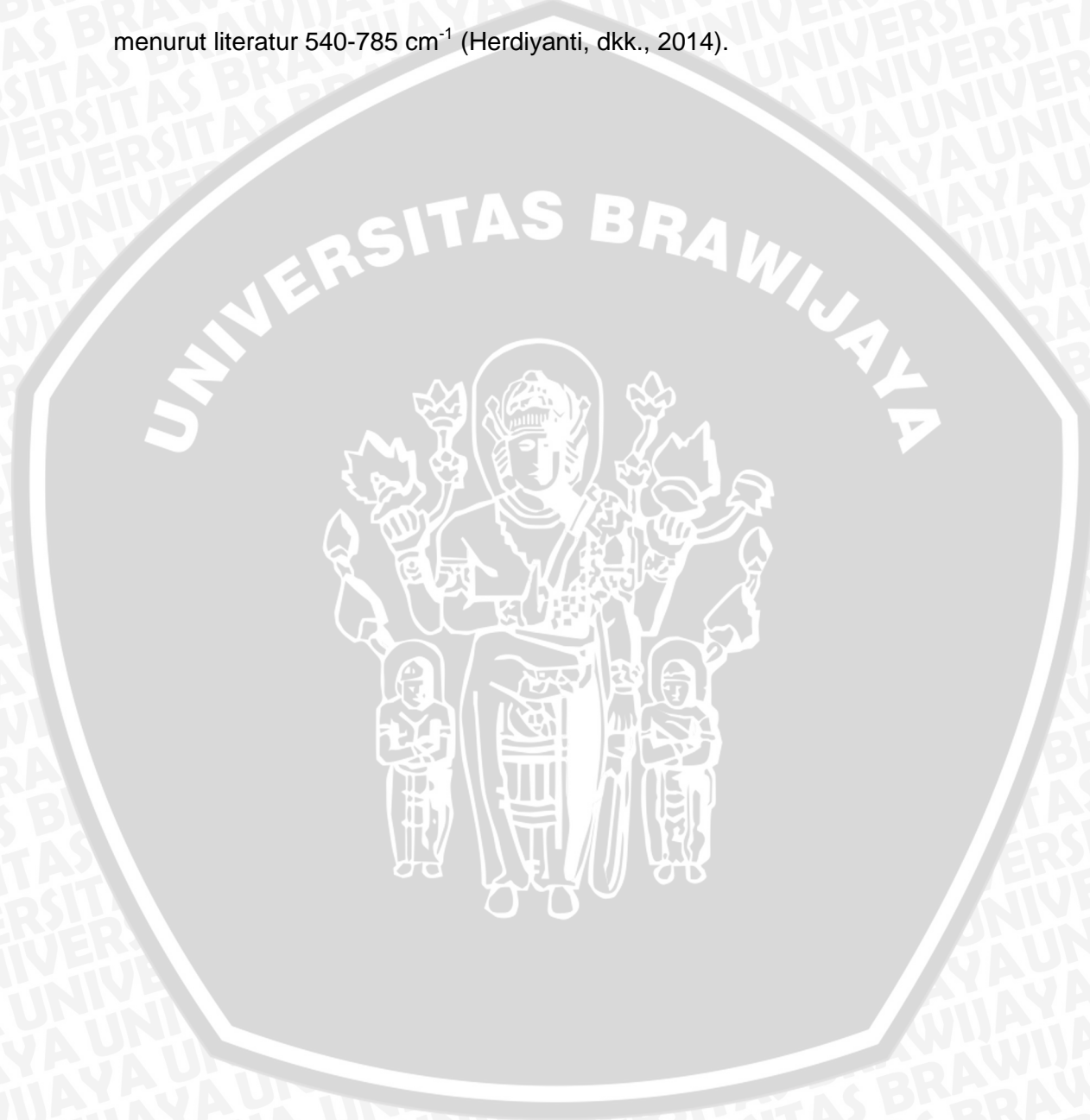
Lampiran 2. Hasil Uji FTIR Natrium Diklofenak

KEMENTERIAN RISET, TEKNOLOGI DAN PENDIDIKAN TINGGI
UNIVERSITAS BRAWIJAYA FAKULTAS MIPA
JURUSAN KIMIA

Jl. Veteran, Malang 65145, Jawa Timur, Indonesia Telp : +62-341-575838, fax : +62-341-554403
http://kimia.ub.ac.id,   email : kimia@ub.ac.id

LAPORAN HASIL ANALISA
NO : IR.19 / RT.5 / T.1 / R.0 / TT. 150803 / 2016

1. Data Konsumen
   Nama   : Harisatul Hasanah
   Instansi   : Fakultas Kedokteran Universitas Brawijaya
   Alamat   : Jl. Veteran Malang
   Telepon   : 085749613583
   Status   : Mahasiswa-S1
   Keperluan Analisis   : Uji Kualitas
2. Sampling Dilakukan Oleh   : Konsumen
3. Identifikasi Sampel
   Nama Sampel   : *Natrium Diklofenak*
   Wujud   : Padat
   Warna   : Putih
   Bau   : Berbau
4. Prosedur Analisis   : Dilakukan Oleh UPT Instrumentasi Jurusan Kimia
                                       FMIPA Universitas Brawijaya Malang
5. Metode Analisis   : FT-IR
6. Penyampaian Laporan Hasil Analisis : Diambil Langsung
7. Tanggal Terima Sampel   : 15 Juni 2016
8. Data Hasil Analisis   : Terlampir

Catatan:
Hasil analisis ini hanya berlaku untuk sampel yang kami terima dengan kondisi sampel saat itu.

Malang, 15 Juni 2016

Mengetahui,
Ketua Jurusan Kimia,

Dr. Edi Priyo Utomo, MS.
NIP. 19571227 198603 1 003

Ketua UPT Layanan Analisa Dan
Pengukuran,

Dra. Sri Wardhani, MSi
NIP. 19680226 199203 2 001

⊕ SHIMADZU

	Peak	Intensity	Corr. Inte	Base (H)	Base (L)	Area	Corr. Are
1	451.31	79.887	10.187	466.74	430.1	2.439	0.785
2	559.32	73.095	12.682	574.75	540.03	3.331	1.003
3	636.47	71.834	11.169	649.97	624.9	2.699	0.688
4	671.18	77.719	5.797	694.33	649.97	4.106	0.612
5	715.54	66.516	16.59	727.12	694.33	4.003	1.307
6	746.4	34.702	36.216	756.05	727.12	7.538	3.674
7	767.62	47.734	23.935	806.19	756.05	7.327	2.078
8	844.77	80.835	10.953	858.27	806.19	2.548	0.925
9	867.91	83.769	9.362	881.41	858.27	1.166	0.504
10	892.98	90.944	6.639	908.41	881.41	0.636	0.36
11	952.77	87.953	7.79	972.06	935.41	1.14	0.464
12	1045.35	86.187	9.415	1056.92	979.77	1.655	0.532
13	1091.64	79.204	14.034	1112.85	1078.14	2.164	1.164
14	1166.86	73.89	10.611	1182.29	1112.85	4.515	0.679
15	1193.86	75.6	8.839	1215.07	1182.29	2.876	0.659
16	1249.79	78.809	4.446	1259.43	1242.07	1.595	0.211
17	1282.58	54.251	16.496	1294.15	1259.43	6.189	1.492
18	1305.72	54.752	16.804	1328.87	1294.15	6.157	1.677
19	1400.23	32.566	34.432	1431.09	1330.79	24.058	9.474
20	1452.3	20.431	27.85	1463.87	1433.01	13.555	4.348
21	1506.3	24.34	39.687	1527.52	1483.16	18.103	9.512
22	1556.45	19.027	10.635	1562.24	1529.45	14.048	1.223
23	1575.74	10	18.851	1695.32	1564.16	35.841	5.201
24	1795.61	93.776	2.1	1822.61	1782.11	0.865	0.138
25	1913.26	91.671	3.289	1932.54	1878.54	1.505	0.318
26	2970.17	81.853	5.586	2983.68	2910.39	4.467	0.527
27	3033.82	78.85	3.968	3047.32	2983.68	5.292	0.561
28	3078.18	76.714	5.063	3099.4	3047.32	5.288	0.736
29	3259.48	63.493	11.878	3319.27	3101.33	29.351	4.964
30	3386.77	62.022	14.515	3560.35	3321.2	29.269	5.013

Natrium Deklofenak

Date/Time; 6/15/2016 11:25:57 AM

No. of Scans; 10

Resolution; 4.0

User; Kimia FMIPA-UB

Comment;

Natrium Deklofenak

Lampiran 3. Penentuan λ Maksimum dan Kurva Baku

PENENTUAN λ MAKSIMUM

Penentuan dilakukan menggunakan larutan natrium diklofenak dalam akuades dengan konsentrasi 10 ppm. Penentuan λ maksimum ini dilakukan menggunakan Spektrofotometer UV-Vis Shimadzu dengan tiga kali replikasi pada rentang panjang gelombang 200 – 400 nm. Sehingga diperoleh hasil λ maksimum pada 275,8 nm dengan absorbansi 0,306. Hasil penentuan λ maksimum sesuai dengan referensi dimana nilai λ maksimum menurut Amalia, dkk. (2011) adalah 279,8 nm.
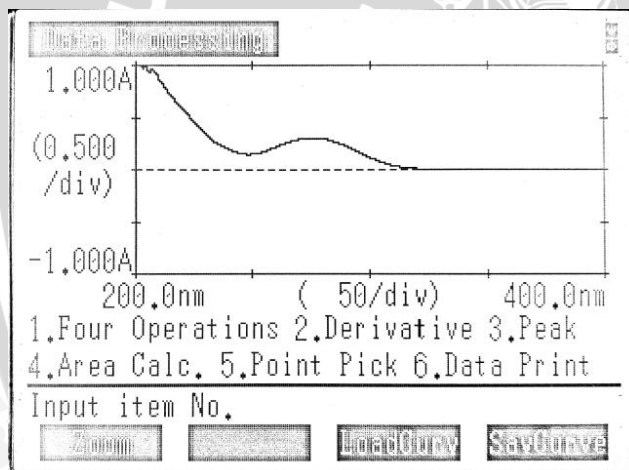
KURVA BAKU NATRIUM DIKLOFENAK

Larutan Baku Induk 100,001 ppm

Natrium diklofenak 10,001 mg dilarutkan dalam 100 ml akuades.

Pengenceran Larutan Baku Induk

$$\frac{7,5\ ppm}{100,01\ ppm} = \frac{x}{25\ ml} \qquad\qquad x = \frac{7,5\ ppm}{100,01\ ppm}\ x\ 25\ ml = 1,874\ \text{ml}$$

$$\frac{10\ ppm}{100,01\ ppm} = \frac{x}{25\ ml} \qquad\qquad x = \frac{10\ ppm}{100,01\ ppm}\ x\ 25\ ml = 2,499\ \text{ml}$$

$$\frac{15\ ppm}{100,01\ ppm} = \frac{x}{25\ ml} \qquad\qquad x = \frac{15\ ppm}{100,01\ ppm}\ x\ 25\ ml = 3,749\ \text{ml}$$

$$\frac{20\ ppm}{100,01\ ppm} = \frac{x}{25\ ml} \qquad\qquad x = \frac{20\ ppm}{100,01\ ppm}\ x\ 25\ ml = 4,999\ \text{ml}$$

$$\frac{25\ ppm}{100,01\ ppm} = \frac{x}{25\ ml} \qquad\qquad x = \frac{25\ ppm}{100,01\ ppm}\ x\ 25\ ml = 6,249\ \text{ml}$$

Persamaan kurva baku $y = 0,0307x - 1,3415 \cdot 10^{-3}$

Perhitungan absorbansi

Konsentrasi 7,5 ppm $\rightarrow$ $y = 0,0307(7,5) - 1,3415 \cdot 10^{-3} = 0,228$

Konsentrasi 10 ppm $\rightarrow$ $y = 0,0307(10) - 1,3415 \cdot 10^{-3} = 0,310$

Konsentrasi 15 ppm $\rightarrow$ $y = 0,0307(15) - 1,3415 \cdot 10^{-3} = 0,461$

Konsentrasi 20 ppm $\rightarrow$ $y = 0,0307(20) - 1,3415 \cdot 10^{-3} = 0,616$

Konsentrasi 25 ppm $\rightarrow$ $y = 0,0307(25) - 1,3415 \cdot 10^{-3} = 0,770$

Konsentrasi	Absorbansi
7,5 ppm	0,228
10 ppm	0,310
15 ppm	0,461
20 ppm	0,616
25 ppm	0,770

Grafik Kurva Baku

$y = 0,0307x - 1,3415 . 10^{-3}$

$r = 0,99963$

Absorbansi (y-axis): 0, 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9

Konsentrasi (ppm) (x-axis): 7,5 10 15 20 25
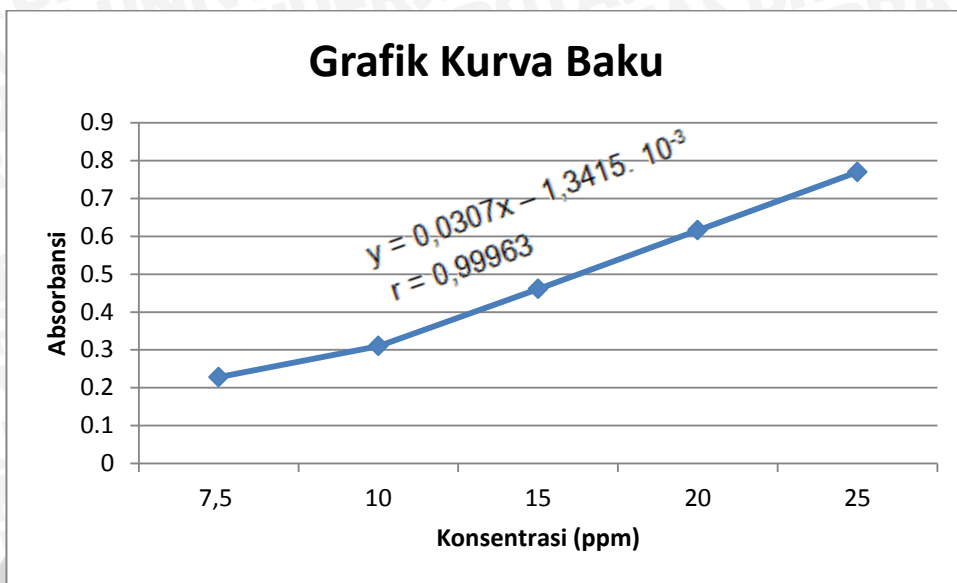
Lampiran 4. Data Identifikasi Bahan Pati Kentang (*Solanum tuberosum* L.)

IDENTIFIKASI PATI KENTANG

Dilakukan indentifikasi bahan pati kentang (*Solanum* tuberosum) melalui beberapa uji diantaranya organoleptik, kelarutan, titik lebur, pH, dan spektrofotometri *infra red* (IR) untuk memastikan bahwa bahan yang digunakan benar-benar pati kentang (*Solanum toberosum* L.) dengan merujuk pada referensi pendukung.

a. **Organoleptik**

Bau   : Tidak berbau

Bentuk : Serbuk halus, padat

Warna : Putih

Rasa   : Tidak berasa

Hasil identifikasi bahan pati kentang dari uji organoleptik sesuai dengan referensi dimana pati kentang memiliki karakteristik tidak berbau, tidak berasa, dan berbentuk sebuk yang berwarna putih hingga putih kekuningan (Rowe, dkk., 2009).

b. **Kelarutan**

Uji kelarutan dilakukan dalam akuades dan etanol, masing-masing dalam kondisi dingin dan dalam suhu 90^0C (di atas suhu gelatinisasi pati kentang). Hasil pengamatan disajikan dalam tabel di bawah ini:

No.	Pelarut	Kelarutan	Suhu
1.	Akuades	Tidak larut	25^0C
2.	Etanol (75%)	Tidak larut	25^0C
3.	Akuades	1 : 1000 / $1,005 \pm 0,005$ mg/ml	90^0C
4.	Etanol (75%)	1 : 186 / $5,364 \pm 0,014$ mg/ml	90^0C

Hasil identifikasi uji kelarutan pati kentang telah sesuai dengan referensi dimana pati kentang praktis tidak larut dalam etanol dingin dan air dingin, pati akan larut dalam air dan etanol ketika dipanaskan pada suhu di atas suhu gelatinisasinya yaitu 57-87^{0}C (Swinkels, 1985).

c. Titik Lebur

Hasil Identifikasi titik lebur pati kentang (*Solanum tuberosum* L.) menggunakan *Melting Point Apparatus* didapatkan hasil dimana pati kentang melebur pada suhu 157 ± 0,02^{0}C. Hal ini sesuai dengan referensi dimana titik lebur pati kentang yaitu sebesar 150-160^{0}C (Koswara, 2006).

d. pH

Uji pH dilakukan dengan mendispersikan 1,0023 g pati kentang (*Solanum tuberosum* L.) ke dalam 100 ml akuades. pH suspensi pati diukur menggunakan pH meter yang menunjukkan hasil 7,497 ± 0,035. Hasil ini sesuai dengan referensi dimana pH suspensi pati dalam air berada pada rentang 4,0 – 8,0 (Rowe, dkk., 2009).

e. Spektrofotometri *Infra Red* (IR)

Pengujian dilakukan menggunakan Spektrofotometer *Infra Red* (IR) 'Shimadzu' di Laboratorium Kimia Analitik Fakultas MIPA Universitas Brawijaya. Spektrum FTIR pati kentang (*Solanum tuberosum* L.) disajikan dalam gambar berikut:
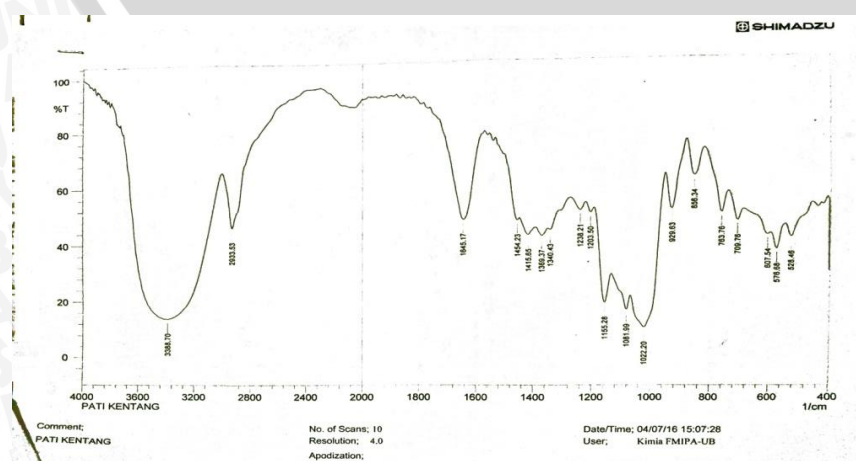
Berdasarkan hasil penelitian yang dilakukan Sacithraa, dkk. (2013) menunjukkan hasil spektrum FTIR pati kentang (*Solanum tuberosum* L.) seperti dalam gambar berikut:
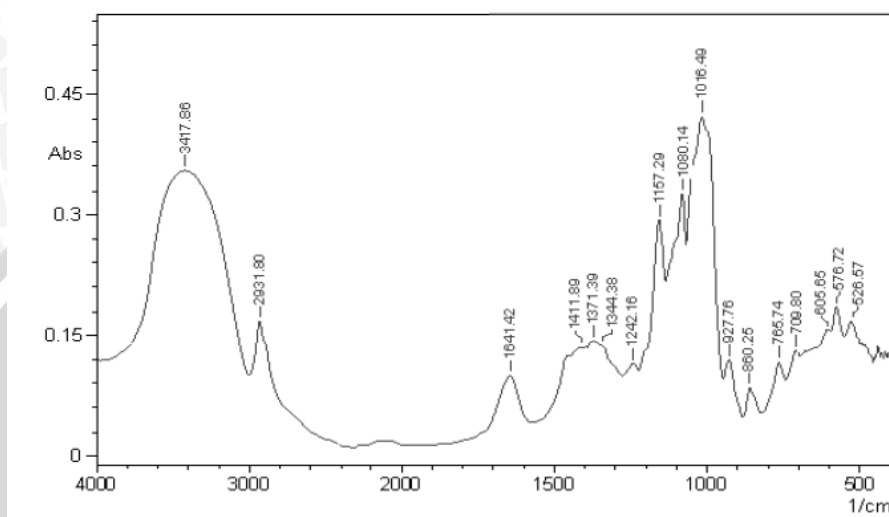
Hasil spektrum FTIR sampel pati kentang (*Solanum tuberosum* L.) kemudian dibandingkan dengan spektrum FTIR pati kentang pada referensi. Puncak gelombang pada kedua spectrum menunjukkan hasil yang hampir sama yaitu:

	Peak	Intensity	Corr. Inte	Base (H)	Base (L)	Area	Corr. Are
1	528.46	41.069	5.918	547.75	459.03	29.623	2.138
2	576.68	36.842	6.789	595.96	549.67	17.963	1.424
3	607.54	41.89	1.373	688.54	597.89	29.956	0.235
4	709.76	46.844	6.257	740.61	690.47	14.764	1.192
5	763.76	49.679	11.342	821.62	742.54	17.773	2.442
6	856.34	62.654	11.228	879.48	823.55	9.667	2.209
7	929.63	51.268	15.813	950.84	881.41	14.748	3.68
8	1022.2	10	27.563	1066.56	952.77	81.512	32.215
9	1081.99	16.184	6.505	1130.21	1068.49	41.051	3.265
10	1155.28	18.811	19.225	1190	1132.14	31.387	7.296
11	1203.5	50.38	2.413	1220.86	1191.93	8.256	0.275
12	1238.21	51.273	3.281	1271	1220.86	13.782	0.669
13	1340.43	44.483	1.631	1348.15	1309.58	12.477	0.255
14	1369.37	42.433	2.648	1388.65	1350.08	13.911	0.56
15	1415.65	42.782	4.083	1446.51	1390.58	19.501	1.137
16	1454.23	47.991	3.296	1498.59	1448.44	12.206	0.644
17	1645.17	48.352	34.404	1760.89	1571.88	32.086	17.391
18	2933.53	46.307	23.07	3002.96	2387.71	69.702	14.832
19	3388.7	13.711	2.826	3409.91	3004.89	235.778	26.934

Dimana puncak gelombang yang sama adalah (528,46 dan 526,57 cm^{-1}), (576,68 dan 576,72 cm^{-1}), serta (607,54 dan 605,65 cm^{-1}) yang merupakan gugus fungsi bromide; (709,76 dan 709,80 cm^{-1}) yang merupakan gugus fungsi piridin; (763,76 dan 765,74 cm^{-1}) yang merupakan gugus fungsi pirol; (860,25 dan 856,34 cm^{-1}) yang merupakan gugus fungsi arena; (927,76 dan 929,63 cm^{-1}) dan (1411,89 dan 1415,65 cm^{-1}) yang merupakan gugus fungsi alkena; (1016,49 dan 1022,2 cm^{-1}), (1081,99 dan 1080,14 cm^{-1}), (1157,29 dan 1155,28 cm^{-1}), (2931,80 dan 2933,53 cm^{-1}), serta (1242,16 dan 1238,21 cm^{-1}) yang merupakan gugus fungsi asam karboksilat; (1340,43 dan 1344,39 cm^{-1}) dan (1371,39 dan 1369,37 cm^{-1}) yang merupakan gugus fungsi alkane; (1641,42 dan 1645,17 cm-1) yang merupakan gugus fungsi alkil; dan (3388,7 dan 3417,86 cm^{-1}) yang merupakan gugus fungsi amina (Sacithraa, dkk., 2013).

Lampiran 5. Hasil Uji FTIR Pati Kentang (*Solanum tuberosum* L.)

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UNIVERSITAS BRAWIJAYA FAKULTAS MIPA
JURUSAN KIMIA

Jl. Veteran, Malang 65145, Jawa Timur, Indonesia Telp : +62-341-575838, fax : +62 -341-554403
http://kimia.ub.ac.id,   email : kimia@ub.ac.id

LAPORAN HASIL ANALISA
NO : M.29 / RT.5 / T.1 / R.0 / TT. 150803 / 2016

1. Data Konsumen
    Nama   : Novia Putri K
    Instansi   : Fakultas Kedokteran Universitas Brawijaya
    Alamat   : Jl. Veteran Malang
    Telepon   : -
    Status   : Mahasiswa
    Keperluan Analisis   : Uji Kualitas
2. Sampling Dilakukan Oleh   : Konsumen
3. Identifikasi Sampel
    Nama Sampel   : ***Pati Kentang***
    Wujud   : Padatan
    Warna   : Putih
    Bau   : Tidak Berbau
4. Prosedur Analis   : Dilakukan Oleh UPT Instrumentasi Jurusan Kimia FMIPA
                                          Universitas Brawijaya Malang
5. Penyampaian Laporan Hasil Analisis   : Diambil Langsung
6. Tanggal Terima Sampel   : 07 April 2016
7. Data Hasil Analisis   : Terlampir

Catatan:
Hasil analisis ini hanya berlaku untuk sampel yang kami terima dengan kondisi sampel saat itu.

Malang, 12 April 2016

Mengetahui:
Ketua Jurusan Kimia,

Kalab. UPT Layanan Analisa Dan
Pengukuran,

Dr. Edi Priyo Utomo, MS.
NIP. 19571227 198603 1 003

Dra. Sri Wardhani, MSi
NIP. 19680226 199203 2 001

PATI KENTANG

⊕ SHIMADZU

	Peak	Intensity	Corr. Inte	Base (H)	Base (L)	Area	Corr. Are
1	528.46	41.069	5.918	547.75	459.03	29.623	2.138
2	576.68	36.842	6.789	595.96	549.67	17.963	1.424
3	607.54	41.89	1.373	688.54	597.89	29.956	0.235
4	709.76	46.844	6.257	740.61	690.47	14.764	1.192
5	763.76	49.679	11.342	821.62	742.54	17.773	2.442
6	856.34	62.654	11.228	879.48	823.55	9.667	2.209
7	929.63	51.268	15.813	950.84	881.41	14.748	3.68
8	1022.2	10	27.563	1066.56	952.77	81.512	32.215
9	1081.99	16.184	6.505	1130.21	1068.49	41.051	3.265
10	1155.28	18.811	19.225	1190	1132.14	31.387	7.296
11	1203.5	50.38	2.413	1220.86	1191.93	8.256	0.275
12	1238.21	51.273	3.281	1271	1220.86	13.782	0.669
13	1340.43	44.483	1.631	1348.15	1309.58	12.477	0.255
14	1369.37	42.433	2.648	1388.65	1350.08	13.911	0.56
15	1415.65	42.782	4.083	1446.51	1390.58	19.501	1.137
16	1454.23	47.991	3.296	1498.59	1448.44	12.206	0.644
17	1645.17	48.352	34.404	1760.89	1571.88	32.086	17.391
18	2933.53	46.307	23.07	3002.96	2387.71	69.702	14.832
19	3388.7	13.711	2.826	3409.91	3004.89	235.778	26.934

Comment;
PATI KENTANG

Date/Time; 04/07/16 15:07:28
No. of Scans; 10
Resolution; 4.0
User; Kimia FMIPA-UB

Lampiran 6. Hasil Uji FTIR Pati Kentang Termodifikasi *Cross-linking*

KEMENTERIAN RISET, TEKNOLOGI DAN PENDIDIKAN TINGGI
UNIVERSITAS BRAWIJAYA FAKULTAS MIPA
JURUSAN KIMIA

Jl. Veteran, Malang 65145, Jawa Timur, Indonesia Telp : +62-341-575838, fax : +62 -341-554403
http://kimia.ub.ac.id,   email : kimia@ub.ac.id

LAPORAN HASIL ANALISA
NO : IR.35 / RT.5 / T.1 / R.0 / TT. 150803 / 2016

1. Data Konsumen
   Nama   : Harisatul Hasanah
   Instansi   : Fakultas Kedokteran Universitas Brawijaya
   Alamat   : Jl. Veteran Malang
   Telepon   : 085749613583
   Status   : Mahasiswa-S1
   Keperluan Analisis   : Uji Kualitas
2. Sampling Dilakukan Oleh   : Konsumen
3. Identifikasi Sampel
   Nama Sampel   : *Pati Kentang Tercross-linking*
   Wujud   : Padat
   Warna   : Putih
   Bau   : Tidak Berbau
4. Prosedur Analisis   : Dilakukan Oleh UPT Instrumentasi Jurusan Kimia
                                           FMIPA Universitas Brawijaya Malang
5. Metode Analisis   : FT-IR
6. Penyampaian Laporan Hasil Analisis   : Diambil Langsung
7. Tanggal Terima Sampel   : 27 Juli 2016
8. Data Hasil Analisis   : Terlampir

Catatan:
Hasil analisis ini hanya berlaku untuk sampel yang kami terima dengan kondisi sampel saat itu.

Malang, 28 Juli 2016

Mengetahui
Ketua Jurusan Kimia,

Ketua UPT Layanan Analisa dan
Pengukuran,

Dr. Edi Priyo Utomo, MS.
NIP. 19571227 198603 1 003

Dra. Sri Wardhani, MSi
NIP. 19680226 199203 2 001

⊕ SHIMADZU

	Peak	Intensity	Corr. Inte	Base (H)	Base (L)	Area	Corr. Are
1	526.53	31.005	6.098	549.68	459.03	41.194	3.093
2	576.68	28.637	6.716	597.89	551.61	22.769	1.911
3	607.54	34.477	1.154	690.47	599.82	35.812	0.22
4	707.83	42.426	6.226	740.62	692.4	15.847	1.326
5	761.83	47.437	13.467	821.62	742.55	17.409	2.966
6	854.41	67.078	15.563	881.41	823.55	7.688	2.757
7	931.56	51.053	19.338	950.84	883.34	12.813	4.204
8	1020.28	10	27.266	1066.56	952.77	85.688	34.101
9	1081.99	15.005	5.649	1130.21	1068.49	43.662	3.424
10	1155.28	16.625	19.871	1191.93	1132.14	34.218	8.346
11	1203.5	50.935	2.716	1220.86	1193.86	7.522	0.299
12	1240.15	52.267	4.185	1272.93	1222.79	13.173	0.811
13	1303.79	51.73	0.366	1305.72	1274.86	8.068	0.05
14	1346.22	43.399	0.461	1348.15	1309.58	12.598	0.248
15	1369.37	40.504	3.192	1392.51	1350.08	15.969	0.721
16	1415.66	40.438	4.512	1444.59	1392.51	19.333	1.284
17	1456.16	45.538	5.765	1502.45	1446.51	13.447	0.889
18	1645.17	44.072	42.064	1731.96	1573.81	31.09	21.006
19	2071.41	88.238	0.448	2077.19	1980.76	4.035	0.309
20	2150.48	87.957	0.735	2283.56	2131.2	6.611	0.131
21	2929.67	36.579	22.714	3001.03	2395.43	99.991	17.934
22	3404.13	14.09	0.033	3407.99	3396.41	9.844	0.006

Pati Kentang Tercross-linking
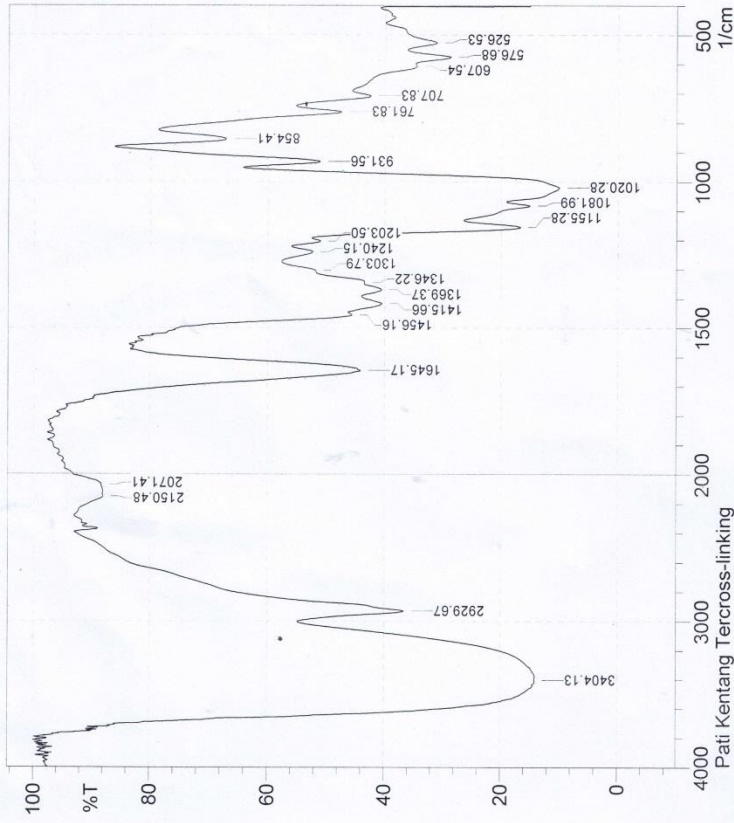
Date/Time; 7/28/2016 9:19:52 PM
No. of Scans; 10
Resolution; 4.0
User; Kimia FMIPA-UB

Comment;
Pati Kentang Tercross-linking

Lampiran 7. Perhitungan LoD *(Loss on Drying)* Pati Kentang

Batch 1

$$= \frac{massa\ awal - massa\ akhir}{massa\ awal} \times 100\%$$

$$= \frac{84,05\ gram - 61,89\ gram}{84,05\ gram} \times 100\%$$

$$= 26,36\ \%$$

Batch 2

$$= \frac{massa\ awal - massa\ akhir}{massa\ awal} \times 100\%$$

$$= \frac{90,26\ gram - 65,69\ gram}{90,26\ gram} \times 100\%$$

$$= 27,22\ \%$$

Batch 3

$$= \frac{massa\ awal - massa\ akhir}{massa\ awal} \times 100\%$$

$$= \frac{85,25\ gram - 60,05\ gram}{85,25\ gram} \times 100\%$$

$$= 26,99\ \%$$
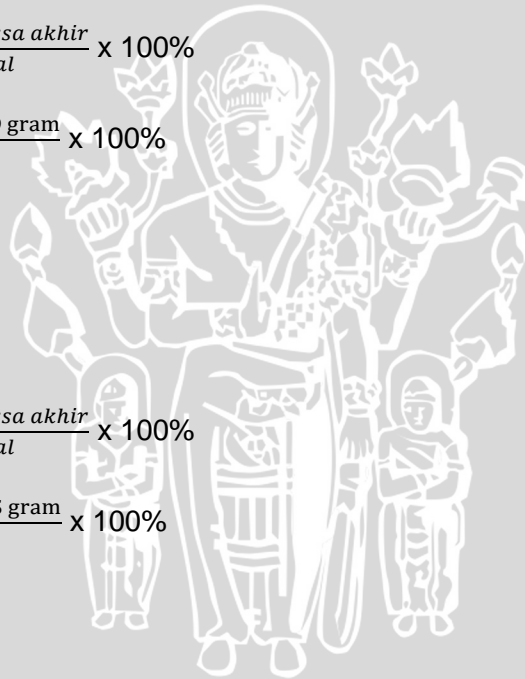
Lampiran 8. Hasil Analisis Statistik *Independent T Test* pH Hari ke-0

Pati kentang 7,5%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a] Statistic	df	Sig.	Shapiro-Wilk Statistic	df	Sig.
pHpre	F1A	.281	3	.	.937	3	.515
	F1B	.326	3	.	.874	3	.306

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

pHpre

Levene Statistic	df1	df2	Sig.
3.375	1	4	.140

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
pHpre	Equal variances assumed	3.375	.140	2.713	4	.053	.3006667	.1108051	-.0069777	.6083110
	Equal variances not assumed			2.713	2.523	.088	.3006667	.1108051	-.0928030	.6941363

Pati kentang 10%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a] Statistic	df	Sig.	Shapiro-Wilk Statistic	df	Sig.
pHpre	F2A	.303	3	.	.909	3	.415
	F2B	.184	3	.	.999	3	.927

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

pHpre

Levene Statistic	df1	df2	Sig.
3.810	1	4	.123

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
pHpre	Equal variances assumed	3.810	.123	7.345	4	.002	.2730000	.0371663	.1018829	.4441171
	Equal variances not assumed			7.345	2.547	.009	.2730000	.0371663	.0128426	.5331574

Pati kentang 12,5%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
pHpre	F3A	.253	3	.	.964	3	.637
	F3B	.240	3	.	.974	3	.692

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

pHpre

Levene Statistic	df1	df2	Sig.
4.393	1	4	.104

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
pHpre	Equal variances assumed	4.393	.104	5.377	4	.006	.2273333	.0422821	.0326624	.4220042
	Equal variances not assumed			5.377	2.146	.028	.2273333	.0422821	-.1473700	.6020367

Lampiran 9. Hasil Analisa Statistik *Independent T Test* pH *Freeze-thaw*

Pati kentang 7,5%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
pHFreezeThaw	F1A	.236	3	.	.977	3	.712
	F1B	.266	3	.	.952	3	.580

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

pHFreezeThaw

Levene Statistic	df1	df2	Sig.
.345	1	4	.588

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
pHFreezeThaw	Equal variances assumed	.345	.588	3.668	4	.021	.1686667	.0459867	-.0430605	.3803939
	Equal variances not assumed			3.668	3.724	.024	.1686667	.0459867	-.0541751	.3915084

Pati kentang 10%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
pHFreezeThaw	F2A	.340	3	.	.849	3	.237
	F2B	.321	3	.	.881	3	.328

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

pHFreezeThaw

Levene Statistic	df1	df2	Sig.
11.796	1	4	.026

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
pHFreezeThaw	Equal variances assumed	11.796	.026	.874	4	.431	.0736667	.0842509	-.3142327	.4615660
	Equal variances not assumed			.874	2.026	.473	.0736667	.0842509	-.7447020	.8920353

Pati kentang 12,5%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
pHFreezeThaw	F3A	.175	3	.	1.000	3	.990
	F3B	.310	3	.	.898	3	.380

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

pHFreezeThaw

Levene Statistic	df1	df2	Sig.
3.112	1	4	.152

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
pHFreezeThaw	Equal variances assumed	3.112	.152	1.341	4	.251	.0903333	.0673713	-.2198504	.4005171
	Equal variances not assumed			1.341	2.048	.309	.0903333	.0673713	-.5527190	.7333856

Lampiran 10. Hasil Analisa Statistik *Independent T Test* pH Hari ke-31

Pati kentang 7,5%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
pHRealTime	F1A	.322	3	.	.879	3	.323
	F1B	.269	3	.	.949	3	.567

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

pHRealTime

Levene Statistic	df1	df2	Sig.
11.768	1	4	.027

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
pHRealTime	Equal variances assumed	11.768	.027	2.375	4	.076	.1916667	.0807038	-.1799015	.5632348
	Equal variances not assumed			2.375	2.005	.140	.1916667	.0807038	-.6056873	.9890206

Pati kentang 10%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
pHRealTime	F2A	.330	3	.	.867	3	.286
	F2B	.281	3	.	.937	3	.515

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

pHRealTime

Levene Statistic	df1	df2	Sig.
1.325	1	4	.314

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
pHRealTime	Equal variances assumed	1.325	.314	4.968	4	.008	.1926667	.0387786	.0850001	.3003332
	Equal variances not assumed			4.968	3.359	.012	.1926667	.0387786	.0763929	.3089404

Pati kentang 12,5%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
pHRealTime	F3A	.298	3	.	.915	3	.436
	F3B	.264	3	.	.954	3	.589

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

pHRealTime

Levene Statistic	df1	df2	Sig.
3.152	1	4	.150

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
pHRealTime	Equal variances assumed	3.152	.150	5.352	4	.006	.2696667	.0503874	.0376784	.5016550
	Equal variances not assumed			5.352	2.480	.020	.2696667	.0503874	-.0950442	.6343775

Lampiran 11. Hasil Analisa Statistik *Independent T Test* Viskositas Hari ke-0

Pati kentang 7,5%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
viskositaspre	F1A	.312	3	.	.895	3	.370
	F1B	.349	3	.	.831	3	.192

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

viskositaspre

Levene Statistic	df1	df2	Sig.
2.416	1	4	.195

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
viskositaspre	Equal variances assumed	2.416	.195	-15.049	4	.000	-1622.000	107.78373	-2118.25	-1125.75
	Equal variances not assumed			-15.049	3.063	.001	-1622.000	107.78373	-2238.85	-1005.15

Pati kentang 10%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
viskositaspre	F2A	.274	3	.	.944	3	.546
	F2B	.219	3	.	.987	3	.780

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

viskositaspre

Levene Statistic	df1	df2	Sig.
.084	1	4	.786

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
viskositaspre	Equal variances assumed	.084	.786	-54.374	4	.000	-10205.67	187.69242	-11069.8	-9341.51
	Equal variances not assumed			-54.374	3.848	.000	-10205.67	187.69242	-11093.5	-9317.81

Pati kentang 12,5%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
viskositaspre	F3A	.175	3	.	1.000	3	1.000
	F3B	.253	3	.	.964	3	.637

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

viskositaspre

Levene Statistic	df1	df2	Sig.
1.932	1	4	.237

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
viskositaspre	Equal variances assumed	1.932	.237	-26.835	4	.000	-13016.67	485.05441	-15249.9	-10783.4
	Equal variances not assumed			-26.835	2.805	.000	-13016.67	485.05441	-16054.8	-9978.58

Lampiran 12. Hasil Analisa Statistik *Independent T Test* Viskositas *Freeze-thaw*

Pati kentang 7,5%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
viskositasFreezeThaw	F1A	.175	3	.	1.000	3	.992
	F1B	.219	3	.	.987	3	.783

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

viskositasFreezeThaw

Levene Statistic	df1	df2	Sig.
1.924	1	4	.238

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
viskositasFreezeThaw	Equal variances assumed	1.924	.238	-15.117	4	.000	-1577.667	104.36208	-2058.16	-1097.17
	Equal variances not assumed			-15.117	2.611	.001	-1577.667	104.36208	-2286.54	-868.794

Pati kentang 10%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
viskositasFreezeThaw	F2A	.328	3	.	.870	3	.295
	F2B	.175	3	.	1.000	3	.997

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

viskositasFreezeThaw

Levene Statistic	df1	df2	Sig.
.244	1	4	.647

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
viskositasFreezeThaw	Equal variances assumed	.244	.647	-69.581	4	.000	-7955.667	114.33673	-8482.08	-7429.25
	Equal variances not assumed			-69.581	3.415	.000	-7955.667	114.33673	-8549.00	-7362.34

Pati kentang 12,5%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
viskositasFreezeThaw	F3A	.313	3	.	.894	3	.365
	F3B	.284	3	.	.933	3	.500

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

viskositasFreezeThaw

Levene Statistic	df1	df2	Sig.
.559	1	4	.496

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
viskositasFreezeThaw	Equal variances assumed	.559	.496	-75.111	4	.000	-9478.000	126.18593	-10059.0	-8897.03
	Equal variances not assumed			-75.111	3.672	.000	-9478.000	126.18593	-10096.0	-8860.02

Lampiran 13. Hasil Analisa Statistik *Independent T Test* Viskositas Hari ke-31

Pati kentang 7,5%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
viskositasRealTime	F1A	.175	3	.	1.000	3	.997
	F1B	.324	3	.	.878	3	.318

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

viskositasRealTime

Levene Statistic	df1	df2	Sig.
1.944	1	4	.236

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
viskositasRealTime	Equal variances assumed	1.944	.236	-8.257	4	.001	-1644.333	199.14344	-2561.21	-727.458
	Equal variances not assumed			-8.257	3.113	.003	-1644.333	199.14344	-2766.78	-521.882

Pati kentang 10%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
viskositasRealTime	F2A	.252	3	.	.965	3	.640
	F2B	.291	3	.	.925	3	.470

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

viskositasRealTime

Levene Statistic	df1	df2	Sig.
8.862	1	4	.041

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
viskositasRealTime	Equal variances assumed	8.862	.041	-12.009	4	.000	-10477.67	872.49610	-14494.7	-6460.61
	Equal variances not assumed			-12.009	2.018	.007	-10477.67	872.49610	-19006.6	-1948.78

Pati kentang 12,5%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
viskositasRealTime	F3A	.262	3	.	.957	3	.600
	F3B	.183	3	.	.999	3	.932

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

viskositasRealTime

Levene Statistic	df1	df2	Sig.
3.401	1	4	.139

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
viskositasRealTime	Equal variances assumed	3.401	.139	-8.466	4	.001	-13300.00	1570.9744	-20532.9	-6067.08
	Equal variances not assumed			-8.466	2.057	.013	-13300.00	1570.9744	-28179.8	1579.801

Lampiran 14. Hasil Analisa Statistik *Independent T Test* Daya Sebar Hari ke-0

Pati kentang 7,5%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
dayasebarpre	F1A	.272	3	.	.946	3	.554
	F1B	.369	3	.	.787	3	.085

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

dayasebarpre

Levene Statistic	df1	df2	Sig.
4.581	1	4	.099

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
dayasebarpre	Equal variances assumed	4.581	.099	3.773	4	.020	1.6789000	.4450346	-.3700816	3.7278816
	Equal variances not assumed			3.773	2.648	.040	1.6789000	.4450346	-1.29454	4.6523362

Pati kentang 10%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
dayasebarpre	F2A	.227	3	.	.983	3	.747
	F2B	.184	3	.	.999	3	.927

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

dayasebarpre

Levene Statistic	df1	df2	Sig.
.914	1	4	.393

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
dayasebarpre	Equal variances assumed	.914	.393	8.215	4	.001	2.3889000	.2907886	1.0500816	3.7277184
	Equal variances not assumed			8.215	3.183	.003	2.3889000	.2907886	.7838588	3.9939412

Pati kentang 12,5%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
dayasebarpre	F3A	.253	3	.	.964	3	.637
	F3B	.292	3	.	.923	3	.463

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

dayasebarpre

Levene Statistic	df1	df2	Sig.
.507	1	4	.516

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
dayasebarpre	Equal variances assumed	.507	.516	14.446	4	.000	2.0556000	.1422977	1.4004478	2.7107522
	Equal variances not assumed			14.446	3.528	.000	2.0556000	.1422977	1.3365483	2.7746517

Lampiran 15. Hasil Analisa Statistik Non Parametrik *Mann-Whitney* Daya Sebar *Freeze-thaw*

Pati kentang 7,5%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
dayasebarFreezeThaw	F1A	.385	3	.	.750	3	.000
	F1B	.385	3	.	.750	3	.000

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

dayasebarFreezeThaw

Levene Statistic	df1	df2	Sig.
.000	1	4	1.000

Test Statistics[b]

	dayasebar FreezeThaw
Mann-Whitney U	.500
Wilcoxon W	6.500
Z	-1.826
Asymp. Sig. (2-tailed)	.068
Exact Sig. [2*(1-tailed Sig.)]	.100[a]

a. Not corrected for ties.

b. Grouping Variable: PatiKentang

Pati kentang 10%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
pHFreezeThaw	F2A	.385	3	.	.750	3	.000
	F2B	.385	3	.	.750	3	.000

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

pHFreezeThaw

Levene Statistic	df1	df2	Sig.
6.408	1	4	.065

Test Statistics[b]

	pHFreeze Thaw
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.023
Asymp. Sig. (2-tailed)	.043
Exact Sig. [2*(1-tailed Sig.)]	.100[a]

a. Not corrected for ties.

b. Grouping Variable: PatiKentang

Pati kentang 12,5%

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	PatiKentang	Statistic	df	Sig.	Statistic	df	Sig.
pHFreezeThaw	F3A	.385	3	.	.750	3	.000
	F3B	.385	3	.	.750	3	.000

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

pHFreezeThaw

Levene Statistic	df1	df2	Sig.
1.228	1	4	.330

Test Statistics[b]

	pHFreeze Thaw
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.023
Asymp. Sig. (2-tailed)	.043
Exact Sig. [2*(1-tailed Sig.)]	.100[a]

a. Not corrected for ties.

b. Grouping Variable: PatiKentang

Lampiran 16. Hasil Analisa Statistik *Independent T Test* Daya Sebar Hari ke-31

Pati kentang 7,5%

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	PatiKentang	Statistic	df	Sig.	Statistic	df	Sig.
dayasebarRealTime	F1A	.369	3	.	.789	3	.089
	F1B	.175	3	.	1.000	3	1.000

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

dayasebarRealTime

Levene Statistic	df1	df2	Sig.
7.293	1	4	.054

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
dayasebarRealTime	Equal variances assumed	7.293	.054	7.122	4	.002	1.5222000	.2137207	.5382096	2.5061904
	Equal variances not assumed			7.122	2.313	.013	1.5222000	.2137207	-.1749906	3.2193906

Pati kentang 10%

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	PatiKentang	Statistic	df	Sig.	Statistic	df	Sig.
dayasebarRealTime	F2A	.293	3	.	.922	3	.461
	F2B	.178	3	.	1.000	3	.959

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

dayasebarRealTime

Levene Statistic	df1	df2	Sig.
1.783	1	4	.253

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
dayasebarRealTime	Equal variances assumed	1.783	.253	-9.521	4	.001	-2.5890000	.2719139	-3.84092	-1.33708
	Equal variances not assumed			-9.521	2.376	.006	-2.5890000	.2719139	-4.67017	-.5078325

Pati kentang 12,5%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
dayasebarRealTime	F3A	.321	3	.	.881	3	.327
	F3B	.293	3	.	.922	3	.458

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

dayasebarRealTime

Levene Statistic	df1	df2	Sig.
4.629	1	4	.098

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
dayasebarRealTime	Equal variances assumed	4.629	.098	17.829	4	.000	2.1334667	.1196637	1.5825238	2.6844096
	Equal variances not assumed			17.829	2.498	.001	2.1334667	.1196637	1.2751671	2.9917662

Lampiran 17. Hasil Analisa Statistik *Independent T Test* Kadar Natrium Diklofenak Hari ke-0

Pati kentang 7,5%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
kadarpre	F1A	.289	3	.	.927	3	.478
	F1B	.370	3	.	.785	3	.080

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

kadarpre

Levene Statistic	df1	df2	Sig.
.280	1	4	.625

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
kadarpre	Equal variances assumed	.280	.625	-7.870	4	.001	-1.5603333	.1982535	-2.47311	-.6475555
	Equal variances not assumed			-7.870	3.878	.002	-1.5603333	.1982535	-2.49310	-.6275716

Pati kentang 10%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
kadarpre	F2A	.336	3	.	.856	3	.257
	F2B	.251	3	.	.966	3	.648

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

pHpre

Levene Statistic	df1	df2	Sig.
3.810	1	4	.123

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
kadarpre	Equal variances assumed	.364	.579	4.632	4	.010	.1410000	.0304412	.0008458	.2811542
	Equal variances not assumed			4.632	3.825	.011	.1410000	.0304412	-.0036212	.2856212

Pati kentang 12,5%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
kadarpre	F3A	.178	3	.	.999	3	.952
	F3B	.194	3	.	.997	3	.888

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

kadarpre

Levene Statistic	df1	df2	Sig.
1.178	1	4	.339

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
kadarpre	Equal variances assumed	1.178	.339	1.721	4	.160	.1233333	.0716791	-.2066839	.4533506
	Equal variances not assumed			1.721	2.716	.193	.1233333	.0716791	-.3417340	.5884007

Lampiran 18. Hasil Analisa Statistik *Independent T Test* Kadar Natrium Diklofenak *Freeze-thaw*

Pati kentang 7,5%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
kadarFreezeThaw	F1A	.179	3	.	.999	3	.948
	F1B	.370	3	.	.786	3	.082

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

kadarFreezeThaw

Levene Statistic	df1	df2	Sig.
14.937	1	4	.018

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
kadarFreezeThaw	Equal variances assumed	14.937	.018	-7.368	4	.002	-1.5886667	.2156167	-2.58139	-.5959470
	Equal variances not assumed			-7.368	2.003	.018	-1.5886667	.2156167	-3.72294	.5456101

Pati kentang 10%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
kadarFreezeThaw	F2A	.314	3	.	.893	3	.363
	F2B	.253	3	.	.964	3	.637

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

kadarFreezeThaw

Levene Statistic	df1	df2	Sig.
1.600	1	4	.275

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
kadarFreezeThaw	Equal variances assumed	1.600	.275	7.456	4	.002	.1446667	.0194022	.0553372	.2339961
	Equal variances not assumed			7.456	3.200	.004	.1446667	.0194022	.0380855	.2512478

Pati kentang 12,5%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
kadarFreezeThaw	F3A	.243	3	.	.972	3	.679
	F3B	.251	3	.	.966	3	.648

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

kadarFreezeThaw

Levene Statistic	df1	df2	Sig.
.397	1	4	.563

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
kadarFreezeThaw	Equal variances assumed	.397	.563	1.318	4	.258	.0870000	.0660278	-.2169981	.3909981
	Equal variances not assumed			1.318	3.604	.265	.0870000	.0660278	-.2410569	.4150569

Lampiran 19. Hasil Analisa Statistik *Independent T Test* Kadar Natrium Diklofenak Hari ke-31

Pati kentang 7,5%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
kadarRealTime	F1A	.198	3	.	.995	3	.872
	F1B	.267	3	.	.951	3	.576

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

kadarRealTime

Levene Statistic	df1	df2	Sig.
1.901	1	4	.240

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
kadarRealTime	Equal variances assumed	1.901	.240	-6.475	4	.003	-1.5930000	.2460343	-2.72577	-.4602346
	Equal variances not assumed			-6.475	2.881	.008	-1.5930000	.2460343	-3.09078	-.0952184

Pati kentang 10%

Tests of Normality

	PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
kadarRealTime	F2A	.366	3	.	.794	3	.101
	F2B	.208	3	.	.992	3	.826

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

kadarRealTime

Levene Statistic	df1	df2	Sig.
5.247	1	4	.084

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
kadarRealTime	Equal variances assumed	5.247	.084	1.932	4	.126	.1233333	.0638392	-.1705884	.4172551
	Equal variances not assumed			1.932	2.531	.166	.1233333	.0638392	-.3270019	.5736686

Pati kentang 12,5%

Tests of Normality

PatiKentang	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
kadarRealTime F3A	.208	3	.	.992	3	.826
F3B	.300	3	.	.913	3	.428

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

kadarRealTime

Levene Statistic	df1	df2	Sig.
.613	1	4	.477

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					99% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
kadarRealTime	Equal variances assumed	.613	.477	9.201	4	.001	.2353333	.0255756	.1175809	.3530858
	Equal variances not assumed			9.201	3.241	.002	.2353333	.0255756	.0964455	.3742211

Lampiran 20. Hasil Analisa Statistik *Paired T Test* pH Setelah Uji *Freeze-thaw*

Formula 1A

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiFreezeThaw	.281	3	.	.937	3	.515
SesudahUjiFreezeThaw	.236	3	.	.977	3	.712

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiFreezeThaw - SesudahUjiFreezeThaw	.0370000	.1810000	.1045004	-.4126289	.4866289	.354	2	.757

Formula 2A

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiFreezeThaw	.303	3	.	.909	3	.415
SesudahUjiFreezeThaw	.351	3	.	.827	3	.181

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiFreezeThaw - SesudahUjiFreezeThaw	-.0273333	.1311539	.0757217	-.3531376	.2984709	-.361	2	.753

Formula 3A

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiFreezeThaw	.253	3	.	.964	3	.637
SesudahUjiFreezeThaw	.175	3	.	1.000	3	.990

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiFreezeThaw - SesudahUjiFreezeThaw	-.0456667	.1025199	.0591899	-.3003403	.2090069	-.772	2	.521

Formula 1B

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiFreezeThaw	.326	3	.	.874	3	.306
SesudahUjiFreezeThaw	.266	3	.	.952	3	.580

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiFreezeThaw - SesudahUjiFreezeThaw	-.0950000	.0095394	.0055076	-.1186972	-.0713028	-17.249	2	.003

Formula 2B

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiFreezeThaw	.184	3	.	.999	3	.927
SesudahUjiFreezeThaw	.321	3	.	.881	3	.328

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiFreezeThaw - SesudahUjiFreezeThaw	-.2236667	.0338575	.0195477	-.3077735	-.1395599	-11.442	2	.008

Formula 3B

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiFreezeThaw	.240	3	.	.974	3	.692
SesudahUjiFreezeThaw	.310	3	.	.898	3	.380

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiFreezeThaw - SesudahUjiFreezeThaw	-.1826667	.0725695	.0418980	-.3629393	-.0023940	-4.360	2	.049

Lampiran 21. Hasil Analisa Statistik *Paired T Test* pH Setelah Uji *Real Time*

Formula 1A

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiRealtime	.281	3	.	.937	3	.515
SesudahUjiRealtime	.322	3	.	.879	3	.323

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiRealtime - SesudahUjiRealtime	.1386667	.0436157	.0251816	.0303191	.2470142	5.507	2	.031

Formula 2A

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiRealtime	.303	3	.	.909	3	.415
SesudahUjiRealtime	.330	3	.	.867	3	.286

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiRealtime - SesudahUjiRealtime	.1400000	.0216564	.0125033	.0862025	.1937975	11.197	2	.008

Formula 3A

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiRealtime	.253	3	.	.964	3	.637
SesudahUjiRealtime	.298	3	.	.915	3	.436

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiRealtime - SesudahUjiRealtime	.0486667	.0177858	.0102686	.0044844	.0928489	4.739	2	.042

Formula 1B

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiRealtime	.303	3	.	.909	3	.415
SesudahUjiRealtime	.269	3	.	.949	3	.567

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiRealtime - SesudahUjiRealtime	.2226667	.0575529	.0332282	.0796974	.3656359	6.701	2	.022

Formula F2B

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiRealtime	.184	3	.	.999	3	.927
SesudahUjiRealtime	.237	3	.	.976	3	.705

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiRealtime - SesudahUjiRealtime	.0653333	.0060277	.0034801	.0503597	.0803070	18.773	2	.003

Formula 3B

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiRealtime	.240	3	.	.974	3	.692
SesudahUjiRealtime	.264	3	.	.954	3	.589

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiRealtime - SesudahUjiRealtime	.0910000	.0112694	.0065064	.0630052	.1189948	13.986	2	.005

Lampiran 22. Hasil Analisa Statistik *Paired T Test* Viskositas Setelah Uji *Freeze-thaw*

Formula 1A

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiFreezeThaw	.312	3	.	.895	3	.370
SesudahUjiFreezeThaw	.175	3	.	1.000	3	.992

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiFreezeThaw - SesudahUjiFreezeThaw	166.667	57.735	33.333	23.245	310.088	5.000	2	.038

Formula 2A

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiFreezeThaw	.274	3	.	.944	3	.546
SesudahUjiFreezeThaw	.328	3	.	.870	3	.295

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiFreezeThaw - SesudahUjiFreezeThaw	183.333	132.666	76.595	-146.228	512.895	2.394	2	.139

Formula 3A

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiFreezeThaw	.175	3	.	1.000	3	1.000
SesudahUjiFreezeThaw	.313	3	.	.894	3	.365

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiFreezeThaw - SesudahUjiFreezeThaw	149.667	496.611	286.718	-1083.983	1383.316	.522	2	.654

Formula 1B

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiFreezeThaw	.235	3	.	.978	3	.715
SesudahUjiFreezeThaw	.219	3	.	.987	3	.783

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiFreezeThaw - SesudahUjiFreezeThaw	889.000	938.436	541.807	-1442.205	3220.205	1.641	2	.243

Formula 2B

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiFreezeThaw	.219	3	.	.987	3	.780
SesudahUjiFreezeThaw	.175	3	.	1.000	3	.997

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiFreezeThaw - SesudahUjiFreezeThaw	2433.333	375.663	216.889	1500.136	3366.531	11.219	2	.008

Formula 3B

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiFreezeThaw	.253	3	.	.964	3	.637
SesudahUjiFreezeThaw	.284	3	.	.933	3	.500

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiFreezeThaw - SesudahUjiFreezeThaw	3688.333	699.461	403.834	1950.775	5425.892	9.133	2	.012

Lampiran 23. Hasil Analisa Statistik *Paired T Test* Viskositas Setelah Uji *Real Time*

Formula 1A

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiRealtime	.312	3	.	.895	3	.370
SesudahUjiRealtime	.175	3	.	1.000	3	.997

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
				Std. Error Mean	95% Confidence Interval of the Difference				
		Mean	Std. Deviation		Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiRealtime - SesudahUjiRealtime	133.333	251.661	145.297	-491.828	758.494	.918	2	.456

Formula 2A

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiRealtime	.274	3	.	.944	3	.546
SesudahUjiRealtime	.252	3	.	.965	3	.640

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
				Std. Error Mean	95% Confidence Interval of the Difference				
		Mean	Std. Deviation		Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiRealtime - SesudahUjiRealtime	183.000	136.525	78.823	-156.146	522.146	2.322	2	.146

Formula 3A

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiRealtime	.175	3	.	1.000	3	1.000
SesudahUjiRealtime	.262	3	.	.957	3	.600

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
				Std. Error Mean	95% Confidence Interval of the Difference				
		Mean	Std. Deviation		Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiRealtime - SesudahUjiRealtime	160.667	75.142	43.383	-25.997	347.330	3.703	2	.066

Formula 1B

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiRealtime	.349	3	.	.831	3	.192
SesudahUjiRealtime	.324	3	.	.878	3	.318

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiRealtime - SesudahUjiRealtime	111.000	138.351	79.877	-232.683	454.683	1.390	2	.299

Formula 2B

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiRealtime	.219	3	.	.987	3	.780
SesudahUjiRealtime	.291	3	.	.925	3	.470

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiRealtime - SesudahUjiRealtime	-89.000	1260.100	727.519	-3219.262	3041.262	-.122	2	.914

Formula 3B

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiRealtime	.253	3	.	.964	3	.637
SesudahUjiRealtime	.183	3	.	.999	3	.932

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiRealtime - SesudahUjiRealtime	-122.667	3458.350	1996.679	-8713.685	8468.351	-.061	2	.957

Lampiran 24. Hasil Analisa Statistik Non Parametrik *Wilcoxon* Daya Sebar
Setelah Uji *Freeze-thaw*

Formula 1A

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiFreezeThaw	.272	3	.	.946	3	.554
SesudahUjiFreezeThaw	.385	3	.	.750	3	.000

a. Lilliefors Significance Correction

Test Statistics[b]

	SesudahUji FreezeThaw - SebelumUji FreezeThaw
Z	-1.604[a]
Asymp. Sig. (2-tailed)	.109

a. Based on positive ranks.

b. Wilcoxon Signed Ranks Test

Formula 2A

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiFreezeThaw	.269	3	.	.949	3	.567
SesudahUjiFtreezeThaw	.385	3	.	.750	3	.000

a. Lilliefors Significance Correction

Test Statistics[b]

	SesudahUji FtreezeThaw - SebelumUji FreezeThaw
Z	-1.604[a]
Asymp. Sig. (2-tailed)	.109

a. Based on positive ranks.

b. Wilcoxon Signed Ranks Test

Formula 3A

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiFreezeThaw	.253	3	.	.964	3	.637
SesudahUjiFreezeThaw	.385	3	.	.750	3	.000

a. Lilliefors Significance Correction

Test Statistics[b]

	SesudahUji FreezeThaw - SebelumUji FreezeThaw
Z	-1.604[a]
Asymp. Sig. (2-tailed)	.109

a. Based on positive ranks.

b. Wilcoxon Signed Ranks Test

Formula 1B

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiFreezeThaw	.369	3	.	.787	3	.085
SesudahUjiFreezeThaw	.385	3	.	.750	3	.000

a. Lilliefors Significance Correction

Test Statistics[b]

	SesudahUji FreezeThaw - SebelumUji FreezeThaw
Z	-1.604[a]
Asymp. Sig. (2-tailed)	.109

a. Based on positive ranks.

b. Wilcoxon Signed Ranks Test

Formula 2B

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiFreezeThaw	.184	3	.	.999	3	.927
SesudahUjiFreezeThaw	.385	3	.	.750	3	.000

a. Lilliefors Significance Correction

Test Statistics[b]

	SesudahUji FreezeThaw - SebelumUji FreezeThaw
Z	-1.604[a]
Asymp. Sig. (2-tailed)	.109

a. Based on positive ranks.

b. Wilcoxon Signed Ranks Test

Formula 3B

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiFreezeThaw	.292	3	.	.923	3	.463
SesudahUjiFreezeThaw	.385	3	.	.750	3	.000

a. Lilliefors Significance Correction

Test Statistics[b]

	SesudahUji FreezeThaw - SebelumUji FreezeThaw
Z	-1.604[a]
Asymp. Sig. (2-tailed)	.109

a. Based on positive ranks.

b. Wilcoxon Signed Ranks Test

Lampiran 25. Hasil Analisa Statistik *Paired T Test* Daya Sebar Setelah Uji *Real Time*

Formula 1A

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiRealtime	.272	3	.	.946	3	.554
SesudahUjiRealtime	.369	3	.	.789	3	.089

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiRealtime - SesudahUjiRealtime	.2000000	.2333643	.1347329	-.3797090	.7797090	1.484	2	.276

Formula 2A

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiRealtime	.269	3	.	.949	3	.567
SesudahUjiRealtime	.227	3	.	.983	3	.747

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiRealtime - SesudahUjiRealtime	.3111333	.5975047	.3449695	-1.17315	1.7954173	.902	2	.462

Formula 3A

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiRealtime	.253	3	.	.964	3	.637
SesudahUjiRealtime	.321	3	.	.881	3	.327

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiRealtime - SesudahUjiRealtime	.0555667	.1071949	.0618890	-.2107202	.3218535	.898	2	.464

Formula 1B

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiRealtime	.369	3	.	.787	3	.085
SesudahUjiRealtime	.175	3	.	1.000	3	1.000

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiRealtime - SesudahUjiRealtime	.0433000	.6316953	.3647094	-1.52592	1.6125180	.119	2	.916

Formula 2B

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiRealtime	.184	3	.	.999	3	.927
SesudahUjiRealtime	.293	3	.	.922	3	.461

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiRealtime - SesudahUjiRealtime	.2556333	.1263931	.0729731	-.0583446	.5696113	3.503	2	.073

Formula 3B

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiRealtime	.292	3	.	.923	3	.463
SesudahUjiRealtime	.292	3	.	.923	3	.463

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiRealtime - SesudahUjiRealtime	.1333333	.1201758	.0693835	-.1651999	.4318666	1.922	2	.195

Lampiran 26. Hasil Analisa Statistik *Paired T Test* Kadar Natrium Diklofenak Setelah Uji *Freeze-thaw*

Formula 1A

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiRealtime	.289	3	.	.927	3	.478
SesudahUjiRealtime	.179	3	.	.999	3	.948

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiRealtime - SesudahUjiRealtime	.0360000	.2303845	.1330125	-.5363067	.6083067	.271	2	.812

Formula 2A

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiFreezeThaw	.336	3	.	.856	3	.257
SesudahUjiFreezeThaw	.314	3	.	.893	3	.363

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiFreezeThaw - SesudahUjiFreezeThaw	.0070000	.0121244	.0070000	-.0231186	.0371186	1.000	2	.423

Formula 3A

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiFreezeThaw	.258	3	.	.960	3	.616
SesudahUjiFreezeThaw	.243	3	.	.972	3	.679

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiFreezeThaw - SesudahUjiFreezeThaw	-.0216667	.2350347	.1356974	-.6055254	.5621920	-.160	2	.888

Formula 1B

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiFreezeThaw	.370	3	.	.785	3	.080
SesudahUjiFreezeThaw	.370	3	.	.786	3	.082

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiFreezeThaw - SesudahUjiFreezeThaw	.0076667	.5543937	.3200793	-1.36952	1.3848569	.024	2	.983

Formula 2B

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiFreezeThaw	.251	3	.	.966	3	.648
SesudahUjiFreezeThaw	.253	3	.	.964	3	.637

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiFreezeThaw - SesudahUjiFreezeThaw	.0106667	.0392471	.0226593	-.0868285	.1081618	.471	2	.684

Formula 3B

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiFreezeThaw	.194	3	.	.997	3	.888
SesudahUjiFreezeThaw	.251	3	.	.966	3	.648

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiFreezeThaw - SesudahUjiFreezeThaw	-.0216667	.0184752	.0106667	-.0675616	.0242283	-2.031	2	.179

Lampiran 27. Hasil Analisa Statistik *Paired T Test* Kadar Natrium Diklofenak Setelah Uji *Real Time*

Formula 1A

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiRealtime	.289	3	.	.927	3	.478
SesudahUjiRealtime	.198	3	.	.995	3	.872

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiRealtime - SesudahUjiRealtime	-.0216667	.3287573	.1898081	-.8383450	.7950116	-.114	2	.920

Formula 2A

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiRealtime	.336	3	.	.856	3	.257
SesudahUjiRealtime	.366	3	.	.794	3	.101

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiRealtime - SesudahUjiRealtime	.0176667	.1315497	.0759503	-.3091210	.3444543	.233	2	.838

Formula 3A

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiRealtime	.178	3	.	.999	3	.952
SesudahUjiRealtime	.208	3	.	.992	3	.826

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiRealtime - SesudahUjiRealtime	-.0613333	.0981037	.0566402	-.3050364	.1823697	-1.083	2	.392

Formula 1B

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiRealtime	.370	3	.	.785	3	.080
SesudahUjiRealtime	.267	3	.	.951	3	.576

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiRealtime - SesudahUjiRealtime	-.0543333	.4249004	.2453163	-1.10984	1.0011777	-.221	2	.845

Formula 2B

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiRealtime	.251	3	.	.966	3	.648
SesudahUjiRealtime	.208	3	.	.992	3	.826

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiRealtime - SesudahUjiRealtime	.0000000	.0386911	.0223383	-.0961140	.0961140	.000	2	1.000

Formula 3B

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SebelumUjiRealtime	.194	3	.	.997	3	.888
SesudahUjiRealtime	.263	3	.	.955	3	.593

a. Lilliefors Significance Correction

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	SebelumUjiRealtime - SesudahUjiRealtime	.0543333	.0330051	.0190555	-.0276558	.1363224	2.851	2	.104

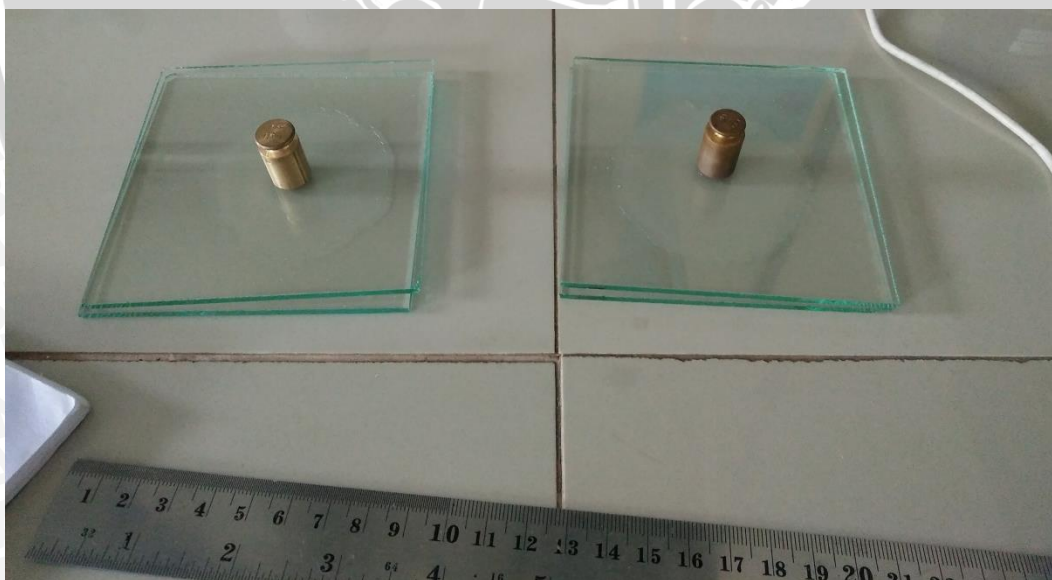Lampiran 28. Dokumentasi Penelitian

Proses filtrasi hasil modifikasi *cross-linking* pati kentang menggunakan *vacuum filter*
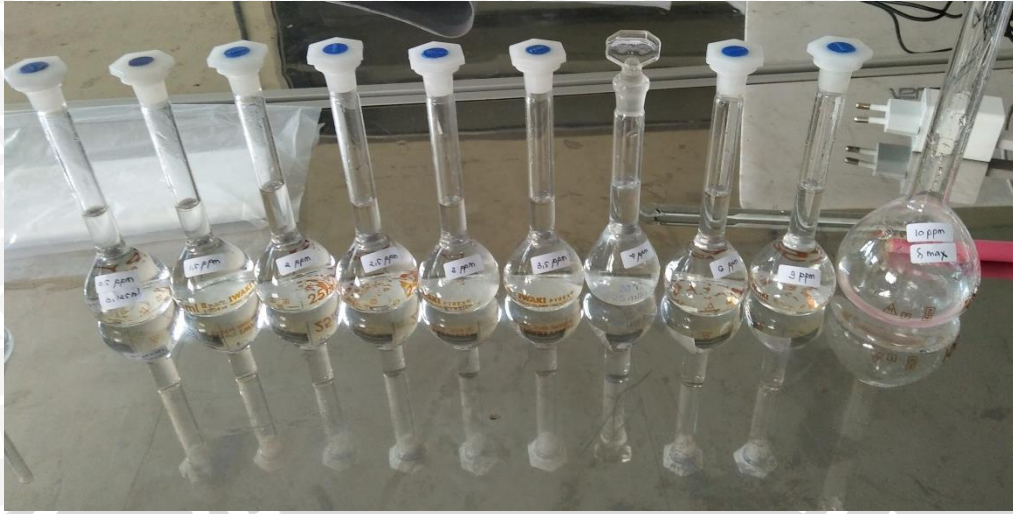

Hasil pengeringan pati kentang termodifikasi *cross-linking*

Proses pembuatan gel natrium diklofenak

Pengujian daya sebar gel

Pembuatan sampel penentuan kurva baku

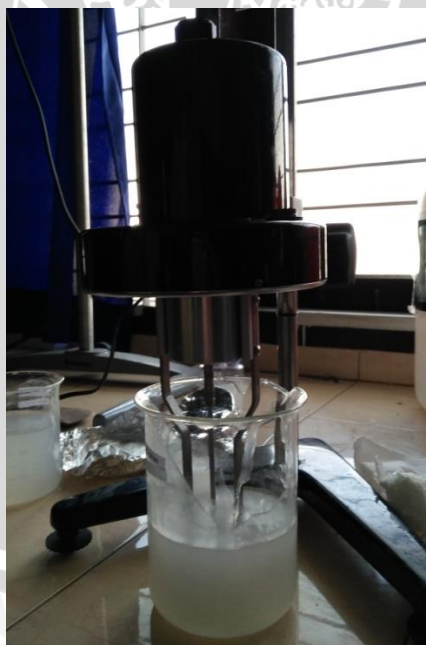Proses sonikasi sampel uji kadar natrium diklofenak dalam gel

Hasil proses sonikasi sampel uji kadar natrium diklofenak dalam gel

Penyaringan sampel uji kadar natrium diklofenak dalam gel

Proses uji pH gel

Proses uji viskositas gel

ANALISIS KUALITATIF ISOPROPIL ALKOHOL

a. Identifikasi Organoleptik

   Bau   : Menyengat

   Bentuk   : Cair

   Warna   : Bening

   Jika hasil identifikasi dibandingkan dengan referensi yang ada telah sesuai, dimana isopropil alkohol merupakan cairan bening, tidak berwarna, dan bersifat *volatile* (Rowe, dkk., 2009).

b. Identifikasi Kelarutan

Perlarut	Kelarutan	Keterangan
Aquades	1 : 6/ 166,667 mg/ml	Larut / bercampur sempurna
Etanol 75%	1 : 5/ 200 mg/ml	Larut / bercampur sempurna

   Jika hasil identifikasi dibanidngkan dengan referensi yang ada telah sesuai, dimana isopropil alkohol dapat bercampur sempurna dengan aseton, kloroform, etanol, gliserin, dan air (Rowe, dkk., 2009).

ANALISIS KUALITATIF METIL PARABEN

a. Identifikasi Organoleptik

Bau   : Tidak berbau

Bentuk   : Serbuk padat

Warna   : Putih

Hasil identifikasi telah sesuai dengan referensi dimana metil paraben berbentuk serbuk kristal tidak berwarna atau putih, tidak berbau dan memiliki rasa sedikit membakar (Rowe, dkk., 2009).

b. Identifikasi Kelarutan

Pelarut	Kelarutan	Keterangan
Akuades	1 : 100 / 100 mg/ml	Tidak larut
Akuades	1 : 500 / 20 mg/ml	Larut sebagian
Propilen glikol	1 : 5 / 200 mg/ml	Larut sebagian
Propilen glikol	1 : 6 / 166,667 mg/ml	Larut
Etanol 75%	1 : 5 / 200 mg/ml	Larut

Hasil identifikasi telah sesuai dengan referensi dimana metil paraben memiliki kelarutan dalam etanol murni 1 : 2; etanol 50% 1 : 6; eter 1 : 10; gliserin 1 : 60; propilen glikol 1 : 5; dalam air 1 : 40 pada suhu ruang; 1 : 50 pada 50^0C; serta 1 : 30 pada 80^0C (Rowe, dkk., 2009).

ANALISIS KUALITATIF PROPILEN GLIKOL

a. Identifikasi Organoleptik

    Bau   : Tidak berbau

    Bentuk   : Cairan kental

    Warna   : Bening

        Hasil identifikasi telah sesuai dengan referensi dimana propilen glikol merupakan cairan bening, tidak berwarna, kental, dan praktis tidak berbau (Rowe, dkk., 2009).

b. Identifikasi Kelarutan

Pelarut	Kelarutan	Keterangan
Akuades	1 : 10 / 100 mg/ml	Larut / bercampur sempurna
Etanol 75%	1 : 10 / 100 mg/ml	Larut / bercampur sempurna

        Hasil identifikasi telah sesuai dengan referensi dimana propilen glikol dapat bercampur sempurna dengan aseton, kloroform, etanol, gliserin, dan air (Rowe, dkk., 2009).