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## Lampiran 1. Scan gambar COA Benzoyl Peroxide



Shizouka Kawaguchi Chemical Co., Ltd  
1456, Ohbuchi Mauhama, Kakegawa 437-1302 Japan

### Certificate of Analysis

#### Our Consignment

Material : BENZOXE-N (BENZOYL PEROXIDE WET (75%) – New Type)  
No Batch : 482108  
Material No. : 2344CA  
Date of production : 05 September 2021  
Expiration date : 05 September 2022

On the batch, of which the consignment is a part, the following values were determined

Parameter	Specification	Result
Appearance	: crystallized powder, white color, odorless	As specification
Benzoic acid	: 0.80 (max)	0.50%
Chlorine (in acetone complete sol)	: 0.20 (max)	0.15%
Active Oxygen	: 4.86-5.05%	4.96%
Purity	: 73.5-76.5%	75.20%
Specific Gravity (25 <sup>o</sup> C)	: 1.33 gr/ml	1.33 gr/ml
Solubility in water	: soluble	soluble
Solubility in acetone, Methyl ethyl ketone, toluene	: soluble	soluble

The above particulars do not release the customer from the obligation to carry out an inspection after good received.

This report does not required a signature

Scanned with CamScanner

## Lampiran 2. Scan gambar COA Niacinamide

**CERTIFICATE OF ANALYSIS**

HSN CODE: 29362920

Purchase Order No.	Date	Our Reference No.	C. O. A. Date	Lab Register Page No.
2021000493	10.03.2021	EXP. No. - 6035	10.04.2021	21-22-01-006
Name of Product	Lot No.	Date of Manufacturing:	Date of Expiry:	Date of Analysis
NICOTINAMIDE BP	21-22/NMD[P]00003	APR. - 2021	MAR. - 2026	03.04.2021
Tests	BP 2019	USP 43	EP 9.3	Results
<b>Appearance</b>	White or almost white, crystalline powder or colourless crystals	White crystalline powder has a bitter taste. Its solution is neutral to litmus.	White or almost white, crystalline powder or colourless crystals	Complies
<b>Solubility</b>	Freely soluble in water and in anhydrous ethanol, slightly soluble in methylene chloride.	N.A.	Freely soluble in water and in anhydrous ethanol, slightly soluble in methylene chloride.	Complies
<b>Identification: -</b>				
<b>A. UV Test - Ratio <math>A_{264} / A_{282}</math> nm</b>	N.A.	0.63 to 0.67	N.A.	0.652
<b>B. IR Test</b>	IR spectrum to match with Reference standard	IR spectrum to match with Reference standard	IR spectrum to match with Reference standard	Matches
<b>Melting Range</b>	N.A.	128° to 131° C	N.A.	129.7° C
<b>Appearance of 5% w/v Solution</b>	Clear and not more intense than BY.	N.A.	Clear and not more intense than BY.	Complies
<b>pH of 5% w/v Solution</b>	6.0 to 7.5	N.A.	6.0 to 7.5	7.01
<b>Related Substances (By HPLC)</b>	Unspecified impurities (NMT 0.10%), Total impurities (NMT 0.2%)	N.A.	Unspecified impurities (NMT 0.10%), Total impurities (NMT 0.2%)	Complies
<b>Loss on Drying</b>	≤ 0.5% w/w	≤ 0.5% w/w	≤ 0.5% w/w	0.14 %w/w (USP) 0.16 %w/w (BP/ EP)
<b>Sulphated Ash / Residue on Ignition</b>	≤ 0.1% w/w	≤ 0.1% w/w	≤ 0.1% w/w	0.04 %w/w
<b>Readily Carbonizable Sub.</b>	N.A.	No more colour than matching Fluid A	N.A.	Complies
<b>Assay (On Dried Basis)</b>				
<b>A. Non Aqueous Titration (Potentiometry)</b>	99.0 to 101.0 % w/w	N.A.	99.0 to 101.0 % w/w	100.42 %w/w
<b>B. HPLC Method</b>	N.A.	98.5 to 101.5 % w/w	N.A.	99.40 %w/w
<b>Special Requirement</b>				
S. No.	Tests	Specification	Results	
	N.A.	N.A.	N.A.	

REPORT: Certified that the material referred above confirms to the following specifications:

1. Manufacturing specifications of WDL.
2. BP 2019 for Niacinamide (Nicotinamide)
3. USP 43 for Niacinamide
4. EP 9.3 for Niacinamide (Nicotinamide)
5. European directive 76/768/EEC and its amendment



### Lampiran 3. Scan gambar *Ethical clearance*



**HEALTH RESEARCH ETHICS COMMITTEE  
KOMISI ETIK PENELITIAN KESEHATAN**

***Dr. Moewardi General Hospital***  
**RSUD Dr. Moewardi**

***ETHICAL CLEARANCE***  
**KELAIKAN ETIK**

**Nomor : 730 / V / HREC / 2022**

***The Health Research Ethics Committee Dr. Moewardi***  
Komisi Etik Penelitian Kesehatan RSUD Dr. Moewardi

***after reviewing the proposal design, herewith to certify***  
setelah menilai rancangan penelitian yang diusulkan, dengan ini menyatakan

***That the research proposal with topic :***  
Bahwa usulan penelitian dengan judul

**Formulasi dan Uji Efektivitas Gel Antijerawat Kombinasi Benzoyl Peroxide 2,5% dan Niacinamide 5% dengan Variasi Konsentrasi Propilen Glikol dan Gliserin Sebagai Penetration Enhancer Pada Kelinci New Zealand Yang Terinfeksi Bakteri Staphylococcus epidermidis**

***Principal investigator*** : Dian Maharani  
Peneliti Utama : 01206297A

***Location of research*** : Universitas Setiabudi Surakarta  
Lokasi Tempat Penelitian

***Is ethically approved***  
Dinyatakan layak etik



#### Lampiran 4. Pembuatan dan evaluasi sediaan



Gambar 3.1 bahan pembuatan gel



Gambar 3.2 proses pembuatan gel



Gambar 3.3 sediaan gel



**Gambar 3.4** pH meter



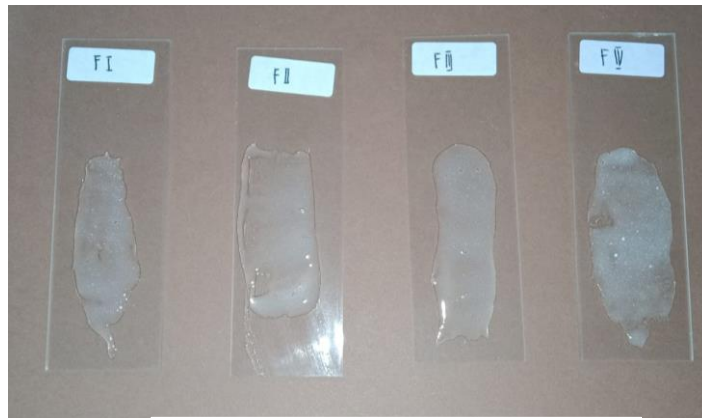
**Gambar 3.5** Viskometer



**Gambar 3.6** alat evaluasi daya lekat



**Gambar 3.7** alat evaluasi daya sebar



Gambar 3.7 evaluasi homogenitas gel

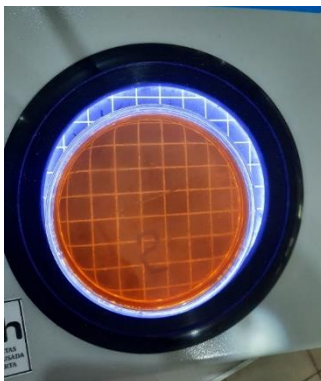
#### Lampiran 4. Identifikasi bakteri *Staphylococcus epidermidis*



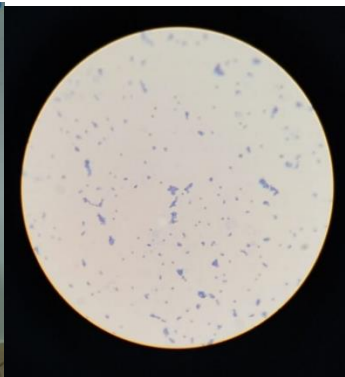
Gambar 4.1 Uji katalase



Gambar 4.2 Uji koagulase



Gambar 4.3 Uji Media selektif MSA



Gambar 4.4 Uji Pewarnaan gram



Gambar 4.5 Mini Laminar Air Flow





Gambar 4.6 Oven Sterilisasi



Gambar 4.7 inkubator

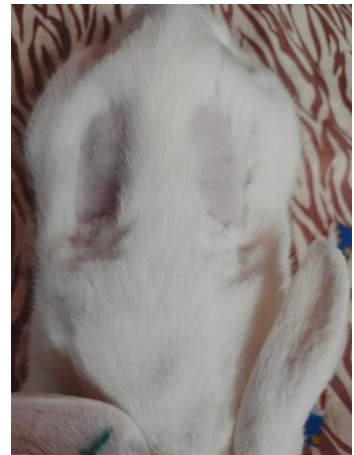
### Lampiran 5. Hewan uji



Gambar 5.1 Proses pencukuran punggung kelinci



Gambar 5.2 induksi bakteri pada punggung kelinci



Gambar 5.3 Sesaat setelah di induksi bakteri *Staphylococcus epidermidis*



Gambar 5.4 H+3 kelinci 1 (terbentuk eritema) / Hari ke-1 pengamatan



Gambar 5.5 H+3 kelinci 2 (terbentuk eritema) / Hari ke-1 pengamatan



Gambar 5.6 H+ Kelinci 3 (terbentuk eritema) / Hari ke-1 pengamatan





**Gambar 5.7 H+3 kelinci 4 (terbentuk eritema) / Hari ke-1 pengamatan**



**Gambar 5.8 H+3 kelinci 5 (terbentuk eritema) / Hari ke-1 pengamatan**



**Gambar 5.9 Kondisi hari ke 6 KP (sembuh) (pengulangan 1)**



**Gambar 5.10 Kondisi hari ke 7 KP (sembuh) (pengulangan 2)**



**Gambar 5.11 Kondisi hari ke 8 KP (sembuh) (pengulangan 3)**



**Gambar 5.12 Kondisi hari ke 9 KN (sembuh) (pengulangan 1)**



**Gambar 5.13 Kondisi hari ke 10 KN (sembuh) (pengulangan 2)**



**Gambar 5.14 Kondisi hari ke 11 KN (sembuh) (pengulangan 3)**



**Gambar 5.15** Kondisi hari ke 7  
F1 (sembuh) (pengulangan 1)

**Gambar 5.16** Kondisi hari ke 9  
F1 (sembuh) (pengulangan 2)

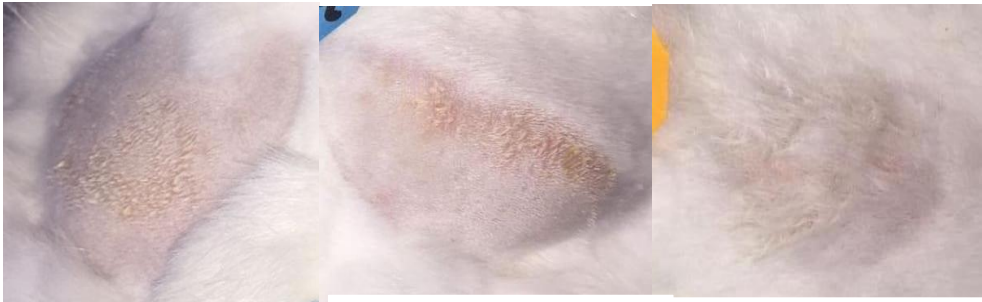
**Gambar 5.17** Kondisi hari ke 10  
F1 (sembuh) (pengulangan 3)



**Gambar 5.18** Kondisi hari ke 7  
F2 (sembuh) (pengulangan 1)

**Gambar 5.19** Kondisi hari ke 8  
F2 (sembuh) (pengulangan 2)

**Gambar 5.20** Kondisi hari ke 9  
F2 (sembuh) (pengulangan 3)



**Gambar 5.21** Kondisi hari ke 8  
F3 (sembuh) (pengulangan 1)

**Gambar 5.22** Kondisi hari ke 9  
F3 (sembuh) (pengulangan 2)

**Gambar 5.23** Kondisi hari ke 10  
F3 (sembuh) (pengulangan 3)



**Gambar 5.24** Kondisi hari ke 10  
TP (pengulangan 1)

**Gambar 5.25** Kondisi hari ke 10  
TP (pengulangan 2)

**Gambar 5.26** Kondisi hari ke 10  
TP (pengulangan 3)

## Lampiran 7. Output uji statistic SPSS

### 1. UJI VISKOSITAS

#### a. *Test of Normality*

Tests of Normality<sup>a,c,d</sup>

	FORMULA	Shapiro-Wilk		
		Statistic	df	Sig.
VISKOSITAS	FORMULA 2	.750	3	.000

a. VISKOSITAS is constant when FORMULA = FORMULA 1. It has been omitted.

b. Lilliefors Significance Correction

c. VISKOSITAS is constant when FORMULA = FORMULA 3. It has been omitted.

d. VISKOSITAS is constant when FORMULA = KONTROL NEGATIF. It has been omitted.

#### b. Uji non parametric

##### - *Kruskal Wallis Test*

#### Ranks

	FORMULA	N	Mean Rank
VISKOSITAS	FORMULA 1	3	7.50
	FORMULA 2	3	5.50
	FORMULA 3	3	2.00
	KONTROL NEGATIF	3	11.00
	Total	12	

02 April 2022

#### Test Statistics<sup>a,b</sup>

	VISKOSITAS
Chi-Square	10.506
Df	3
Asymp. Sig.	.015

a. Kruskal Wallis Test

b. Grouping Variable:

#### Uji Mann-Whitney

NPAR TESTS

/M-W= VISKOSITAS BY FORMULA(1 4)

/MISSING ANALYSIS.

**Ranks**

	FORMULA	N	Mean Rank	Sum of Ranks
	FORMULA 1	3	2.00	6.00
VISKOSITAS	KONTROL NEGATIF	3	5.00	15.00
	Total	6		

**Test Statistics<sup>a</sup>**

	VISKOSITAS
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.236
Asymp. Sig. (2-tailed)	.025
Exact Sig. [2*(1-tailed Sig.)]	.100 <sup>b</sup>

a. Grouping Variable: FORMULA

b. Not corrected for ties.

## NPAR TESTS

```
/M-W= VISKOSITAS BY FORMULA(2 4)
/MISSING ANALYSIS.
```

**Ranks**

	FORMULA	N	Mean Rank	Sum of Ranks
	FORMULA 2	3	2.00	6.00
VISKOSITAS	KONTROL NEGATIF	3	5.00	15.00
	Total	6		

**Test Statistics<sup>a</sup>**

	VISKOSITAS
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.121
Asymp. Sig. (2-tailed)	.034
Exact Sig. [2*(1-tailed Sig.)]	.100 <sup>b</sup>

a. Grouping Variable: FORMULA

b. Not corrected for ties.

## NPAR TESTS

```
/M-W= VISKOSITAS BY FORMULA(3 4)
/MISSING ANALYSIS.
```

Ranks				
	FORMULA	N	Mean Rank	Sum of Ranks
	FORMULA 3	3	2.00	6.00
VISKOSITAS	KONTROL NEGATIF	3	5.00	15.00
	Total	6		

**Test Statistics<sup>a</sup>**

	VISKOSITAS
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.236
Asymp. Sig. (2-tailed)	.025
Exact Sig. [2*(1-tailed Sig.)]	.100 <sup>b</sup>

a. Grouping Variable: FORMULA

b. Not corrected for ties.

## NPAR TESTS

```
/M-W= VISKOSITAS BY FORMULA(1 2)
/MISSING ANALYSIS.
```

Ranks				
	FORMULA	N	Mean Rank	Sum of Ranks
	FORMULA 1	3	4.50	13.50
VISKOSITAS	FORMULA 2	3	2.50	7.50
	Total	6		

**Test Statistics<sup>a</sup>**

	VISKOSITAS
Mann-Whitney U	1.500
Wilcoxon W	7.500
Z	-1.581
Asymp. Sig. (2-tailed)	.114
Exact Sig. [2*(1-tailed Sig.)]	.200 <sup>b</sup>

a. Grouping Variable: FORMULA

b. Not corrected for ties.

## NPAR TESTS

```
/M-W= VISKOSITAS BY FORMULA(1 3)
/MISSING ANALYSIS.
```

**Ranks**

	FORMULA	N	Mean Rank	Sum of Ranks
	FORMULA 1	3	5.00	15.00
VISKOSITAS	FORMULA 3	3	2.00	6.00
	Total	6		

**Test Statistics<sup>a</sup>**

	VISKOSITAS
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.236
Asymp. Sig. (2-tailed)	.025
Exact Sig. [2*(1-tailed Sig.)]	.100 <sup>b</sup>

a. Grouping Variable: FORMULA

b. Not corrected for ties.

NPAR TESTS

```
/M-W= VISKOSITAS BY FORMULA(2 3)
/MISSING ANALYSIS.
```

**Ranks**

	FORMULA	N	Mean Rank	Sum of Ranks
	FORMULA 2	3	5.00	15.00
VISKOSITAS	FORMULA 3	3	2.00	6.00
	Total	6		

**Test Statistics<sup>a</sup>**

	VISKOSITAS
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.121
Asymp. Sig. (2-tailed)	.034
Exact Sig. [2*(1-tailed Sig.)]	.100 <sup>b</sup>

a. Grouping Variable: FORMULA

b. Not corrected for ties.

## 2. Uji pH

### a. Test of Normality



**Tests of Normality<sup>b,c</sup>**

	Formula	Shapiro-Wilk		
		Statistic	df	Sig.
pH	formula 1	.750	3	.000
	formula 3	.750	3	.000

a. Lilliefors Significance Correction

b. pH is constant when Formula = formula 2. It has been omitted.

c. pH is constant when Formula = kontrol negatif. It has been omitted.

**a. Uji non-parametric****- *Kruskal Wallis Test*****Ranks**

	Formula	N	Mean Rank
pH	formula 1	3	11.00
	formula 2	3	8.00
	formula 3	3	5.00
	kontrol negatif	3	2.00
	Total	12	

**Test Statistics<sup>a,b</sup>**

	pH
Chi-Square	10.761
Df	3
Asymp. Sig.	.013

a. Kruskal Wallis Test

b. Grouping Variable:

Formula

***Mann-Whitney-Test***

NPAR TESTS

/M-W= pH BY FORMULA(1 2)

/MISSING ANALYSIS.

**Ranks**

	Formula	N	Mean Rank	Sum of Ranks
pH	formula 1	3	5.00	15.00
	formula 2	3	2.00	6.00
	Total	6		

**Test Statistics<sup>a</sup>**

	pH
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.121
Asymp. Sig. (2-tailed)	.034
Exact Sig. [2*(1-tailed Sig.)]	.100 <sup>b</sup>

a. Grouping Variable: Formula

b. Not corrected for ties.

NPAR TESTS

/M-W= pH BY FORMULA(1 3)

/MISSING ANALYSIS.

**Ranks**

	Formula	N	Mean Rank	Sum of Ranks
	formula 1	3	5.00	15.00
pH	formula 3	3	2.00	6.00
	Total	6		

**Test Statistics<sup>a</sup>**

	pH
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.023
Asymp. Sig. (2-tailed)	.043
Exact Sig. [2*(1-tailed Sig.)]	.100 <sup>b</sup>

a. Grouping Variable: Formula

b. Not corrected for ties.

NPAR TESTS

/M-W= pH BY FORMULA(1 4)

/MISSING ANALYSIS.

**Ranks**

	Formula	N	Mean Rank	Sum of Ranks
	formula 1	3	5.00	15.00
pH	kontrol negatif	3	2.00	6.00
	Total	6		

**Test Statistics<sup>a</sup>**

	pH
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.121
Asymp. Sig. (2-tailed)	.034
Exact Sig. [2*(1-tailed Sig.)]	.100 <sup>b</sup>

a. Grouping Variable: Formula

b. Not corrected for ties.

## NPAR TESTS

/M-W= pH BY FORMULA(2 4)

/MISSING ANALYSIS.

**Ranks**

	Formula	N	Mean Rank	Sum of Ranks
	formula 2	3	5.00	15.00
pH	kontrol negatif	3	2.00	6.00
	Total	6		

**Test Statistics<sup>a</sup>**

	pH
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.236
Asymp. Sig. (2-tailed)	.025
Exact Sig. [2*(1-tailed Sig.)]	.100 <sup>b</sup>

a. Grouping Variable: Formula

b. Not corrected for ties.

## NPAR TESTS

/M-W= pH BY FORMULA(2 3)

/MISSING ANALYSIS.

**Ranks**

	Formula	N	Mean Rank	Sum of Ranks
	formula 2	3	5.00	15.00
pH	formula 3	3	2.00	6.00

Total	6	
-------	---	--

**Test Statistics<sup>a</sup>**

	pH
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.121
Asymp. Sig. (2-tailed)	.034
Exact Sig. [2*(1-tailed Sig.)]	.100 <sup>b</sup>

a. Grouping Variable: Formula

b. Not corrected for ties.

## NPAR TESTS

/M-W= pH BY FORMULA(3 4)

/MISSING ANALYSIS.

**Ranks**

	Formula	N	Mean Rank	Sum of Ranks
	formula 3	3	5.00	15.00
pH	kontrol negatif	3	2.00	6.00
	Total	6		

**Test Statistics<sup>a</sup>**

	pH
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.121
Asymp. Sig. (2-tailed)	.034
Exact Sig. [2*(1-tailed Sig.)]	.100 <sup>b</sup>

a. Grouping Variable: Formula

b. Not corrected for ties.

**3. UJI DAYA LEKAT****a. Test of Normality****Tests of Normality**

	FORMULA	Shapiro-Wilk		
		Statistic	df	Sig.
DAYA LEKAT	FORMULA 1	.818	3	.157

FORMULA 2	.991	3	.817
FORMULA 3	.860	3	.266
KONTROL NEGATIF	.997	3	.900

a. Lilliefors Significance Correction

**b. Test Homogeneity of Variances**

**Test of Homogeneity of Variances**

DAYA LEKAT

Levene Statistic	df1	df2	Sig.
.755	3	8	.550

**c. Student Newman Keuls (SNK) Test**

**DAYA LEKAT**

Student-Newman-Keuls<sup>a</sup>

FORMULA	N	Subset for alpha = 0.05		
		1	2	3
FORMULA 3	3	1.2233		
FORMULA 2	3		1.3933	
FORMULA 1	3			1.9300
KONTROL NEGATIF	3			1.9933
Sig.		1.000	1.000	.405

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3,000.

**4. UJI DAYA SEBAR**

**a. Normality Test**

**Tests of Normality**

	FPRMULA	Shapiro-Wilk		
		Statistic	df	Sig.
DAYA SEBAR	FORMULA 1	.750	3	.000
	FORMULA 2	.750	3	.000
	FORMULA 3	.750	3	.000
	KONTROL NEGATIF	.750	3	.000

a. Lilliefors Significance Correction

**b. Non Parametric Test**

**- Kruskal Wallis Test**

## Ranks

	FPRMULA	N	Mean Rank
DAYA SEBAR	FORMULA 1	3	5.33
	FORMULA 2	3	8.33
	FORMULA 3	3	10.33
	KONTROL NEGATIF	3	2.00
	Total	12	

Test Statistics<sup>a,b</sup>

	DAYA SEBAR
Chi-Square	9.661
df	3
Asymp. Sig.	.022

a. Kruskal Wallis Test

b. Grouping Variable:

FPRMULA

- *Mann-Whitney-Test*

NPAR TESTS

/M-W= DAYA\_SEBAR BY FORMULA(1 4)

/MISSING ANALYSIS.

## Ranks

	FPRMULA	N	Mean Rank	Sum of Ranks
DAYA SEBAR	FORMULA 1	3	5.00	15.00
	KONTROL NEGATIF	3	2.00	6.00
	Total	6		

Test Statistics<sup>a</sup>

	DAYA SEBAR
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.023
Asymp. Sig. (2-tailed)	.043
Exact Sig. [2*(1-tailed Sig.)]	.100 <sup>b</sup>

a. Grouping Variable: FPRMULA

b. Not corrected for ties.



## NPAR TESTS

/M-W= DAYA\_SEBAR BY FORMULA(2 4)  
/MISSING ANALYSIS.

## Ranks

	FPRMULA	N	Mean Rank	Sum of Ranks
	FORMULA 2	3	5.00	15.00
DAYA SEBAR	KONTROL NEGATIF	3	2.00	6.00
	Total	6		

Test Statistics<sup>a</sup>

	DAYA SEBAR
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.023
Asymp. Sig. (2-tailed)	.043
Exact Sig. [2*(1-tailed Sig.)]	.100 <sup>b</sup>

## NPAR TESTS

/M-W= DAYA\_SEBAR BY FORMULA(3 4)  
/MISSING ANALYSIS.

## Ranks

	FPRMULA	N	Mean Rank	Sum of Ranks
	FORMULA 3	3	5.00	15.00
DAYA SEBAR	KONTROL NEGATIF	3	2.00	6.00
	Total	6		

Test Statistics<sup>a</sup>

	DAYA SEBAR
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.023
Asymp. Sig. (2-tailed)	.043
Exact Sig. [2*(1-tailed Sig.)]	.100 <sup>b</sup>

a. Grouping Variable: FPRMULA

b. Not corrected for ties.

## NPAR TESTS

/M-W= DAYA\_SEBAR BY FORMULA(1 2)  
/MISSING ANALYSIS.

**Ranks**

	FPRMULA	N	Mean Rank	Sum of Ranks
	FORMULA 1	3	2.33	7.00
DAYA SEBAR	FORMULA 2	3	4.67	14.00
	Total	6		

**Test Statistics<sup>a</sup>**

	DAYA SEBAR
Mann-Whitney U	1.000
Wilcoxon W	7.000
Z	-1.650
Asymp. Sig. (2-tailed)	.099
Exact Sig. [2*(1-tailed Sig.)]	.200 <sup>b</sup>

a. Grouping Variable: FPRMULA

b. Not corrected for ties.

## NPAR TESTS

```
/M-W= DAYA_SEBAR BY FORMULA (1 3)
/MISSING ANALYSIS.
```

**Ranks**

	FPRMULA	N	Mean Rank	Sum of Ranks
	FORMULA 1	3	2.00	6.00
DAYA SEBAR	FORMULA 3	3	5.00	15.00
	Total	6		

**Test Statistics<sup>a</sup>**

	DAYA SEBAR
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.023
Asymp. Sig. (2-tailed)	.043
Exact Sig. [2*(1-tailed Sig.)]	.100 <sup>b</sup>

a. Grouping Variable: FPRMULA

b. Not corrected for ties.

## NPAR TESTS

```
/M-W= DAYA_SEBAR BY FORMULA (2 3)
/MISSING ANALYSIS.
```



sebelum Pair 1 - sesudah pengujian	.99000	.08602	.04301	.85312	1.12688	23.017	3	.000
---	--------	--------	--------	--------	---------	--------	---	------

**c. Cycling Test Viskositas**

**d. Paired Samples Statistics**

	Mean	N	Std. Deviation	Std. Error Mean
sebelum pengujian	145.0000	4	31.09126	15.54563
sesudah pengujian	135.0000	4	26.45751	13.22876

**Paired Samples Correlations**

	N	Correlation	Sig.
sebelum pengujian & sesudah pengujian	4	.973	.027

**Paired Samples Test**

	Paired Differences					t	df	Sig. (2- tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
sebelum pengujian - sesudah pengujian	10.0000	8.16497	4.08248	-2.99228	22.99228	2.449	3	.092

**6. UJI EFEKTIVITAS KECEPATAN PENYEMBUHAN INFEKSI**

**a. Test of Normality**

**Tests of Normality<sup>b</sup>**

	Shapiro-Wilk		
	Statistic	df	Sig.
F1	.964	3	.637

F2	1.000	3	1.000
F3	1.000	3	1.000
KN	1.000	3	1.000
KP	1.000	3	1.000

a. Lilliefors Significance Correction

b. NORMAL is constant. It has been omitted.

### ***b. Test of Homogeneity of variances***

#### **Test of Homogeneity of Variances**

kecepatan penyembuhan infeksi

Levene Statistic	df1	df2	Sig.
1.257	5	12	.343

### ***c. Student Newman Keuls (SNK) Test***

#### **kecepatan penyembuhan infeksi**

Student-Newman-Keuls<sup>a</sup>

formula	N	Subset for alpha = 0.05		
		1	2	3
kontrol positif	3	7.0000		
formula 2	3	8.0000	8.0000	
formula 1	3	8.6667	8.6667	
formula 3	3	9.0000	9.0000	
kontrol negatif	3		10.0000	
tanpa perlakuan	3			14.0000
Sig.		.133	.133	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3,000.

## **7. UJI PENGURANGAN SKOR DIAMETER PENYEMBUHAN INFEKSI**

### ***a. Test of Normality***

#### **Tests of Normality**

	FORMULA	Shapiro-Wilk		
		Statistic	df	Sig.
SKOR	FORMULA 1	.906	10	.258
DIAMETER	FORMULA 2	.509	10	.000

FORMULA 3	.820	10	.026
KONTROL NEGATIF	.509	10	.000
KONTROL POSITIF	.686	10	.001
TANPA PERLAKUAN	.655	10	.000

a. Lilliefors Significance Correction

**b. Non parametric Test**

***Kruskal Wallis Test***

**Ranks**

	FORMULA	N	Mean Rank
	FORMULA 1	10	38.05
	FORMULA 2	10	34.60
	FORMULA 3	10	29.25
SKOR DIAMETER	KONTROL NEGATIF	10	24.30
	KONTROL POSITIF	10	39.55
	TANPA PERLAKUAN	10	17.25
	Total	60	

**Test Statistics<sup>a,b</sup>**

	SKOR DIAMETER
Chi-Square	16.049
df	5
Asymp. Sig.	.007

***Mann-Whitney-Test***

NPAR TESTS

/M-W= DIAMETER BY FORMULA(1 2)

/MISSING ANALYSIS.

**Ranks**

	FORMULA	N	Mean Rank	Sum of Ranks
	FORMULA 1	10	11.20	112.00
SKOR DIAMETER	FORMULA 2	10	9.80	98.00
	Total	20		

**Test Statistics<sup>a</sup>**



	SKOR DIAMETER
Mann-Whitney U	43.000
Wilcoxon W	98.000
Z	-.601
Asymp. Sig. (2-tailed)	.548
Exact Sig. [2*(1-tailed Sig.)]	.631 <sup>b</sup>

a. Grouping Variable: FORMULA

b. Not corrected for ties.

NPAR TESTS

```
/M-W= skor_diameter BY formula(1 3)
/MISSING ANALYSIS.
```

#### Ranks

	Formula	N	Mean Rank	Sum of Ranks
	FORMULA 1	10	11.95	119.50
Skor_diameter	FORMULA 3	10	9.05	90.50
	Total	20		

#### Test Statistics<sup>a</sup>

	Skor_diameter
Mann-Whitney U	35.500
Wilcoxon W	90.500
Z	-1.184
Asymp. Sig. (2-tailed)	.236
Exact Sig. [2*(1-tailed Sig.)]	.280 <sup>b</sup>

a. Grouping Variable: formula

b. Not corrected for ties.

NPAR TESTS

```
/M-W= skor_diameter BY formula(1 4)
/MISSING ANALYSIS.
```

#### Ranks

	Formula	N	Mean Rank	Sum of Ranks
	FORMULA 1	10	13.00	130.00
Skor_diameter	KONTROL NEGATIF	10	8.00	80.00
	Total	20		

**Test Statistics<sup>a</sup>**

	Skor_diameter
Mann-Whitney U	25.000
Wilcoxon W	80.000
Z	-2.147
Asymp. Sig. (2-tailed)	.032
Exact Sig. [2*(1-tailed Sig.)]	.063 <sup>b</sup>

a. Grouping Variable: formula

b. Not corrected for ties.

NPAR TESTS

/M-W= DIAMETER BY FORMULA(1 5)  
/MISSING ANALYSIS.

**Ranks**

	FORMULA	N	Mean Rank	Sum of Ranks
	FORMULA 1	10	10.15	101.50
SKOR DIAMETER	KONTROL POSITIF	10	10.85	108.50
	Total	20		

**Test Statistics<sup>a</sup>**

	SKOR DIAMETER
Mann-Whitney U	46.500
Wilcoxon W	101.500
Z	-.286
Asymp. Sig. (2-tailed)	.775
Exact Sig. [2*(1-tailed Sig.)]	.796 <sup>b</sup>

a. Grouping Variable: FORMULA

b. Not corrected for ties.

NPAR TESTS

/M-W= skor\_diameter BY formula(2 3)  
/MISSING ANALYSIS.

**Ranks**

	formula	N	Mean Rank	Sum of Ranks
	FORMULA 2	10	11.40	114.00
Skor_diameter	FORMULA 3	10	9.60	96.00
	Total	20		

**Test Statistics<sup>a</sup>**

	Skor_diameter
Mann-Whitney U	41.000
Wilcoxon W	96.000
Z	-.841
Asymp. Sig. (2-tailed)	.400
Exact Sig. [2*(1-tailed Sig.)]	.529 <sup>b</sup>

a. Grouping Variable: formula

b. Not corrected for ties.

NPAR TESTS

/M-W= skor\_diameter BY formula(2 4)  
/MISSING ANALYSIS.

**Ranks**

	formula	N	Mean Rank	Sum of Ranks
	FORMULA 2	10	12.30	123.00
Skor_diameter	KONTROL NEGATIF	10	8.70	87.00
	Total	20		

**Test Statistics<sup>a</sup>**

	Skor_diameter
Mann-Whitney U	32.000
Wilcoxon W	87.000
Z	-1.949
Asymp. Sig. (2-tailed)	.051
Exact Sig. [2*(1-tailed Sig.)]	.190 <sup>b</sup>

a. Grouping Variable: formula

b. Not corrected for ties.

NPAR TESTS

/M-W= DIAMETER BY FORMULA(2 5)  
/MISSING ANALYSIS.

**Ranks**

	FORMULA	N	Mean Rank	Sum of Ranks
	FORMULA 2	10	9.60	96.00
SKOR DIAMETER	KONTROL POSITIF	10	11.40	114.00
	Total	20		

**Test Statistics<sup>a</sup>**

	SKOR DIAMETER
Mann-Whitney U	41.000
Wilcoxon W	96.000
Z	-.849
Asymp. Sig. (2-tailed)	.396
Exact Sig. [2*(1-tailed Sig.)]	.529 <sup>b</sup>

a. Grouping Variable: FORMULA

b. Not corrected for ties.

NPAR TESTS

```
/M-W= skor_diameter BY formula(3 4)
/MISSING ANALYSIS.
```

**Ranks**

	formula	N	Mean Rank	Sum of Ranks
	FORMULA 3	10	11.30	113.00
Skor_diameter	KONTROL NEGATIF	10	9.70	97.00
	Total	20		

**Test Statistics<sup>a</sup>**

	Skor_diameter
Mann-Whitney U	42.000
Wilcoxon W	97.000
Z	-.750
Asymp. Sig. (2-tailed)	.453
Exact Sig. [2*(1-tailed Sig.)]	.579 <sup>b</sup>

a. Grouping Variable: formula

b. Not corrected for ties.

NPAR TESTS

```
/M-W= DIAMETER BY FORMULA(3 5)
/MISSING ANALYSIS.
```

**Ranks**

	FORMULA	N	Mean Rank	Sum of Ranks
SKOR DIAMETER	FORMULA 3	10	8.80	88.00
	KONTROL POSITIF	10	12.20	122.00

Total	20		
-------	----	--	--

**Test Statistics<sup>a</sup>**

	SKOR DIAMETER
Mann-Whitney U	33.000
Wilcoxon W	88.000
Z	-1.459
Asymp. Sig. (2-tailed)	.145
Exact Sig. [2*(1-tailed Sig.)]	.218 <sup>b</sup>

a. Grouping Variable: FORMULA

b. Not corrected for ties.

## NPAR TESTS

/M-W= DIAMETER BY FORMULA(4 5)  
/MISSING ANALYSIS.

**Ranks**

	FORMULA	N	Mean Rank	Sum of Ranks
	KONTROL NEGATIF	10	7.90	79.00
SKOR DIAMETER	KONTROL POSITIF	10	13.10	131.00
	Total	20		

**Test Statistics<sup>a</sup>**

	SKOR DIAMETER
Mann-Whitney U	24.000
Wilcoxon W	79.000
Z	-2.430
Asymp. Sig. (2-tailed)	.015
Exact Sig. [2*(1-tailed Sig.)]	.052 <sup>b</sup>

a. Grouping Variable: FORMULA

b. Not corrected for ties.

## NPAR TESTS

/M-W= skor\_diameter BY formula(4 6)  
/MISSING ANALYSIS.

## Ranks

	formula	N	Mean Rank	Sum of Ranks
	KONTROL NEGATIF	10	12.00	120.00
Skor_diameter	TANPA PERLAKUAN	10	9.00	90.00
	Total	20		

Test Statistics<sup>a</sup>

	Skor_diameter
Mann-Whitney U	35.000
Wilcoxon W	90.000
Z	-1.371
Asymp. Sig. (2-tailed)	.170
Exact Sig. [2*(1-tailed Sig.)]	.280 <sup>b</sup>

a. Grouping Variable: formula

b. Not corrected for ties.

## NPAR TESTS

/M-W= DIAMETER BY FORMULA(6 5)  
/MISSING ANALYSIS.

## Ranks

	FORMULA	N	Mean Rank	Sum of Ranks
	KONTROL POSITIF	10	14.00	140.00
SKOR DIAMETER	TANPA PERLAKUAN	10	7.00	70.00
	Total	20		

Test Statistics<sup>a</sup>

	SKOR DIAMETER
Mann-Whitney U	15.000
Wilcoxon W	70.000
Z	-2.928
Asymp. Sig. (2-tailed)	.003
Exact Sig. [2*(1-tailed Sig.)]	.007 <sup>b</sup>

a. Grouping Variable: FORMULA

b. Not corrected for ties.