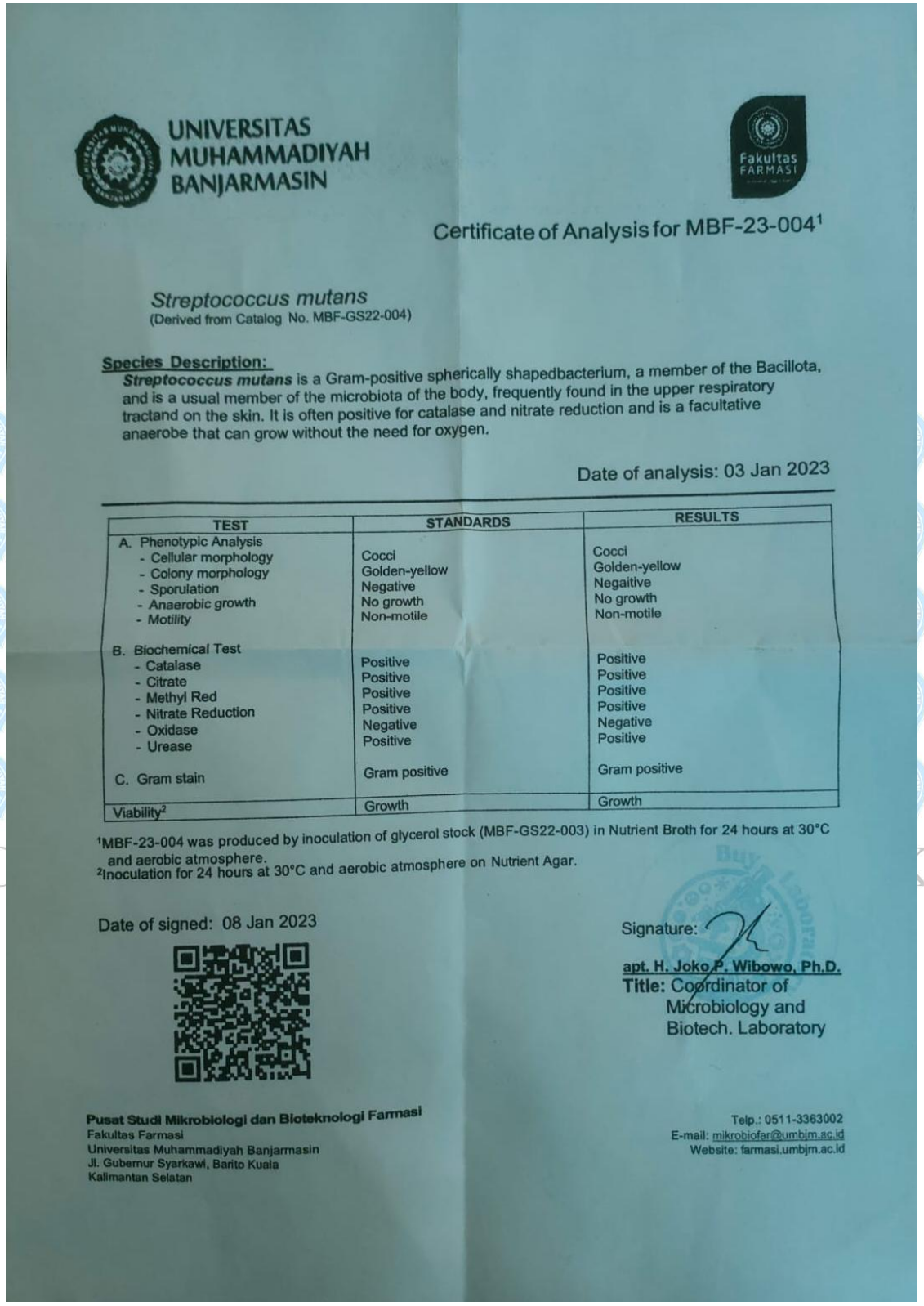
Lampiran

1. Sertifikat bakteri streptococcus mutans



UNIVERSITAS MUHAMMADIYAH BANJARMASIN

Fakultas FARMASI

Certificate of Analysis for MBF-23-004[1]

Streptococcus mutans
(Derived from Catalog No. MBF-GS22-004)

Species Description:
Streptococcus mutans is a Gram-positive spherically shapedbacterium, a member of the Bacillota, and is a usual member of the microbiota of the body, frequently found in the upper respiratory tractand on the skin. It is often positive for catalase and nitrate reduction and is a facultative anaerobe that can grow without the need for oxygen.

Date of analysis: 03 Jan 2023

TEST	STANDARDS	RESULTS
A. Phenotypic Analysis		
- Cellular morphology	Cocci	Cocci
- Colony morphology	Golden-yellow	Golden-yellow
- Sporulation	Negative	Negaitive
- Anaerobic growth	No growth	No growth
- Motility	Non-motile	Non-motile
B. Biochemical Test		
- Catalase	Positive	Positive
- Citrate	Positive	Positive
- Methyl Red	Positive	Positive
- Nitrate Reduction	Positive	Positive
- Oxidase	Negative	Negative
- Urease	Positive	Positive
C. Gram stain	Gram positive	Gram positive
Viability[2]	Growth	Growth

[1]MBF-23-004 was produced by inoculation of glycerol stock (MBF-GS22-003) in Nutrient Broth for 24 hours at 30°C and aerobic atmosphere.
[2]Inoculation for 24 hours at 30°C and aerobic atmosphere on Nutrient Agar.

Date of signed: 08 Jan 2023

Signature:

apt. H. Joko P. Wibowo, Ph.D.
Title: Coordinator of Microbiology and Biotech. Laboratory

Pusat Studi Mikrobiologi dan Bioteknologi Farmasi
Fakultas Farmasi
Universitas Muhammadiyah Banjarmasin
Jl. Gubernur Syarkawi, Barito Kuala
Kalimantan Selatan

Telp.: 0511-3363002
E-mail: mikrobiofar@umbjm.ac.id
Website: farmasi.umbjm.ac.id

2. Hasil uji fitokimia

KEMENTERIAN PENDIDIKAN TINGGI, SAINS,
DAN TEKNOLOGI
UNIVERSITAS TANJUNGPURA
FAKULTAS KEHUTANAN
Jalan Daya Nasional Pontianak, 78124
WhatsApp 0899-0695-566 Website: https://fahutan.untan.ac.id/ Email: fahutan@untan.ac.id

HASIL ANALISIS
Laboratorium Kimia Hasil Hutan

Nama Pengguna : 1. Yoga Dwi Putra
2. Abednego Edo
Nama Bahan : Ekstrak Daun Pulai
Jenis Analisis : Skrining Metabolit Sekunder
Tanggal Analisis : 5 Mei 2026

A. Hasil uji

Senyawa metabolit sekunder	Pereaksi	Hasil uji	Keterangan
Alkaloid	Mayer	+	Terbentuk endapan putih
	Dragendrotff	+	Terbentuk endapan jingga
	Bouchardat / Wagner	+	Terbentuk endapan Coklat
Flavonoid	Serbuk mg dan HCL pekat (Uji Shinoda)	+	Perubahan warna merah
Tanin	FeCL3 1%	+	Perubahan warna hitam
Triterpenoid / Steroid	Kloroform, Asam Asetat anhidrat, H_2SO_4 (Liebermann-Burchard)	+	Terjadi perubahan warna hijau (+Steroid)
Saponin	Aquades + HCL	-	Busa cepat hilang

Lampiran dokumentasi uji: https://ggr.sh/YTUV

Dilaporkan Oleh,
Analis

Alkhadi, SHut, MHut
Teknisi Laboratorium

3. Uji normalitas

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	konsenstrasi	Statistic	df	Sig.	Statistic	df	Sig.
zona_hambat	25%	.167	9	.200*	.974	9	.930
	35%	.221	9	.200*	.916	9	.357
	45%	.150	9	.200*	.951	9	.699
	ciprofloxacin	.162	9	.200*	.967	9	.865

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

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4. Uji homogenitas

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
zona_hambat	Based on Mean	1.437	3	32	.250
	Based on Median	1.175	3	32	.334
	Based on Median and with adjusted df	1.175	3	25.223	.339
	Based on trimmed mean	1.405	3	32	.259

5. Uji one way ANOVA

ANOVA

zona_hambat

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1335.038	3	445.013	391.848	.000
Within Groups	36.342	32	1.136		
Total	1371.380	35			

6. Uji post hoc tukey

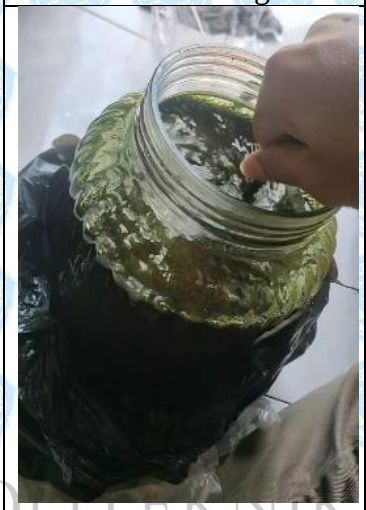
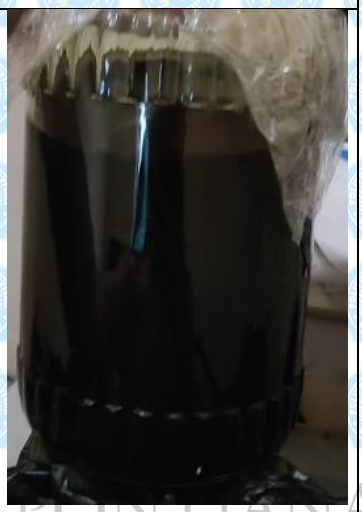
Multiple Comparisons

Dependent Variable: zona_hambat

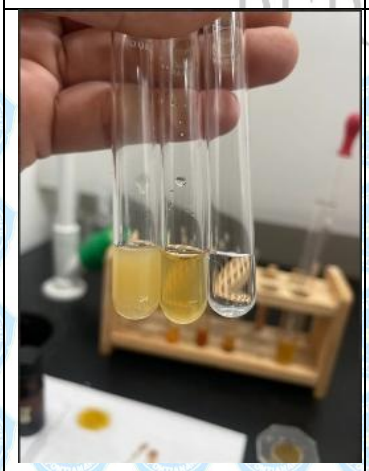
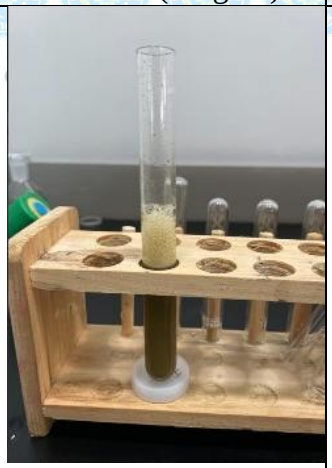
	(I) konsenstrasi	(J) konsenstrasi	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Bonferroni	25%	35%	-.35000	.50237	1.000	-1.7628	1.0628
		45%	-1.03889	.50237	.281	-2.4517	.3739
		ciprofloxacin	-14.50000*	.50237	.000	-15.9128	-13.0872
	35%	25%	.35000	.50237	1.000	-1.0628	1.7628
		45%	-.68889	.50237	1.000	-2.1017	.7239
		ciprofloxacin	-14.15000*	.50237	.000	-15.5628	-12.7372
	45%	25%	1.03889	.50237	.281	-.3739	2.4517
		35%	.68889	.50237	1.000	-.7239	2.1017
		ciprofloxacin	-13.46111*	.50237	.000	-14.8739	-12.0483
	ciprofloxacin	25%	14.50000*	.50237	.000	13.0872	15.9128
		35%	14.15000*	.50237	.000	12.7372	15.5628
		45%	13.46111*	.50237	.000	12.0483	14.8739
Games-Howell	25%	35%	-.35000	.54852	.918	-1.9202	1.2202
		45%	-1.03889	.58087	.314	-2.7011	.6233
		ciprofloxacin	-14.50000*	.43514	.000	-15.8159	-13.1841
	35%	25%	.35000	.54852	.918	-1.2202	1.9202
		45%	-.68889	.56161	.620	-2.2980	.9203
		ciprofloxacin	-14.15000*	.40906	.000	-15.3797	-12.9203
	45%	25%	1.03889	.58087	.314	-.6233	2.7011
		35%	.68889	.56161	.620	-.9203	2.2980
		ciprofloxacin	-13.46111*	.45152	.000	-14.8312	-12.0910
	ciprofloxacin	25%	14.50000*	.43514	.000	13.1841	15.8159
		35%	14.15000*	.40906	.000	12.9203	15.3797
		45%	13.46111*	.45152	.000	12.0910	14.8312

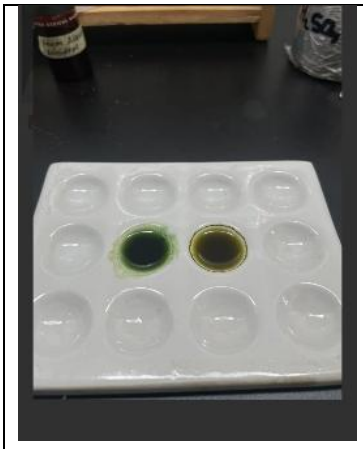
*. The mean difference is significant at the 0.05 level.

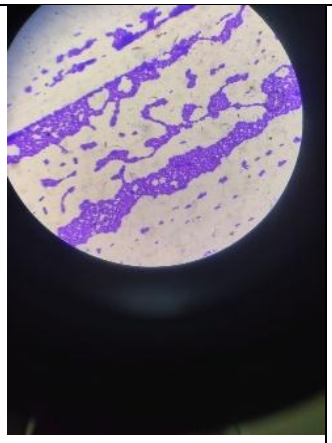
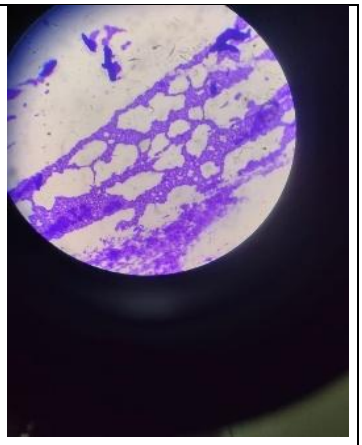
7. Dokumentasi penelitian

		
Pengambilan daun pulai di ambawang	Proses pengeringan daun pulai	Daun pulai yg sudah kering
		
Pembuatan meserasi	Proses penyaringan	Ekstrak yg di dapat

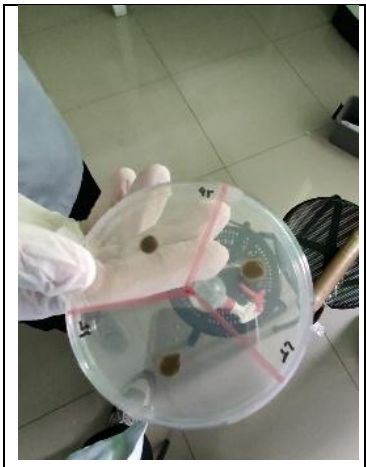
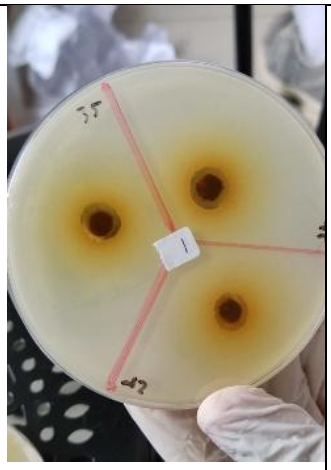
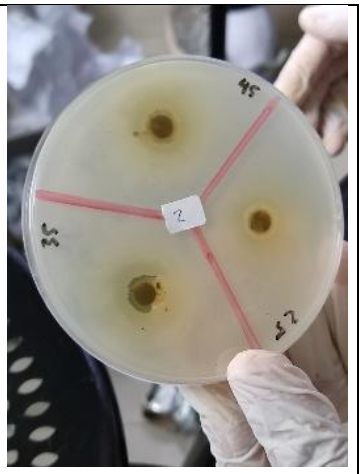
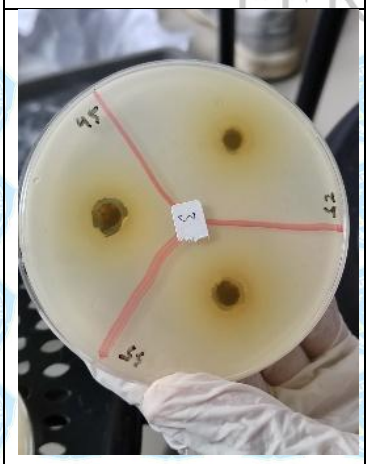
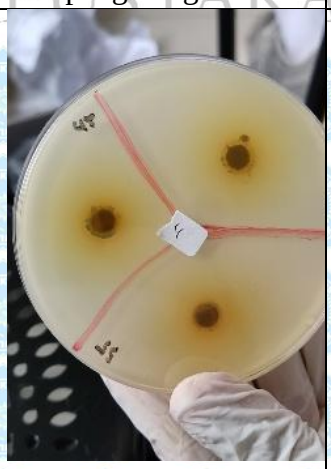
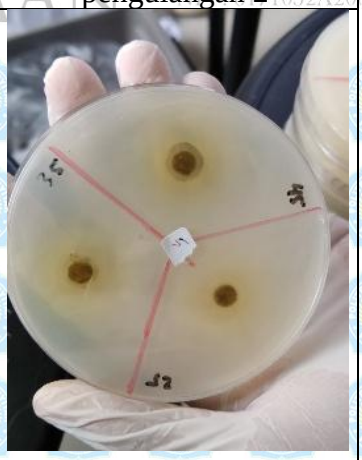
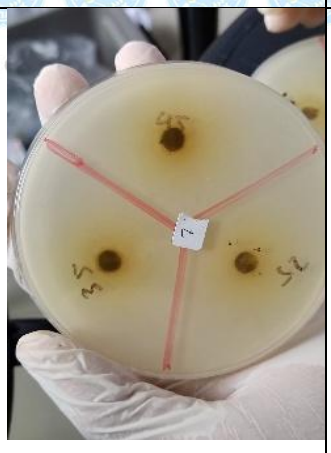
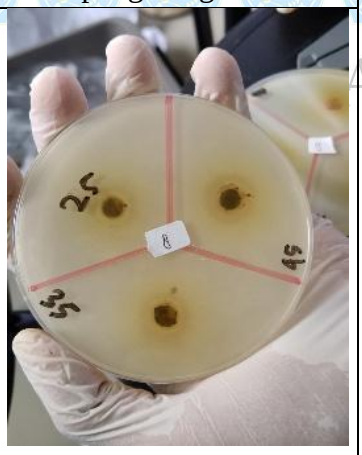
PERPUSTAKAAN 00001
POLITEKNIK 'AISYIYAH PONTIANAK

		
Hasil evaporasi	Hasil evaporasi	Proses evaporasi
		
Hasil fitokimia Alkaloid (Mayer)	Hasil fitokimia Alkaloid (Wagner)	Hasil fitokimia Alkaloid (Dragendroff)
		
Hasil fitokimia flavonoid	Hasil fitokimia saponin	Hasil fitokimia Tanin

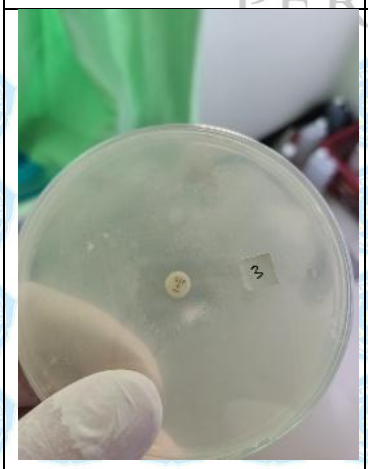
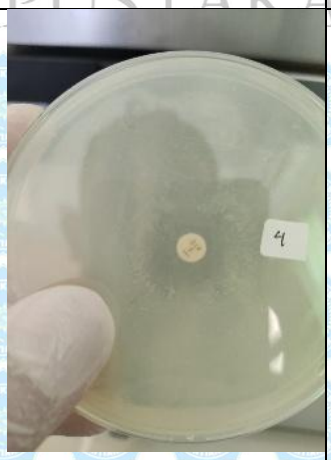
		
Hasil fitokimia Terpenoid	Proses penimbangan media	Proses penimbangan media
		
Media yg telah di autoclave	Proses penuangan media ke petri	Bakteri streptococcus pada media bap
		
Proses pembuatan preparat	Proses pembuatan preparat	Proses pembuatan preparat

		
Proses pembuatan preparat	Hasil dari preparat	Hasil preparat
		
Hasil dari Mc farland	Proses pembuatan konsetrasi	Proses pemipetaan aquadest steril
		
Konsentrasi 25%35%45%	Media mah yg telah jadi	Proses penempelan disc cakram

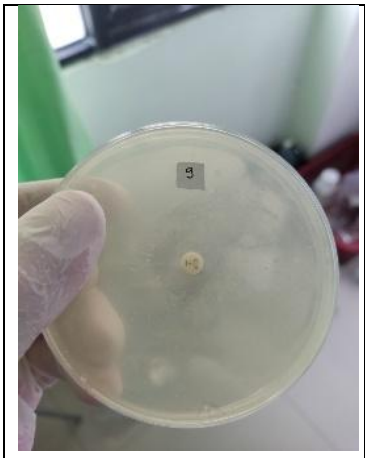
PERPUSTAKAAN NPP. 6171052A2000001

		
Hasil penempelan disc cakram	Hasil zona hambat pengulangan 1	Hasil zona hambat pengulangan 2
		
Hasil zona hambat pengulangan 3	Hasil zona hambat pengulangan 4	Hasil zona hambat pengulangan 5
		
Hasil zona hambat pengulangan 6	Hasil zona hambat pengulangan 7	Hasil pengulangan zona hambat 8`

PERPUSTAKAAN 1052A2000001
PO AK

 Hasil zona hambat pengulangan 9	 Pengulangan 1 kontrol positif	 Pengulangan 2 kontrol positif
 Pengulangan 3 kontrol positif	 Pengulangan 4 kontrol positif	 Pengulangan 5 kontrol positif
 Pengulangan 6 kontrol positif	 Pengulangan 7 kontrol positif	 Pengulangan 8 kontrol positif

PERPUSTAKAAN NPP. 6171052A2000001

 Pengulangan 9 kontrol positif		

PERPUSTAKAAN NPP. 6171052A2000001

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