

DAFTAR PUSTAKA

- Abidah, A. 2010. Perubahan Bentuk dan Fungsi Rumah Bugis-Makassar di Makassar. *Jurnal Forum Bangunan*, 8, 21–25.
- Akbar, A. M. 2017. Konsep Dan Bentuk Ruang *Rakkeang* Rumah Tradisional Bangsawan Bugis di Bone Sulawesi Selatan. *LOSARI: Jurnal Arsitektur Kota Dan Pemukiman*, 55–61.
- Alkindi, H., Purwanto, Y., & Wulandani, D. 2015. Analisis Cfd Aliran Udara Panas Pada Pengering Tipe Rak Dengan Sumber Energi Gas Buang. *Jurnal Keteknikan Pertanian*.
- Azzamudin, R., & Marwan Effendy, S. T. 2017. *Analisis Distribusi Aliran Udara Pada Ruangan Dengan Variabel Temperatur dan Penempatan AC Menggunakan Metode Computational Fluid Dynamics (CFD)*. Universitas Muhammadiyah Surakarta.
- Cengel, Y. 2003. Heat Transfer A Practical Approach, WCB McGraw-Hill. *Ellison, New York*, 609.
- Feriska, A., Triyanto, D.,(2017). *Jurnal Coding Sistem Untan Rancang Bangun Penjemur Dan Pengering Pakaian Otomatis Jurnal Coding Sistem Komputer Untan ISSN : 2338-493X. 05(2)*.
- Haryadi, Y. (2010). Peranan Penyimpanan dalam Menunjang Ketahanan Pangan. *Jurnal Pangan*, 19(4), 345–359.
- Hendrawan MA., Purboputro PI., Saputro MA., Setiadi W. 2018. Perancanganchassis Mobil Listrik Prototype "Ababil" dan Simulasi Pembebanan Statik dengan Menggunakan SolidWorks Premium 2016.
- Holman, J. P., & Jasfie, E. 1997. Perpindahan kalor, edisi ke-2. Jakarta: Erlangga.
- Ihsan, S. 2019. Analisis Bentuk Aliran Pada Kondensor Tipe Shell Dan Tube Menggunakan Simulasi Cfd (Computational Fluid Dynamics). *Journal of Industrial Engineering and Operation Management (JIEOM)*, 1(1), 19–22.
- Jalaluddin, Akmal S., Nasrul Za., Ishak. 2019. Analisis Profil Aliran Fluida Cair dan Pressure Drop pada Pipa L menggunakan Metode Simulasi Computational Fluid Dinamic (CFD). *Jurnal Teknologi Kimia Unimal*, 8(2),53-72.
- Nuryawati, T. 2011. Simulasi Distribusi Suhu dan Pola Aliran Udara dalam Rumah Tanaman Tipe Modified Arch Menggunakan Computational Fluid Dynamics. Institut Pertanian Bogor: Bogor.[*Skripsi*].
- Purnama., Ansar dan Sirajuddin H.A. 2013. Keterkaitan Suhu dan Kelembaban Udara Ruang Penyimpanan terhadap Kadar Air Jagung pada Bangunan Penyimpanan (Studi Kasus Pada Gudang K.U.D. Di Desa Pringgasela Kecamatan Pringgasela). Universitas Mataram: Mataram.

- Romdhonah Y. 2011. Simulasi Distribusi Suhu dan Kelembaban Udara untuk Pengembangan Desain Rumah Tanaman di Daerah Tropika Basah. *Tesis*. Institut Pertanian Bogor. Bogor.
- Sakti, W. B. 2013. Panduan Praktis Analisa CFD Menggunakan *SolidWorks Flow Simulation*. *Wbsakti.Wordpreess.Com*.
- Simanjuntak JSC. 2018. Simulasi Aliran Fluida pada Alat Penukar Kalor Udara-Tanah Bersirip Siklus Terbuka dengan Menggunakan Perhitungan Dinamika Fluida. *Skripsi*. Universitas Sumatera Utara: Medan.
- Taufiq, M. (2004). Pengaruh Temperatur Terhadap Laju Pengeringan Jagung Pada Pengering Konvensional Dan Fluidized Bed. *Skripsi*.
- Warto. 2014. Prediksi Pola Aliran dan Distribusi Suhu Udara pada Rumah Tanaman Tipe Modified Standard Peak di Kecamatan Dramaga, Bogor. Institut Pertanian Bogor: Bogor.[*Skripsi*].

LAMPIRAN

Lampiran 1. Bahasa Program

```
/*ANALISIS ALIRAN UDARA DAN PERPINDAHAN PANAS PADA
RAKKEANG
(LOTENG RUMAH TRADISIONAL BUGIS) MENGGUNAKAN
COMPUTATIONAL FLUID DINAMICS (CFD)
Gunawan (G041171003)
* Dosen Pembimbing
* Dr. Abdul Azis S, S.TP., M.Si.
* Prof. Dr. Ir. Salengke, M.Sc.
*/
//lcd//
#include <Wire.h>
#include <LiquidCrystal_I2C.h>
LiquidCrystal_I2C lcd(0x27,20,4);

//RTC//
#include <DS3231.h>
DS3231 rtc(SDA, SCL); // inisialisasi penggunaan i2c
Time t;
#define buz 22
int Hor;
int Min;
int Sec;
// data loger//
#include <SPI.h>
#include <SD.h>
const int CS = 53;
File dataku;
int count = 1;
// MOSI 51, MISO50, SCK52, CS53//

//sensor DHT 11//
#include "DHT.h"

// definisikan pin yang digunakan utk sensor DHT11

#define DHTPIN 2
#define DHTPIN3 3
#define DHTPIN4 4
#define DHTPIN5 5
#define DHTPIN6 6
#define DHTPIN7 7
#define DHTPIN8 8
#define DHTPIN9 9
```

```

#define DHTPIN10 10
#define DHTPIN11 11
#define DHTPIN12 12
#define DHTPIN13 13
#define DHTPIN14 14
#define DHTPIN15 15

// Tentukan jenis DHT yang digunakan (pilih salah satu)
// Saat ini yang dipilih adalah DHT11
#define DHTTYPE DHT11 // DHT 11
//#define DHTTYPE DHT22 // DHT 22 (AM2302)
//#define DHTTYPE DHT21 // DHT 21 (AM2301)

DHT dht(DHTPIN, DHTTYPE);
DHT dht1(DHTPIN3, DHTTYPE);
DHT dht2 (DHTPIN4, DHTTYPE);
DHT dht3 (DHTPIN5, DHTTYPE);
DHT dht4 (DHTPIN6, DHTTYPE);
DHT dht5 (DHTPIN7, DHTTYPE);
DHT dht6 (DHTPIN8, DHTTYPE);
DHT dht7 (DHTPIN9, DHTTYPE);
DHT dht8 (DHTPIN10, DHTTYPE);
DHT dht9 (DHTPIN11, DHTTYPE);
DHT dht10 (DHTPIN12, DHTTYPE);
DHT dht11 (DHTPIN13, DHTTYPE);
DHT dht12 (DHTPIN14, DHTTYPE);
DHT dht13 (DHTPIN15, DHTTYPE);

void setup() {
Serial.begin(9600);
Serial.println("DHT TES.. ");
dht.begin();
dht1.begin();
dht2.begin();
dht3.begin();
dht4.begin();
dht5.begin();
dht6.begin();
dht7.begin();
dht8.begin();
dht9.begin();
dht10.begin();
dht11.begin();
dht12.begin();
dht13.begin();
rtc.begin();
lcd.init();
lcd.backlight();

```

```

lcd.begin(20,4);

Serial.print("Membaca SDcard... ");
if (!SD.begin(CS))
{
    Serial.println("GAGAL/SDcard rusak!");
    while (1);
}
Serial.println("Berhasil");

//setting pertama download program

rtc.setDate(14, 7, 2021); //mensetting tanggal 07 april 2018
rtc.setTime(14, 20, 00); //menset jam 22:00:00
rtc.setDOW(WEDNESDAY); //menset hari "Sabtu"
}

void loop() {
{rtc.setDOW(WEDNESDAY);

t = rtc.getTime();

Hor = t.hour;

Min = t.min;

Sec = t.sec;
Serial.print(rtc.getDOWStr()); //prosedur pembacaan hari
Serial.print(" ");

Serial.print(rtc.getDateStr()); //prosedur pembacaan tanggal
Serial.print(" -- ");

Serial.println(rtc.getTimeStr());
delay (1000);}

// Baca humidity dan temperature
float h = dht.readHumidity();
float t = dht.readTemperature();

float T = ((t*0.8505)+4.7062);
float H = ((h*0.8333)+10.8333);

float h1 = dht1.readHumidity();
float t1 = dht1.readTemperature();

float T1 = ((t1*0.4571)+19.029);
float H1 = ((h1*0.7857) + 14.619);

```

```

float h2 = dht2.readHumidity();
float t2 = dht2.readTemperature();

float T2 = ((t2*0.7131)+10.873);
float H2 = ((h2*0.75) + 12.333);

float h3 = dht3.readHumidity();
float t3 = dht3.readTemperature();

float T3 = ((t3* 0.8036)+ 6.4911);
float H3 = ((h3*0.8158) + 12.211);

float h4 = dht4.readHumidity();
float t4 = dht4.readTemperature();

float T4 = ((t4*0.9214) + 2.2786);
float H4 = ((h4*0.75) + 16.917);

float h5 = dht5.readHumidity();
float t5 = dht5.readTemperature();

float T5 = ((t5*0.7429) + 9.5571);
float H5 = ((h5*0.7895) + 14.105);

float h6 = dht6.readHumidity();
float t6 = dht6.readTemperature();

float T6 = ((t6*0.8542) + 5.4902);
float H6 = ((h6*0.7895) + 12.737);

float h7 = dht7.readHumidity();
float t7 = dht7.readTemperature();

float T7 = ((t7* 0.675) + 11.65);
float H7 = ((h7*0.8158) + 12.2111);

float h8 = dht8.readHumidity();
float t8 = dht8.readTemperature();

float T8 = ((t8*0.8786) + 3.3357);
float H8 = ((h8*0.8158)+ 12.211);

float h9 = dht9.readHumidity();
float t9 = dht9.readTemperature();

float T9 = ((t9*0.95) + 1.75);
float H9 = ((h9*0.5) + 31.167);

```

```

float h10 = dht10.readHumidity();
float t10 = dht10.readTemperature();

float T10 = ((t10*0.9214) + 1.6571);
float H10 = ((h10*0.7895) + 12);

float h11 = dht11.readHumidity();
float t11 = dht11.readTemperature();

float T11 = ((t11*0.9143) + 4.0571);
float H11 = ((h11*0.6429) + 23.357);

float h12 = dht12.readHumidity();
float t12 = dht12.readTemperature();

float T12 = ((t12* 0.775) + 7.05);
float H12 = ((h12*0.75) + 13.083);

float h13 = dht13.readHumidity();
float t13 = dht13.readTemperature();

float T13 = ((t13*0.9135) + 3.274);
float H13 = ((h13*= 0.7895) + 13);

// Cek hasil pembacaan, dan tampilkan bila ok

if (isnan(T) || isnan(H)) {
    Serial.println("Failed to read from DHT");
} else {
    Serial.print("Humidity: ");//kelembaban
    Serial.print(H);
    Serial.print(" %t ");
    Serial.print("Temperature: ");
    Serial.print(T);
    Serial.println(" *C");
}

if (isnan(T1) || isnan(H1)) {
    Serial.println("Failed to read from DHT");
} else {
    Serial.print("Humidity: ");//kelembaban
    Serial.print(H1);
    Serial.print(" %t ");
    Serial.print("Temperature: ");
    Serial.print(T1);
    Serial.println(" *C");
}

if (isnan(T2) || isnan(H2)) {

```

```

Serial.println("Failed to read from DHT");}
else {
Serial.print("Humidity: ");//kelembaban
Serial.print(H2);
Serial.print(" %t ");
Serial.print("Temperature: ");
Serial.print(T2);
Serial.println(" *C");}

if (isnan(T3) || isnan(H3)) {
Serial.println("Failed to read from DHT");}
else {
Serial.print("Humidity: ");//kelembaban
Serial.print(H3);
Serial.print(" %t ");
Serial.print("Temperature: ");
Serial.print(T3);
Serial.println(" *C");;;}

if (isnan(T4) || isnan(H4)) {
Serial.println("Failed to read from DHT");}
else {
Serial.print("Humidity: ");//kelembaban
Serial.print(H4);
Serial.print(" %t ");
Serial.print("Temperature: ");
Serial.print(T4);
Serial.println(" *C");}

if (isnan(T5) || isnan(H5)) {
Serial.println("Failed to read from DHT");}
else {
Serial.print("Humidity: ");//kelembaban
Serial.print(H5);
Serial.print(" %t ");
Serial.print("Temperature: ");
Serial.print(T5);
Serial.println(" *C");}

if (isnan(T6) || isnan(H6)) {
Serial.println("Failed to read from DHT");}
else {
Serial.print("Humidity: ");//kelembaban
Serial.print(H6);
Serial.print(" %t ");
Serial.print("Temperature: ");
Serial.print(T6);
Serial.println(" *C");}

```

```

if (isnan(T7) || isnan(H7)) {
    Serial.println("Failed to read from DHT");
} else {
    Serial.print("Humidity: ");//kelembaban
    Serial.print(H7);
    Serial.print(" %t ");
    Serial.print("Temperature: ");
    Serial.print(T7);
    Serial.println(" *C");
}

if (isnan(T8) || isnan(H8)) {
    Serial.println("Failed to read from DHT");
} else {
    Serial.print("Humidity: ");//kelembaban
    Serial.print(H8);
    Serial.print(" %t ");
    Serial.print("Temperature: ");
    Serial.print(H8);
    Serial.println(" *C");
}

if (isnan(T9) || isnan(H9)) {
    Serial.println("Failed to read from DHT");
} else {
    Serial.print("Humidity: ");//kelembaban
    Serial.print(H9);
    Serial.print(" %t ");
    Serial.print("Temperature: ");
    Serial.print(H9);
    Serial.println(" *C");
}

if (isnan(T10) || isnan(H10)) {
    Serial.println("Failed to read from DHT");
} else {
    Serial.print("Humidity: ");//kelembaban
    Serial.print(H10);
    Serial.print(" %t ");
    Serial.print("Temperature: ");
    Serial.print(T10);
    Serial.println(" *C");
}

if (isnan(T11) || isnan(H11)) {
    Serial.println("Failed to read from DHT");
} else {
    Serial.print("Humidity: ");//kelembaban
    Serial.print(H11);
    Serial.print(" %t ");
    Serial.print("Temperature: ");
}

```

```

Serial.print(T11);
Serial.println(" *C");

if (isnan(T12) || isnan(H12)) {
    Serial.println("Failed to read from DHT");
    else {
        Serial.print("Humidity: ");//kelembaban
        Serial.print(H12);
        Serial.print(" %t ");
        Serial.print("Temperature: ");
        Serial.print(T12);
        Serial.println(" *C");

if (isnan(T13) || isnan(H13)) {
    Serial.println("Failed to read from DHT");
    else {
        Serial.print("Humidity: ");//kelembaban
        Serial.print(H13);
        Serial.print(" %t ");
        Serial.print("Temperature: ");
        Serial.print(T13);
        Serial.println(" *C");

//lcd//

lcd.setCursor(1,0);
lcd.print("SENSOR SUHU DAN RH");

lcd.setCursor(0,1);
lcd.print("T=");
lcd.print(T );

lcd.print("C" );
lcd.setCursor(0,2);
lcd.print("H=");
lcd.print(H );
lcd.print("% ");

lcd.setCursor(10,1);
lcd.print("T=");
lcd.print(T1);
lcd.write ((char)223);
lcd.print("C" );
lcd.setCursor(10,2);
lcd.print("H=");
lcd.print(H1);
lcd.print("% ");

```

```

lcd.setCursor(0,3);
lcd.print rtc.getDateStr(); //prosedur pembacaan tanggal
lcd.print("-");
lcd.print rtc.getTimeStr();

// data loger//
Serial.print(count);

dataku = SD.open("sensor.txt", FILE_WRITE);
if (dataku)
{
    dataku.println("");
    dataku.print(count);
    dataku.println(" ");
    dataku.print(T);
    dataku.println(" ");
    dataku.print(H);
    dataku.println(" ");
    dataku.print(T1);
    dataku.println(" ");
    dataku.print(H1);
    dataku.println(" ");
    dataku.print(T2);
    dataku.println(" ");
    dataku.print(H2);
    dataku.println(" ");
    dataku.print(T3);
    dataku.println(" ");
    dataku.print(H3);
    dataku.println(" ");
    dataku.print(T4);
    dataku.println(" ");
    dataku.print(H4);
    dataku.println(" ");
    dataku.print(T5);
    dataku.println(" ");
    dataku.print(H5);
    dataku.println(" ");
    dataku.print(T6);
    dataku.println(" ");
    dataku.print(H6);
    dataku.println(" ");
    dataku.print(T7);
    dataku.println(" ");
    dataku.print(H7);
    dataku.println(" ");
    dataku.print(T8);
    dataku.println(" ");
}

```

```

dataku.print(H8);
dataku.println(" ");
dataku.print(T9);
dataku.println(" ");
dataku.print(H9);
dataku.println(" ");
dataku.print(T10);
dataku.println(" ");
dataku.print(H10);
dataku.println(" ");
dataku.print(T11);
dataku.println(" ");
dataku.print(H11);
dataku.println(" ");
dataku.print(T12);
dataku.println(" ");
dataku.print(H12);
dataku.println(" ");
dataku.print(T13);
dataku.println(" ");
dataku.print(H13);
dataku.println(" ");
dataku.print(rtc.getDateStr()); //prosedur pembacaan tanggal
dataku.print(" -- ");
dataku.println(rtc.getTimeStr());
dataku.close();

Serial.println(" | Data Tersimpan");
if(count>100000000) count=0;
}

else
{
    Serial.println(" | Gagal Tersimpan!");
}
count = count + 1;
delay (300000);
}

```

Lampiran 2. Data Hasil Pengukuran Suhu dan Kelembaban Internal Rakkeang

Tabel Data hasil pengukuran bagian 1

DATA HASIL PENGUKURAN (1)																				
Hari/Tanggal	No	1		2		3		4		5		6		7		8		9		
		suhu	RH																	
Rabu 14 Juli 2021 pukul 18.00	1	31,6	53	32	52	31,9	55	31,1	53	30,9	51	31,9	52	30,6	53	31,6	53	31,5	51	
Rabu 14 Juli 2021 pukul 18.30	2	30,2	57	30,6	54	30,6	56	30,9	56	30,2	52	30,4	55	29,1	59	30,3	55	30,1	54	
Rabu 14 Juli 2021 pukul 19.00	3	28,4	60	28,7	57	28,7	58	29,2	58	29,3	56	28,6	59	27,5	63	28,5	58	29,4	59	
Rabu 14 Juli 2021 pukul 19.30	4	27,6	61	27,9	59	28	59	28,4	60	28,3	59	27,7	61	26,6	67	27,7	60	28,5	61	
Rabu 14 Juli 2021 pukul 20.00	5	26,9	63	27,3	60	27,2	61	27,8	60	27,7	62	27,1	66	26	70	26,9	64	27,8	64	
Rabu 14 Juli 2021 pukul 20.30	6	26,5	63	26,8	63	26,8	62	26,3	63	27,3	64	26,6	68	25,6	70	26,6	65	26,4	66	
Rabu 14 Juli 2021 pukul 21.00	7	25,9	66	26,2	65	26,3	64	26,8	65	26,6	66	26	69	24,9	71	26	68	25,8	68	
Rabu 14 Juli 2021 pukul 21.30	8	25,5	68	25,9	68	25,8	67	25,4	68	25,3	67	25,7	72	24,6	73	25,7	70	25,5	69	
Rabu 14 Juli 2021 pukul 22.00	9	25,3	69	25,7	70	25,6	69	25,2	70	25,1	69	25,5	71	24,3	73	25,4	71	25,3	70	
Rabu 14 Juli 2021 pukul 22.30	10	24,8	70	25,2	71	25,2	70	25,6	71	24,6	70	25	71	23,9	74	24,9	73	24,8	72	
Rabu 14 Juli 2021 pukul 23.00	11	24,7	70	25,1	70	25,1	72	25,6	70	24,6	72	24,8	74	23,8	73	24,8	74	24,6	73	
Rabu 14 Juli 2021 pukul 23.30	12	24,1	73	24,6	73	24,6	73	25	73	23,9	74	24,3	75	23,4	74	24,2	75	24,1	74	
Rabu 14 Juli 2021 pukul 24.00	13	23,7	75	24	73	24,1	75	24,6	75	23,5	78	23,9	78	22,9	77	23,8	77	23,7	77	
Kamis 15 Juli 2021 pukul 00.30	14	23,5	79	23,9	75	23,9	77	24,4	78	23,3	79	23,7	79	22,8	79	23,7	79	23,5	79	
Kamis 15 Juli 2021 pukul 01.00	15	23,9	78	24,3	77	24,3	79	24,7	80	23,6	80	24	80	23,1	77	23,9	80	24	77	
Kamis 15 Juli 2021 pukul 01.30	16	23,8	79	24,1	80	24,2	81	24,6	80	23,6	80	24	80	23	79	23,8	81	23,9	79	
Kamis 15 Juli 2021 pukul 02.00	17	23,7	82	23,9	82	23,9	82	23,4	82	23,3	81	23,9	81	22,9	83	23,7	81	23,7	83	
Kamis 15 Juli 2021 pukul 02.30	18	23,5	82	23,8	81	23,8	82	23,2	81	23,1	81	23,7	82	22,7	80	23,6	81	23,6	80	
Kamis 15 Juli 2021 pukul 03.00	19	23,7	82	24	80	24	81	23,5	81	23,4	81	23,9	82	22,9	80	23,7	81	23,8	81	
Kamis 15 Juli 2021 pukul 03.30	20	23,8	81	24,1	80	24,2	81	23,6	81	23,6	82	24	82	23,1	80	23,8	81	23,9	81	
Kamis 15 Juli 2021 pukul 04.00	21	23,7	82	24	81	24,1	81	23,5	82	23,4	82	23,9	82	22,9	81	23,7	82	23,7	81	
Kamis 15 Juli 2021 pukul 04.30	22	23,6	82	23,9	81	24	84	23,4	82	23,3	83	23,8	83	22,8	81	23,7	82	22,7	83	
Kamis 15 Juli 2021 pukul 05.00	23	23,2	82	23,5	83	23,6	85	23	84	22,9	84	23,4	83	22,4	83	23,3	84	22,1	84	

Kamis 15 Juli 2021 pukul 05.30	24	22,9	87	23,2	86	23,3	86	22,7	88	22,6	86	23,1	87	22,1	87	22,9	88	22,9	87
Kamis 15 Juli 2021 pukul 06.00	25	23,2	87	23,5	86	23,5	90	24	86	23,9	85	23,4	86	22,3	85	23,2	87	23,2	85
Kamis 15 Juli 2021 pukul 06.30	26	23,2	87	23,5	87	23,6	89	24	86	23,9	86	23,4	87	22,4	85	23,3	88	23,1	85
Kamis 15 Juli 2021 pukul 07.00	27	23,2	88	23,5	88	23,5	91	24	87	23,9	87	23,4	88	22,4	86	23,2	90	24,1	86
Kamis 15 Juli 2021 pukul 07.30	28	24,2	83	24,5	83	24,4	85	24,9	82	24,8	80	24,4	84	23,4	84	24,2	86	25,1	84
Kamis 15 Juli 2021 pukul 08.00	29	25,3	79	25,6	81	25,5	82	25,9	80	25,7	77	25,6	78	24,4	79	25,3	80	26,5	79
Kamis 15 Juli 2021 pukul 08.30	30	25,9	77	26,2	77	26,1	79	26,5	77	26,4	74	26,2	75	25,1	75	26	71	27,2	74
Kamis 15 Juli 2021 pukul 09.00	31	28,4	70	29	73	29	70	29,1	70	28,9	65	29,2	66	28,3	68	29	63	31,5	63
Kamis 15 Juli 2021 pukul 09.30	32	33,4	49	32,1	52	34,1	52	33,5	50	33,4	45	32,6	53	33,7	49	32,5	47	33,2	46
Kamis 15 Juli 2021 pukul 10.00	33	32	52	32,4	52	32,3	50	33,6	50	33,6	44	32,7	52	31,6	50	32,8	46	33,2	48
Kamis 15 Juli 2021 pukul 10.30	34	32,3	53	32,6	49	32,4	50	33,7	49	33,8	43	33	50	31,7	48	32,9	44	33,5	49
Kamis 15 Juli 2021 pukul 11.00	35	33,8	45	34,1	42	33,8	46	34,1	45	34,2	40	35	44	33,5	42	34,5	40	33,7	44
Kamis 15 Juli 2021 pukul 11.30	36	37,3	37	38	37	37,2	38	37,4	38	37,7	37	38,9	37	34,4	39	38,6	37	36,4	35
Kamis 15 Juli 2021 pukul 12.00	37	41	31	41,5	33	40,7	34	40,7	31	41,1	31	41,9	32	41,4	30	42,4	34	39,3	27
Kamis 15 Juli 2021 pukul 12.30	38	43,7	27	44,1	30	43,1	30	43,2	28	43,2	26	43,3	28	43,4	27	44	27	44,7	25
Kamis 15 Juli 2021 pukul 13.00	39	42	28	42,3	31	41,3	28	41,4	30	41,2	29	40,5	30	41,8	30	42,4	29	42,7	29
Kamis 15 Juli 2021 pukul 13.30	40	40,9	30	41,1	34	40,2	27	40,3	32	40,2	30	41	32	40,1	31	40,9	32	43,7	28
Kamis 15 Juli 2021 pukul 14.00	41	42,4	29	42,6	32	41,5	33	41,7	31	41,1	32	43,5	32	41,7	32	41,9	37	45,7	28
Kamis 15 Juli 2021 pukul 14.30	42	40,7	31	40,9	34	40,2	34	40,2	35	40,1	36	41,7	34	40	33	40,8	39	43,5	29
Kamis 15 Juli 2021 pukul 15.00	43	36,7	37	36,9	39	36,4	41	36,7	43	36,9	41	37,5	43	33,1	40	37,1	44	35,6	39
Kamis 15 Juli 2021 pukul 15.30	44	35,5	41	35,8	43	35,5	43	35,7	45	35,8	43	36	47	31,7	43	35,7	46	34,2	41
Kamis 15 Juli 2021 pukul 16.00	45	34,6	43	34,8	45	34,4	46	34,9	48	34,7	44	35	49	33,5	46	34,5	48	33,2	47
Kamis 15 Juli 2021 pukul 16.30	46	37,7	37	38,2	37	37,4	38	37,1	41	37	40	39,1	40	34,4	38	38	41	40,9	36
Kamis 15 Juli 2021 pukul 17.00	47	33,3	47	33,5	49	33,3	50	33,6	52	33,6	46	33,5	52	32,2	47	33,3	51	34,2	46
Kamis 15 Juli 2021 pukul 17.30	48	31,3	50	31,7	52	31,4	53	32	54	32	47	31,5	56	30,2	52	31,4	54	32,2	51

Kamis 15 Juli 2021 pukul 06.00	25	23,9	86	22	87	23,8	88	24,2	85	24,3	88	23,7	89	23,2	84	24,1	91	23,7	84
Kamis 15 Juli 2021 pukul 06.30	26	23,9	86	23	85	23,9	87	24,2	85	24,3	88	23,7	89	23,3	84	24,2	91	23,8	84
Kamis 15 Juli 2021 pukul 07.00	27	23,9	87	24	83	23,8	89	24,2	86	24,3	89	23,7	90	23,3	85	24,1	92	23,6	85
Kamis 15 Juli 2021 pukul 07.30	28	24,9	82	25	80	24,7	83	25,1	81	25,2	84	24,7	86	24,3	83	25,1	88	25,6	83
Kamis 15 Juli 2021 pukul 08.00	29	26	78	26,1	77	25,8	80	26,1	79	26,1	80	25,9	81	25,3	78	26,2	84	26	78
Kamis 15 Juli 2021 pukul 08.30	30	26,6	76	26,7	75	26,4	77	26,7	76	26,8	75	26,5	79	26	74	26,9	80	27,7	73
Kamis 15 Juli 2021 pukul 09.00	31	28,1	69	28,5	68	29,3	68	29,3	69	29,3	67	29,5	72	29,2	67	29,9	71	31	62
Kamis 15 Juli 2021 pukul 09.30	32	32,1	48	32,6	50	32,4	46	32,7	49	32,2	52	32,9	52	34,6	48	33,4	48	32,7	45
Kamis 15 Juli 2021 pukul 10.00	33	32,7	51	32,9	52	32,6	46	32,8	50	33	50	33	50	32,5	50	33,7	50	33,9	47
Kamis 15 Juli 2021 pukul 10.30	34	33	52	33,1	54	32,7	45	32,9	51	33,2	49	32,3	48	32,6	52	33,8	48	34	48
Kamis 15 Juli 2021 pukul 11.00	35	34,5	44	34,6	46	34,1	40	34,3	45	34,6	42	35,3	44	34,4	45	35,4	42	34,2	43
Kamis 15 Juli 2021 pukul 11.30	36	38	36	36,5	36	37,5	35	37,6	39	38,1	38	36,2	39	35,3	39	37,5	34	36,9	34
Kamis 15 Juli 2021 pukul 12.00	37	41,7	30	39	28	41	30	40,9	32	41,5	31	40,2	32	42,3	31	40,3	31	39,8	26
Kamis 15 Juli 2021 pukul 12.30	38	44,4	26	43,6	23	43,4	24	43,4	26	43,6	27	43,6	26	44,3	28	44,9	25	43,2	24
Kamis 15 Juli 2021 pukul 13.00	39	42,7	27	41,8	28	41,6	29	41,6	29	41,6	30	41,8	30	42,7	32	42,3	29	42,2	28
Kamis 15 Juli 2021 pukul 13.30	40	41,6	29	40,6	32	40,5	32	40,5	35	40,6	33	42,3	34	41	31	40,8	32	43,8	27
Kamis 15 Juli 2021 pukul 14.00	41	43,1	28	43,1	31	41,8	31	41,9	34	41,5	32	43,8	33	42,6	31	42,8	36	46,2	27
Kamis 15 Juli 2021 pukul 14.30	42	41,4	30	41,4	33	40,5	32	40,4	36	40,5	34	42	35	40,9	32	41,7	38	44	28
Kamis 15 Juli 2021 pukul 15.00	43	37,4	36	37,4	38	36,7	39	36,9	42	37,3	40	37,8	42	34	39	38	43	36,1	36
Kamis 15 Juli 2021 pukul 15.30	44	36,2	40	36,3	42	35,8	41	35,9	44	36,2	44	36,3	46	32,6	42	36,6	45	34,7	40
Kamis 15 Juli 2021 pukul 16.00	45	35,3	42	35,3	44	34,7	44	35,1	47	35,1	45	35,3	48	34,4	45	35,4	47	33,7	43
Kamis 15 Juli 2021 pukul 16.30	46	38,4	36	38,7	36	37,7	36	37,3	40	37,4	41	39,4	39	35,3	37	38,9	40	41,4	33
Kamis 15 Juli 2021 pukul 17.00	47	34	46	34	48	33,6	48	33,8	51	34	47	33,8	51	33,1	46	34,2	50	34,7	45
Kamis 15 Juli 2021 pukul 17.30	48	32	49	32,2	51	31,7	51	32,2	53	32,4	48	31,8	55	31,1	51	32,3	53	32,7	51

Tabel Data hasil pengukuran bagian 3

DATA HASIL PENGUKURAN (3)

Hari/Tanggal	No	1		2		3		4		5		6		7		8		9	
		suhu	RH																
Rabu 14 Juli 2021 pukul 18.00	1	31	51	31,3	55	30,5	41	31,2	55	31,5	54	31,9	52	31,4	55	31,3	60	31,3	50
Rabu 14 Juli 2021 pukul 18.30	2	30,2	56	30,4	61	29,8	46	30,3	61	30,7	60	30,9	59	30,6	61	30	65	30,4	56
Rabu 14 Juli 2021 pukul 19.00	3	29	58	29,2	63	28,7	47	29,2	63	29,6	62	29,6	61	29,3	63	29,4	66	29,2	59
Rabu 14 Juli 2021 pukul 19.30	4	28,3	60	28,6	64	28,1	48	28,6	65	28,9	63	28	64	28,7	65	29,8	66	28,6	61
Rabu 14 Juli 2021 pukul 20.00	5	27,5	62	27,8	67	27,3	52	27,8	67	27,1	67	27,1	66	27,9	70	28,9	70	27,6	64
Rabu 14 Juli 2021 pukul 20.30	6	27,2	65	27,6	67	27,1	51	27,5	67	26,9	65	26,9	65	26,6	69	27,5	69	26,4	63
Rabu 14 Juli 2021 pukul 21.00	7	26,6	68	26,9	68	26,5	61	26	68	26,3	67	26,3	66	26	69	26	70	25,9	64
Rabu 14 Juli 2021 pukul 21.30	8	26,1	69	25,5	71	26,1	64	25,5	71	25,9	69	25,8	69	25,6	72	25,6	72	25,3	68
Rabu 14 Juli 2021 pukul 22.00	9	26	70	25,3	71	25,9	64	25,3	71	25,7	69	25,6	69	25,4	71	25,6	71	25,2	68
Rabu 14 Juli 2021 pukul 22.30	10	25,7	73	25,9	71	25,5	64	25,9	71	25,3	71	25,3	71	25,1	72	25,1	72	24,9	68
Rabu 14 Juli 2021 pukul 23.00	11	25,5	72	25,8	70	25,4	64	25,8	70	25,1	70	25,2	69	25,9	71	25	71	24,7	67
Rabu 14 Juli 2021 pukul 23.30	12	25	74	25,3	72	24,9	68	25,3	72	24,6	70	24,6	70	25,4	72	25,2	72	24,2	69
Rabu 14 Juli 2021 pukul 24.00	13	24,6	76	24,9	74	24,6	70	24,8	75	24,2	73	24,2	73	25	74	24,8	73	24,7	72
Kamis 15 Juli 2021 pukul 00.30	14	24,4	80	24,7	78	24,4	72	24,7	78	24	76	24	76	24,8	77	24,4	75	24,6	75
Kamis 15 Juli 2021 pukul 01.00	15	24,7	78	24,1	76	24,6	74	25	76	24,3	74	24,3	75	25,1	76	24,8	75	24,8	74
Kamis 15 Juli 2021 pukul 01.30	16	24,6	79	23,9	77	24,6	79	24,9	77	24,3	75	24,3	75	25	77	24,8	75	24,7	75
Kamis 15 Juli 2021 pukul 02.00	17	23,5	82	23,8	80	23,4	82	23,7	80	24,1	78	23	79	23,8	79	24,8	77	24,6	77
Kamis 15 Juli 2021 pukul 02.30	18	23,1	84	23,5	81	23,2	82	23,4	82	23,8	79	23,7	80	23,5	80	23,1	78	24,2	78
Kamis 15 Juli 2021 pukul 03.00	19	23,5	82	23,7	81	23,4	82	23,7	81	23,1	78	23	79	23,9	80	23,7	78	23,6	78
Kamis 15 Juli 2021 pukul 03.30	20	23,4	83	23,7	81	23,4	82	23,7	81	23,1	79	23,1	80	23,8	80	23,5	78	23,6	79
Kamis 15 Juli 2021 pukul 04.00	21	23,4	82	23,7	80	23,4	82	23,7	81	23,1	79	23,1	79	23,9	80	23,8	77	23,6	78
Kamis 15 Juli 2021 pukul 04.30	22	23,3	83	23,6	81	23,3	83	23,6	82	23	79	23	80	23,7	80	23,4	78	23,5	79
Kamis 15 Juli 2021 pukul 05.00	23	23,9	86	23,2	84	23,9	85	23,2	85	22,5	82	22,6	82	22,3	83	22	80	22	81

Kamis 15 Juli 2021 pukul 05.30	24	23,9	87	23,1	85	23,9	86	23,1	86	22,5	83	22,5	84	22,2	84	22,7	82	22,1	83
Kamis 15 Juli 2021 pukul 06.00	25	23,9	86	23,3	84	23,1	85	23,3	85	22,7	82	22,7	82	22,4	83	23	80	22,2	82
Kamis 15 Juli 2021 pukul 06.30	26	23	86	23,3	84	23	84	23,2	85	23,1	82	23,6	83	23,4	84	23,1	81	23,1	82
Kamis 15 Juli 2021 pukul 07.00	27	23,9	89	22,2	87	23,9	82	23,2	87	23,6	84	23,9	85	24,3	84	23	82	23,1	83
Kamis 15 Juli 2021 pukul 07.30	28	24,9	83	25,3	81	24,9	78	24,4	81	24,6	79	25,7	79	25,4	82	25,3	80	24,2	78
Kamis 15 Juli 2021 pukul 08.00	29	25	77	27,2	75	26,9	70	27,6	73	26,9	71	27,9	72	26,5	74	26,9	73	27,7	71
Kamis 15 Juli 2021 pukul 08.30	30	27	71	28,3	69	27,9	65	28,4	67	28,5	67	29,1	66	28,4	69	28,4	70	28,8	65
Kamis 15 Juli 2021 pukul 09.00	31	31,2	59	30,8	56	32,4	58	30,9	53	30,5	55	30,2	52	30,5	56	30,7	64	31,3	57
Kamis 15 Juli 2021 pukul 09.30	32	32	48	32,6	48	32,8	49	32,7	45	32,3	47	32,1	42	33,7	43	32,7	47	33	51
Kamis 15 Juli 2021 pukul 10.00	33	33,6	47	33,8	45	33,2	47	32,2	48	34,3	47	32,8	44	34,3	44	32,5	48	33,9	49
Kamis 15 Juli 2021 pukul 10.30	34	33,2	49	33,4	46	32,8	45	31,8	51	33,8	51	34,4	48	33,8	47	32,7	46	33,3	47
Kamis 15 Juli 2021 pukul 11.00	35	34,4	42	34,5	43	34,1	40	34	45	35,1	45	36,4	41	32,6	40	33,9	39	35,4	37
Kamis 15 Juli 2021 pukul 11.30	36	38,1	37	38,2	35	34,5	37	37,9	35	38,7	36	37,5	33	36,2	33	35,9	33	38,5	30
Kamis 15 Juli 2021 pukul 12.00	37	41,9	31	41,9	30	41	31	41,8	29	42,4	32	40,3	28	43,3	30	38,4	28	41,7	23
Kamis 15 Juli 2021 pukul 12.30	38	43,4	27	43,4	27	42,5	26	43,9	28	43,5	25	42,7	25	44,4	25	43,5	23	43,7	20
Kamis 15 Juli 2021 pukul 13.00	39	41,7	31	41,5	32	39,5	32	40,9	33	41,4	30	41,4	30	42,3	29	41,7	25	41,4	25
Kamis 15 Juli 2021 pukul 13.30	40	41,2	31	41,1	30	38,2	31	40,2	33	41,3	31	41,4	30	41,6	33	41,3	26	40,1	30
Kamis 15 Juli 2021 pukul 14.00	41	41	31	41,1	31	38,5	31	40,1	33	40,8	35	42,2	31	41,1	35	42,2	27	41,5	32
Kamis 15 Juli 2021 pukul 14.30	42	40,8	30	40,7	32	38,6	32	40,9	33	41	36	42,4	31	41,4	33	42	26	42,2	36
Kamis 15 Juli 2021 pukul 15.00	43	36	43	36,3	42	35,5	42	36,6	40	37	40	37,8	37	34	41	40	30	37,3	39
Kamis 15 Juli 2021 pukul 15.30	44	35,4	44	35,8	43	34,9	42	35,8	42	36,3	43	36,8	40	33,2	44	38,6	36	36,2	42
Kamis 15 Juli 2021 pukul 16.00	45	34,5	47	34,7	46	36	44	34,8	45	35,1	45	35,7	42	32,2	47	37,2	39	35,1	45
Kamis 15 Juli 2021 pukul 16.30	46	38,4	38	38,1	37	38,4	42	38,2	37	38,2	38	39,7	35	35,8	39	42,1	50	39,6	38
Kamis 15 Juli 2021 pukul 17.00	47	33,6	50	33,8	49	33,1	45	33,7	49	34	48	34,2	47	33,8	47	35,8	55	33,7	47
Kamis 15 Juli 2021 pukul 17.30	48	31,7	53	31,9	52	31,2	47	31,9	52	32,3	51	32,4	50	32	52	33,7	59	31,9	49

Tabel Data hasil pengukuran bagian 4

Hari/Tanggal	No	DATA HASIL PENGUKURAN (4)																	
		1		2		3		4		5		6		7		8		9	
		suhu	RH	suhu	RH	suhu	RH	suhu	RH	suhu	RH	suhu	RH	suhu	RH	suhu	RH	suhu	RH
Rabu 14 Juli 2021 pukul 18.00	1	31,9	54	32,1	48	30,6	54	31,9	52	31,6	53	31,6	55	31,3	55	32,2	58	30,6	54
Rabu 14 Juli 2021 pukul 18.30	2	30,4	59	31	52	29,2	57	30,4	55	30,1	55	30,9	57	30,8	59	30,4	62	30,2	56
Rabu 14 Juli 2021 pukul 19.00	3	30	61	29,5	57	28,7	59	29,2	57	29,8	58	29,6	58	29,5	62	29	64	28,7	56
Rabu 14 Juli 2021 pukul 19.30	4	29,2	64	28,7	59	27,1	62	28,5	59	29	60	28,8	59	28,7	63	28,1	67	28	58
Rabu 14 Juli 2021 pukul 20.00	5	28,6	67	28	60	26,3	64	27,8	62	28,4	65	28,1	60	28	66	27,3	67	27,2	60
Rabu 14 Juli 2021 pukul 20.30	6	28,1	67	27,5	65	26,9	65	27,4	62	27,8	65	27,7	62	27,6	67	26,9	67	26,8	61
Rabu 14 Juli 2021 pukul 21.00	7	25,3	76	24,7	75	25	70	24,7	73	25,1	70	24,9	71	24,8	77	23,9	76	24,9	62
Rabu 14 Juli 2021 pukul 21.30	8	26,1	71	25,5	71	26,9	67	25,4	64	25,9	67	25,6	67	25,5	70	25,4	70	26,8	64
Rabu 14 Juli 2021 pukul 22.00	9	25,8	71	25,3	71	26,6	69	25,2	64	25,6	69	25,4	68	25,3	70	25,2	70	25,5	64
Rabu 14 Juli 2021 pukul 22.30	10	25,5	72	25,9	70	26,2	72	24,8	66	25,2	70	25	69	25	71	25	70	25,1	67
Rabu 14 Juli 2021 pukul 23.00	11	25,2	72	25,6	71	26	71	24,6	65	25	70	24,8	71	24,7	70	24,7	70	24,9	67
Rabu 14 Juli 2021 pukul 23.30	12	25,7	71	25,1	72	25,5	72	24	67	24,3	73	24,2	73	24,2	72	24,2	71	24,3	67
Rabu 14 Juli 2021 pukul 24.00	13	24,3	74	24,7	74	25,1	75	24,7	70	24,1	75	23,9	76	23,8	73	24	72	24	67
Kamis 15 Juli 2021 pukul 00.30	14	24,1	77	24,6	76	25	76	24,6	71	24	77	23,7	79	23,7	74	23,9	74	23,9	70
Kamis 15 Juli 2021 pukul 01.00	15	24,6	76	24,9	78	25,2	75	24,9	70	24,4	76	24,2	74	24	74	24,2	73	24,2	71
Kamis 15 Juli 2021 pukul 01.30	16	24,7	78	23,2	80	24,2	80	25	85	24,2	79	24,3	75	24,3	87	25	79	24,1	73
Kamis 15 Juli 2021 pukul 02.00	17	24,6	79	23,2	80	24,2	82	24,9	85	24,1	80	24,2	76	24,2	89	24,9	80	24	73
Kamis 15 Juli 2021 pukul 02.30	18	24	80	23,5	80	24,7	80	24,4	73	24,7	79	24,6	75	24,5	78	23,7	76	23,6	75

Kamis 15 Juli 2021 pukul 03.00	19	24,4	79	23,7	82	24,1	79	24,8	72	24,1	80	24,9	76	24,8	77	23,9	76	24	76
Kamis 15 Juli 2021 pukul 03.30	20	24,4	80	23,7	82	24	79	24,8	73	24,1	80	24,9	76	24,9	78	24	77	24	76
Kamis 15 Juli 2021 pukul 04.00	21	24,2	80	23,6	83	23,9	79	23,6	75	24	80	23,8	81	23,7	78	23,8	76	23,8	78
Kamis 15 Juli 2021 pukul 04.30	22	24,2	80	23,5	85	23,9	80	23,5	78	23,8	85	23,7	82	23,6	79	23,9	77	23,8	80
Kamis 15 Juli 2021 pukul 05.00	23	23,7	83	23,1	87	23,4	82	23,2	80	23,5	88	23,3	85	23,2	80	23,4	79	23,3	81
Kamis 15 Juli 2021 pukul 05.30	24	23,6	84	23,1	87	23,4	83	23,1	84	23,4	89	23,3	88	23,2	82	23,4	80	23,3	83
Kamis 15 Juli 2021 pukul 06.00	25	23,1	83	23,2	89	23,5	82	23,3	84	23,6	89	23,4	88	23,3	82	23,7	80	23,5	83
Kamis 15 Juli 2021 pukul 06.30	26	23,1	84	23,2	90	23,5	83	23,5	84	23,6	89	23,4	88	23,9	82	23,4	80	23,8	83
Kamis 15 Juli 2021 pukul 07.00	27	23,8	84	23,6	90	23,8	83	24,3	84	24,6	87	24,5	87	24,3	82	23,7	80	24,5	83
Kamis 15 Juli 2021 pukul 07.30	28	26,1	80	25,4	85	25,7	78	25,4	73	25,7	82	25,8	78	25,6	78	24,7	76	25,9	78
Kamis 15 Juli 2021 pukul 08.00	29	27,3	76	26,8	79	27,5	72	26,3	67	26,1	78	26,4	76	27,6	72	27,3	70	27	68
Kamis 15 Juli 2021 pukul 08.30	30	27,5	76	27	79	27,7	73	27,5	67	28,4	76	28,1	73	28	71	28,1	69	28,2	65
Kamis 15 Juli 2021 pukul 09.00	31	30,7	61	31,3	60	29,4	59	31	57	30,1	55	30,5	58	30,6	60	30,6	61	30,2	48
Kamis 15 Juli 2021 pukul 09.30	32	32,2	50	32,1	56	32,5	55	31,7	53	32	53	32,6	53	32,6	52	32,4	53	31,5	46
Kamis 15 Juli 2021 pukul 10.00	33	32	50	32,5	54	32,9	54	32,2	50	32,2	50	32,8	52	32,2	51	32,6	49	31,4	46
Kamis 15 Juli 2021 pukul 10.30	34	34	47	33,4	51	33,7	51	32,8	48	33,7	45	34,7	48	33,2	46	33,6	47	32,6	44
Kamis 15 Juli 2021 pukul 11.00	35	32,9	43	35,3	42	33,6	44	34,4	43	35,4	40	35	40	34,3	40	35,8	40	35,1	38
Kamis 15 Juli 2021 pukul 11.30	36	36	37	37,3	35	36,5	33	35,9	35	37,5	36	36,6	35	36,6	37	37,2	37	37	35
Kamis 15 Juli 2021 pukul 12.00	37	40,9	30	40	32	39,4	28	41,4	31	41,1	30	39,6	31	39,1	32	41,6	32	40,1	33
Kamis 15 Juli 2021 pukul 12.30	38	38,4	35	37,7	38	37,8	35	35,5	37	37,6	38	36,6	34	37,9	35	39,1	35	38,5	36
Kamis 15 Juli 2021 pukul 13.00	39	44,8	30	43	30	41,7	32	42,9	31	41,3	32	42,2	31	42,6	33	41,2	31	42,8	31
Kamis 15 Juli 2021 pukul 13.30	40	43,1	31	42,6	28	43,4	31	41,2	32	40,6	31	43,8	29	43,1	31	42,4	29	43,8	29
Kamis 15 Juli 2021 pukul 14.00	41	42,9	32	42,4	28	42,3	30	40,7	31	40,1	31	43	28	43,5	30	42	29	44,2	28
Kamis 15 Juli 2021 pukul 14.30	42	40,2	35	41,4	30	39,8	36	35,5	38	39,5	38	41,6	33	40,7	33	41,7	33	42,3	32
Kamis 15 Juli 2021 pukul 15.00	43	35,9	40	38,6	35	38,6	38	34,3	40	38,4	40	40,3	35	36	38	40,3	36	41,4	35
Kamis 15 Juli 2021 pukul 15.30	44	33,2	45	35,7	42	35,9	44	34,8	44	35,7	44	36,5	42	32,9	45	36,7	40	37	41
Kamis 15 Juli 2021 pukul 16.00	45	33,1	46	35,6	42	35,7	44	34,6	44	35,4	44	37,1	41	33,2	45	36,2	39	37,9	39
Kamis 15 Juli 2021 pukul 16.30	46	33,3	44	35,8	43	35,9	43	34,7	43	35,7	43	37,1	40	33,5	43	36,9	42	37,6	40
Kamis 15 Juli 2021 pukul 17.00	47	33	50	32,8	52	32,8	51	32,1	49	32,9	50	32,8	52	32,5	51	34,7	50	33	52
Kamis 15 Juli 2021 pukul 17.30	48	32,2	52	31,6	54	32	53	31,2	49	32	52	31,8	54	31,6	53	32,3	52	32	53

Lampiran 3. Data Hasil Pengukuran Suhu dan Kelembaban Lingkungan

Tabel Data hasil pengukuran External

Waktu	External 1		External 2	
	Suhu (°C)	Kelembaban (%)	Suhu (°C)	Kelembaban (%)
Rabu 14 Juli 2021 pukul 18.00	27	63	26,3	68
Rabu 14 Juli 2021 pukul 18.30	26,1	68	25,1	70
Rabu 14 Juli 2021 pukul 19.00	25,5	68	24,3	72
Rabu 14 Juli 2021 pukul 19.30	24,4	73	23,8	74
Rabu 14 Juli 2021 pukul 20.00	24,3	74	23,6	74
Rabu 14 Juli 2021 pukul 20.30	23,8	74	22,6	76
Rabu 14 Juli 2021 pukul 21.00	23,2	77	22,3	77
Rabu 14 Juli 2021 pukul 21.30	23	77	22,1	77
Rabu 14 Juli 2021 pukul 22.00	22,8	77	21,7	79
Rabu 14 Juli 2021 pukul 22.30	22,5	76	21,5	78
Rabu 14 Juli 2021 pukul 23.00	22	79	21,1	80
Rabu 14 Juli 2021 pukul 23.30	21,6	81	20,6	83
Rabu 14 Juli 2021 pukul 24.00	21,4	86	20,4	87
Kamis 15 Juli 2021 pukul 00.30	21,6	83	20,9	84
Kamis 15 Juli 2021 pukul 01.00	21,6	84	20,8	84
Kamis 15 Juli 2021 pukul 01.30	21,5	88	20,7	88
Kamis 15 Juli 2021 pukul 02.00	21,3	89	20,1	88
Kamis 15 Juli 2021 pukul 02.30	21,4	88	20,6	88
Kamis 15 Juli 2021 pukul 03.00	21,3	88	20,8	88
Kamis 15 Juli 2021 pukul 03.30	21,5	88	20,7	88
Kamis 15 Juli 2021 pukul 04.00	21,4	89	20,6	89

Kamis 15 Juli 2021 pukul 04.30	21	90	20	90
Kamis 15 Juli 2021 pukul 05.00	20,8	92	19,9	92
Kamis 15 Juli 2021 pukul 05.30	21	91	20,2	90
Kamis 15 Juli 2021 pukul 06.00	21	90	20,3	89
Kamis 15 Juli 2021 pukul 06.30	21,9	87	20,2	86
Kamis 15 Juli 2021 pukul 07.00	21,6	86	21,6	82
Kamis 15 Juli 2021 pukul 07.30	23,4	78	23,6	75
Kamis 15 Juli 2021 pukul 08.00	25,8	71	25,5	63
Kamis 15 Juli 2021 pukul 08.30	28,8	59	29,7	52
Kamis 15 Juli 2021 pukul 09.00	30	51	30,5	47
Kamis 15 Juli 2021 pukul 09.30	30,8	46	31,9	43
Kamis 15 Juli 2021 pukul 10.00	31,8	44	32,1	42
Kamis 15 Juli 2021 pukul 10.30	32,9	40	33	41
Kamis 15 Juli 2021 pukul 11.00	34,6	31	35,7	34
Kamis 15 Juli 2021 pukul 11.30	36,1	24	37,8	26
Kamis 15 Juli 2021 pukul 12.00	39,6	22	39,6	24
Kamis 15 Juli 2021 pukul 12.30	42,6	23	41,2	23
Kamis 15 Juli 2021 pukul 13.00	40,4	28	40,8	26
Kamis 15 Juli 2021 pukul 13.30	40	29	40,3	27
Kamis 15 Juli 2021 pukul 14.00	39,1	30	39,1	30
Kamis 15 Juli 2021 pukul 14.30	39,8	32	38,8	34
Kamis 15 Juli 2021 pukul 15.00	38,2	34	37,6	38
Kamis 15 Juli 2021 pukul 15.30	37	37	35,1	40
Kamis 15 Juli 2021 pukul 16.00	35	39	34,1	43
Kamis 15 Juli 2021 pukul 16.30	33,5	41	32,2	43
Kamis 15 Juli 2021 pukul 17.00	30,8	45	30,8	53
Kamis 15 Juli 2021 pukul 17.30	27	56	28,3	61

Lampiran 4. Data Hasil Simulasi Suhu dan Kelembaban Rakkeang tiap waktu

Tabel Hasil simulasi suhu waktu Malam

No	Goal Name	Unit	Value	Averaged Value	Min Value	MaxValue	Progress [%]	Delta	Criteria
1	PG Temperature (Fluid) 1	[°C]	26,61684912	26,62	26,61	26,62	100	0,002881213	0,349493973
2	PG Temperature (Fluid) 10	[°C]	23,43680009	23,44	23,44	23,44	100	0,000365646	0,617025143
3	PG Temperature (Fluid) 11	[°C]	24,1187961	24,12	24,12	24,12	100	0,002837173	0,515364551
4	PG Temperature (Fluid) 12	[°C]	26,65071953	26,65	26,65	26,65	100	0,006619538	0,361944798
5	PG Temperature (Fluid) 13	[°C]	25,52654302	25,52	25,52	25,53	100	0,005215882	0,292707997
6	PG Temperature (Fluid) 14	[°C]	26,08745932	26,09	26,09	26,09	100	0,002771086	0,273483766
7	PG Temperature (Fluid) 15	[°C]	23,4	23,40	23,40	23,40	100	0	2,9655E-06
8	PG Temperature (Fluid) 16	[°C]	23,41708205	23,42	23,42	23,42	100	0,001158479	0,619891271
9	PG Temperature (Fluid) 17	[°C]	23,40648473	23,41	23,41	23,41	100	3,12295E-05	0,621443344
10	PG Temperature (Fluid) 18	[°C]	23,40001219	23,40	23,40	23,40	100	0	0,002799742
11	PG Temperature (Fluid) 19	[°C]	23,40158507	23,40	23,40	23,40	100	0	0,622262239
12	PG Temperature (Fluid) 2	[°C]	23,48799528	23,49	23,49	23,49	100	0,001563392	0,609318484
13	PG Temperature (Fluid) 20	[°C]	23,4013322	23,40	23,40	23,40	100	0	0,62230017
14	PG Temperature (Fluid) 21	[°C]	23,40000433	23,40	23,40	23,40	100	0	0,001878981
15	PG Temperature (Fluid) 22	[°C]	23,41652119	23,42	23,42	23,42	100	0	0,620021822
16	PG Temperature (Fluid) 23	[°C]	23,40890024	23,41	23,41	23,41	100	0	0,621164964
17	PG Temperature (Fluid) 24	[°C]	23,40000551	23,40	23,40	23,40	100	0	0,000913398
18	PG Temperature (Fluid) 25	[°C]	23,41675102	23,42	23,42	23,42	100	0	0,619987347
19	PG Temperature (Fluid) 26	[°C]	23,40884709	23,41	23,41	23,41	100	0	0,621172937
20	PG Temperature (Fluid) 27	[°C]	23,40001216	23,40	23,40	23,40	100	0	0,001880894
21	PG Temperature (Fluid) 28	[°C]	23,41688233	23,42	23,42	23,42	100	0	0,619967651
22	PG Temperature (Fluid) 29	[°C]	23,4085857	23,41	23,41	23,41	100	0	0,621212146
23	PG Temperature (Fluid) 3	[°C]	23,42294635	23,42	23,42	23,42	100	0	0,619058047

24	PG Temperature (Fluid) 30	[°C]	23,4	23,40	23,40	23,40	100	0	2,9655E-06
25	PG Temperature (Fluid) 32	[°C]	23,42255542	23,42	23,42	23,42	100	0,00043064	0,619081861
26	PG Temperature (Fluid) 33	[°C]	23,41122847	23,41	23,41	23,41	100	0	0,620797969
27	PG Temperature (Fluid) 34	[°C]	23,40002717	23,40	23,40	23,40	100	0	0,002841409
28	PG Temperature (Fluid) 35	[°C]	23,42912023	23,43	23,43	23,43	100	0,000499724	0,618119362
29	PG Temperature (Fluid) 36	[°C]	23,41433688	23,41	23,41	23,41	100	0	0,620320755
30	PG Temperature (Fluid) 37	[°C]	23,4	23,40	23,40	23,40	100	0	2,9655E-06
31	PG Temperature (Fluid) 38	[°C]	23,41188183	23,41	23,41	23,41	100	0,00029132	0,620697776
32	PG Temperature (Fluid) 39	[°C]	23,40600381	23,41	23,41	23,41	100	0	0,621599429
33	PG Temperature (Fluid) 4	[°C]	23,40012528	23,40	23,40	23,40	100	0	0,622481209
34	PG Temperature (Fluid) 40	[°C]	23,40000885	23,40	23,40	23,40	100	0	0,002845345
35	PG Temperature (Fluid) 41	[°C]	23,41545981	23,42	23,42	23,42	100	0	0,620181029
36	PG Temperature (Fluid) 42	[°C]	23,40741843	23,41	23,41	23,41	100	0	0,621387236
37	PG Temperature (Fluid) 43	[°C]	23,40000282	23,40	23,40	23,40	100	0	0,000917603
38	PG Temperature (Fluid) 44	[°C]	25,34762747	25,35	25,35	25,35	100	0,003146057	0,333887738
39	PG Temperature (Fluid) 45	[°C]	25,30817313	25,31	25,31	25,31	100	0,000197814	0,349874795
40	PG Temperature (Fluid) 46	[°C]	23,40102294	23,40	23,40	23,40	100	0	0,009637152
41	PG Temperature (Fluid) 47	[°C]	25,09056459	25,09	25,09	25,09	100	0,002530829	0,348672159
42	PG Temperature (Fluid) 48	[°C]	25,15319676	25,15	25,15	25,15	100	0,000205778	0,361642368
43	PG Temperature (Fluid) 49	[°C]	23,40161904	23,40	23,40	23,40	100	0	0,016704283
44	PG Temperature (Fluid) 5	[°C]	23,42345098	23,42	23,42	23,42	100	0,00147583	0,619235321
45	PG Temperature (Fluid) 6	[°C]	23,42950072	23,43	23,43	23,43	100	0,001735563	0,618185024
46	PG Temperature (Fluid) 7	[°C]	23,42342262	23,42	23,42	23,42	100	2,07181E-06	0,618986296
47	PG Temperature (Fluid) 8	[°C]	23,42331874	23,42	23,42	23,42	100	0	0,619002189
48	PG Temperature (Fluid) 9	[°C]	23,44772491	23,45	23,45	23,45	100	0,000867453	0,615475874

Tabel Hasil simulasi kelembaban waktu Malam

No	Goal Name	Unit	Value	Averaged Value	Min Value	Max Value	Progress [%]	Delta	Criteria
1	PG Relative Humidity 1	[%]	55,89817148	55,90	55,89817148	55,90784308	100	0,009671592	2,411581002
2	PG Relative Humidity 10	[%]	67,55357601	67,55	67,55357601	67,5550346	100	0,001458592	0,380430382
3	PG Relative Humidity 11	[%]	64,84668459	64,85	64,84668459	64,85794918	100	0,011264585	0,052617412
4	PG Relative Humidity 12	[%]	55,80500309	55,81	55,80188256	55,82387415	100	0,021991591	2,574543266
5	PG Relative Humidity 13	[%]	59,63267367	59,64	59,62896668	59,64730997	100	0,018343296	1,98577908
6	PG Relative Humidity 14	[%]	57,66471916	57,67	57,66299669	57,67240161	100	0,009404918	2,115594598
7	PG Relative Humidity 15	[%]	67,69997758	67,70	67,69997099	67,69997865	100	5,693E-06	4,3273E-05
8	PG Relative Humidity 16	[%]	67,63206564	67,63	67,6274537	67,63206578	100	0,004612078	0,393172922
9	PG Relative Humidity 17	[%]	67,67427136	67,67	67,67414131	67,67427162	100	0,000130306	0,398451695
10	PG Relative Humidity 18	[%]	67,69999662	67,70	67,69998941	67,699997	100	5,86177E-06	0,001475653
11	PG Relative Humidity 19	[%]	67,69371943	67,69	67,69371703	67,69371943	100	2,4057E-06	0,402497734
12	PG Relative Humidity 2	[%]	67,35000202	67,35	67,34722687	67,35343028	100	0,006203418	0,351838481
13	PG Relative Humidity 20	[%]	67,69477281	67,69	67,69476686	67,69477281	100	5,95153E-06	0,401812702
14	PG Relative Humidity 21	[%]	67,70008354	67,70	67,7000763	67,70008354	100	5,60789E-06	0,000999346
15	PG Relative Humidity 22	[%]	67,63429907	67,63	67,63429662	67,63429907	100	2,45121E-06	0,39291398
16	PG Relative Humidity 23	[%]	67,66466096	67,66	67,66465507	67,66466096	100	5,88297E-06	0,397205901
17	PG Relative Humidity 24	[%]	67,70008723	67,70	67,70008007	67,70008723	100	5,59325E-06	0,000485701
18	PG Relative Humidity 25	[%]	67,63338494	67,63	67,63338249	67,63338494	100	2,44391E-06	0,393196577
19	PG Relative Humidity 26	[%]	67,66487224	67,66	67,66486636	67,66487224	100	5,87631E-06	0,397094851
20	PG Relative Humidity 27	[%]	67,7000621	67,70	67,70005493	67,7000621	100	5,81037E-06	0,000991951
21	PG Relative Humidity 28	[%]	67,63286272	67,63	67,63286022	67,63286272	100	2,49881E-06	0,393105434
22	PG Relative Humidity 29	[%]	67,66591211	67,67	67,66590622	67,66591211	100	5,88718E-06	0,397348082
23	PG Relative Humidity 3	[%]	67,60867717	67,61	67,60867717	67,60868389	100	6,71714E-06	0,388735286
24	PG Relative Humidity 30	[%]	67,7001107	67,70	67,70010358	67,7001107	100	5,83903E-06	7,14656E-06
25	PG Relative Humidity 32	[%]	67,61029803	67,61	67,60901807	67,61073212	100	0,001714054	0,389006158

26	PG Relative Humidity 33	[%]	67,65539819	67,66	67,65539227	67,65539819	100	5,92407E-06	0,395679952
27	PG Relative Humidity 34	[%]	67,70000704	67,70	67,69999989	67,70000704	100	5,52483E-06	0,001489895
28	PG Relative Humidity 35	[%]	67,58419107	67,58	67,58312635	67,58511597	100	0,001989617	0,38517759
29	PG Relative Humidity 36	[%]	67,64303276	67,64	67,64302682	67,64303276	100	5,94121E-06	0,393829423
30	PG Relative Humidity 37	[%]	67,7001157	67,70	67,70010861	67,7001157	100	5,91342E-06	6,37608E-06
31	PG Relative Humidity 38	[%]	67,6527545	67,65	67,65222258	67,65338412	100	0,001161545	0,395665976
32	PG Relative Humidity 39	[%]	67,67618449	67,68	67,67617854	67,67618449	100	5,94938E-06	0,398727302
33	PG Relative Humidity 4	[%]	67,69945324	67,70	67,69945324	67,69945972	100	6,47571E-06	0,402793983
34	PG Relative Humidity 40	[%]	67,70006861	67,70	67,70006124	67,70006861	100	5,69638E-06	0,001504096
35	PG Relative Humidity 41	[%]	67,63851981	67,64	67,63851732	67,63851981	100	2,49184E-06	0,393606763
36	PG Relative Humidity 42	[%]	67,67055572	67,67	67,67054976	67,67055572	100	5,96392E-06	0,397928057
37	PG Relative Humidity 43	[%]	67,70009369	67,70	67,70008651	67,70009369	100	5,6659E-06	0,000487551
38	PG Relative Humidity 44	[%]	60,27982406	60,28	60,26966851	60,28087789	100	0,011209381	1,350868696
39	PG Relative Humidity 45	[%]	60,43595621	60,44	60,4352565	60,43595621	100	0,000699705	1,395607366
40	PG Relative Humidity 46	[%]	67,69606493	67,70	67,6960579	67,69606493	100	7,02369E-06	0,004530193
41	PG Relative Humidity 47	[%]	61,20712094	61,21	61,19780516	61,20712468	100	0,009319517	1,322287939
42	PG Relative Humidity 48	[%]	60,98428781	60,98	60,98373043	60,98446228	100	0,000731856	1,349929708
43	PG Relative Humidity 49	[%]	67,69369229	67,69	67,69368526	67,69369229	100	6,13729E-06	0,007889967
44	PG Relative Humidity 5	[%]	67,6066762	67,61	67,60570533	67,61158293	100	0,0058776	0,389471011
45	PG Relative Humidity 6	[%]	67,58261386	67,58	67,57862946	67,58554019	100	0,006910731	0,385187532
46	PG Relative Humidity 7	[%]	67,6067836	67,61	67,60677536	67,6067836	100	8,23625E-06	0,388734681
47	PG Relative Humidity 8	[%]	67,60719641	67,61	67,60719641	67,60720323	100	6,82072E-06	0,38873324
48	PG Relative Humidity 9	[%]	67,51014294	67,51	67,51014294	67,51359416	100	0,003451226	0,374207063

Tabel Hasil simulasi suhu waktu Pagi

No	Goal Name	Unit	Value	Averaged Value	Min Value	Max Value	Progress [%]	Delta	Criteria
1	PG Temperature (Fluid) 1	[°C]	27,05	27,05	27,04	27,05	100	0,008474583	0,249155858
2	PG Temperature (Fluid) 10	[°C]	24,56	24,56	24,55	24,56	100	0,001369363	0,578092452
3	PG Temperature (Fluid) 11	[°C]	25,06	25,06	25,06	25,06	100	0,006261209	0,646974059
4	PG Temperature (Fluid) 12	[°C]	26,95	26,94	26,93	26,95	100	0,015802797	0,231317682
5	PG Temperature (Fluid) 13	[°C]	26,01	26,01	26,00	26,01	100	0,004418991	0,260466467
6	PG Temperature (Fluid) 14	[°C]	26,51	26,51	26,51	26,51	100	0,002651826	0,268952093
7	PG Temperature (Fluid) 15	[°C]	24,53	24,53	24,53	24,53	100	0	2,9768E-06
8	PG Temperature (Fluid) 16	[°C]	24,54	24,54	24,54	24,54	100	0,000512577	0,576172013
9	PG Temperature (Fluid) 17	[°C]	24,53	24,53	24,53	24,53	100	1,56902E-05	0,574979479
10	PG Temperature (Fluid) 18	[°C]	24,53	24,53	24,53	24,53	100	0	0,002605856
11	PG Temperature (Fluid) 19	[°C]	24,53	24,53	24,53	24,53	100	0	0,574268215
12	PG Temperature (Fluid) 2	[°C]	24,60	24,60	24,59	24,60	100	0,00334804	0,583957181
13	PG Temperature (Fluid) 20	[°C]	24,53	24,53	24,53	24,53	100	0	0,574341107
14	PG Temperature (Fluid) 21	[°C]	24,53	24,53	24,53	24,53	100	0	0,001747958
15	PG Temperature (Fluid) 22	[°C]	24,54	24,54	24,54	24,54	100	0	0,575888566
16	PG Temperature (Fluid) 23	[°C]	24,53	24,53	24,53	24,53	100	0	0,575140734
17	PG Temperature (Fluid) 24	[°C]	24,53	24,53	24,53	24,53	100	0	0,000850358
18	PG Temperature (Fluid) 25	[°C]	24,54	24,54	24,54	24,54	100	0,000163994	0,575933113
19	PG Temperature (Fluid) 26	[°C]	24,53	24,53	24,53	24,53	100	0	0,575156064
20	PG Temperature (Fluid) 27	[°C]	24,53	24,53	24,53	24,53	100	0	0,001750992
21	PG Temperature (Fluid) 28	[°C]	24,54	24,54	24,54	24,54	100	0	0,57598246
22	PG Temperature (Fluid) 29	[°C]	24,53	24,53	24,53	24,53	100	0	0,575132613
23	PG Temperature (Fluid) 3	[°C]	24,55	24,55	24,54	24,55	100	0,001102185	0,576707304
24	PG Temperature (Fluid) 30	[°C]	24,53	24,53	24,53	24,53	100	0	2,9768E-06

25	PG Temperature (Fluid) 32	[°C]	24,55	24,54	24,54	24,55	100	0,000226018	0,576618265
26	PG Temperature (Fluid) 33	[°C]	24,54	24,54	24,54	24,54	100	2,61038E-05	0,575380014
27	PG Temperature (Fluid) 34	[°C]	24,53	24,53	24,53	24,53	100	0	0,00264657
28	PG Temperature (Fluid) 35	[°C]	24,55	24,55	24,55	24,55	100	0,000413534	0,577306431
29	PG Temperature (Fluid) 36	[°C]	24,54	24,54	24,54	24,54	100	0	0,575690753
30	PG Temperature (Fluid) 37	[°C]	24,53	24,53	24,53	24,53	100	0	2,9768E-06
31	PG Temperature (Fluid) 38	[°C]	24,54	24,54	24,54	24,54	100	0,000215291	0,575404084
32	PG Temperature (Fluid) 39	[°C]	24,53	24,53	24,53	24,53	100	0	0,574815831
33	PG Temperature (Fluid) 4	[°C]	24,53	24,53	24,53	24,53	100	0,000272362	0,574448206
34	PG Temperature (Fluid) 40	[°C]	24,53	24,53	24,53	24,53	100	0	0,002647392
35	PG Temperature (Fluid) 41	[°C]	24,54	24,54	24,54	24,54	100	0,000283791	0,575713379
36	PG Temperature (Fluid) 42	[°C]	24,53	24,53	24,53	24,53	100	0	0,574956328
37	PG Temperature (Fluid) 43	[°C]	24,53	24,53	24,53	24,53	100	0	0,000853793
38	PG Temperature (Fluid) 44	[°C]	25,96	25,96	25,96	25,96	100	0,003962243	0,396336637
39	PG Temperature (Fluid) 45	[°C]	25,95	25,95	25,95	25,95	100	0,002298778	0,405349491
40	PG Temperature (Fluid) 46	[°C]	24,53	24,53	24,53	24,53	100	0	0,009086315
41	PG Temperature (Fluid) 47	[°C]	25,71	25,71	25,71	25,71	100	0,003800977	0,388508487
42	PG Temperature (Fluid) 48	[°C]	25,79	25,80	25,79	25,80	100	0,001534781	0,377061496
43	PG Temperature (Fluid) 49	[°C]	24,53	24,53	24,53	24,53	100	0	0,01571371
44	PG Temperature (Fluid) 5	[°C]	24,55	24,55	24,54	24,55	100	0,003493986	0,576722074
45	PG Temperature (Fluid) 6	[°C]	24,55	24,55	24,55	24,55	100	0,00345759	0,57754358
46	PG Temperature (Fluid) 7	[°C]	24,55	24,55	24,54	24,55	100	0,001099549	0,576811175
47	PG Temperature (Fluid) 8	[°C]	24,55	24,55	24,54	24,55	100	0,00111026	0,57680133
48	PG Temperature (Fluid) 9	[°C]	24,56	24,56	24,56	24,56	100	0,001713901	0,579223568

Tabel Hasil simulasi kelembaban waktu Pagi

No	Goal Name	Unit	Value	Averaged Value	Min Value	Max Value	Progress [%]	Delta	Criteria
1	PG Relative Humidity 1	[%]	64,84027076	64,84492231	64,83974906	64,87087591	100	0,031126853	0,485030082
2	PG Relative Humidity 10	[%]	75,19459244	75,19651894	75,19459244	75,20061508	100	0,006022643	2,256992729
3	PG Relative Humidity 11	[%]	72,94053316	72,94757207	72,94049564	72,96748412	100	0,026988476	2,555835035
4	PG Relative Humidity 12	[%]	65,24480705	65,25225658	65,24135825	65,30274987	100	0,061391624	0,407978495
5	PG Relative Humidity 13	[%]	68,9636923	68,97144241	68,9636923	68,98192966	100	0,018237362	0,996861092
6	PG Relative Humidity 14	[%]	66,94559656	66,94918958	66,94495261	66,95539544	100	0,010442832	0,903043491
7	PG Relative Humidity 15	[%]	75,31008739	75,31008256	75,31007399	75,3100876	100	1,3605E-05	5,33679E-05
8	PG Relative Humidity 16	[%]	75,26095933	75,26135887	75,25963882	75,26191891	100	0,002280094	2,248406403
9	PG Relative Humidity 17	[%]	75,29542628	75,29541581	75,29534502	75,29542628	100	8,12614E-05	2,24311242
10	PG Relative Humidity 18	[%]	75,31017589	75,31017109	75,3101621	75,31017589	100	1,37815E-05	0,009730087
11	PG Relative Humidity 19	[%]	75,31701048	75,31700901	75,31700476	75,31701052	100	5,7608E-06	2,240048967
12	PG Relative Humidity 2	[%]	75,01758996	75,02010334	75,01429583	75,02864829	100	0,014352461	2,282911452
13	PG Relative Humidity 20	[%]	75,31490202	75,31489843	75,31489077	75,31490202	100	1,12469E-05	2,240355515
14	PG Relative Humidity 21	[%]	75,31025834	75,31025417	75,31024507	75,31025834	100	1,32715E-05	0,006521811
15	PG Relative Humidity 22	[%]	75,26680898	75,26680747	75,26680318	75,26680898	100	5,79936E-06	2,247117896
16	PG Relative Humidity 23	[%]	75,28893181	75,28892823	75,2889207	75,28893181	100	1,11094E-05	2,243773743
17	PG Relative Humidity 24	[%]	75,3102343	75,31023013	75,31022121	75,3102343	100	1,30862E-05	0,003178031
18	PG Relative Humidity 25	[%]	75,26464082	75,26473414	75,26463813	75,26536452	100	0,000726387	2,247322113
19	PG Relative Humidity 26	[%]	75,28847203	75,28846845	75,28846092	75,28847203	100	1,11073E-05	2,24385644
20	PG Relative Humidity 27	[%]	75,31023596	75,31023176	75,31022282	75,31023596	100	1,31367E-05	0,006535242
21	PG Relative Humidity 28	[%]	75,26391536	75,26391383	75,2639095	75,26391536	100	5,85644E-06	2,247511136
22	PG Relative Humidity 29	[%]	75,2890704	75,28906683	75,28905926	75,2890704	100	1,11412E-05	2,243734288
23	PG Relative Humidity 3	[%]	75,24260156	75,24282752	75,24256058	75,24727069	100	0,004710112	2,250740238
24	PG Relative Humidity 30	[%]	75,31023294	75,31022876	75,31021989	75,31023294	100	1,30451E-05	1,43542E-05

25	PG Relative Humidity 32	[%]	75,24336138	75,24357335	75,24336101	75,24435927	100	0,000998257	2,250305204
26	PG Relative Humidity 33	[%]	75,28094216	75,28093304	75,28081502	75,28094216	100	0,000127149	2,244802971
27	PG Relative Humidity 34	[%]	75,31021782	75,31021359	75,31020464	75,31021782	100	1,31811E-05	0,009872444
28	PG Relative Humidity 35	[%]	75,22095022	75,22156555	75,22095006	75,22278057	100	0,001830516	2,25332121
29	PG Relative Humidity 36	[%]	75,27033568	75,27033208	75,27032445	75,27033568	100	1,12375E-05	2,246141181
30	PG Relative Humidity 37	[%]	75,31023841	75,31023421	75,31022534	75,31023841	100	1,30695E-05	1,41548E-05
31	PG Relative Humidity 38	[%]	75,28084355	75,2815483	75,28084351	75,28179684	100	0,000953331	2,244962314
32	PG Relative Humidity 39	[%]	75,29884588	75,29884223	75,29883464	75,29884588	100	1,1246E-05	2,242370561
33	PG Relative Humidity 4	[%]	75,31159337	75,31163751	75,31153954	75,312585	100	0,001045455	2,241034266
34	PG Relative Humidity 40	[%]	75,31027249	75,31026818	75,31025904	75,31027249	100	1,34429E-05	0,009877094
35	PG Relative Humidity 41	[%]	75,27076173	75,27092772	75,27075833	75,27201778	100	0,00125945	2,246316573
36	PG Relative Humidity 42	[%]	75,29412668	75,29412304	75,29411541	75,29412668	100	1,12737E-05	2,242977059
37	PG Relative Humidity 43	[%]	75,3102413	75,31023713	75,3102282	75,3102413	100	1,30984E-05	0,003193342
38	PG Relative Humidity 44	[%]	69,16459491	69,16373119	69,15798488	69,17448863	100	0,016503754	1,171344604
39	PG Relative Humidity 45	[%]	69,20861583	69,20778547	69,19898561	69,20861583	100	0,009630224	1,219102935
40	PG Relative Humidity 46	[%]	75,30673456	75,30673041	75,30672161	75,30673456	100	1,29462E-05	0,033783159
41	PG Relative Humidity 47	[%]	70,21230409	70,211595	70,20597052	70,22186302	100	0,015892507	1,154879264
42	PG Relative Humidity 48	[%]	69,86021289	69,85958041	69,85375876	69,86021289	100	0,006454139	1,09975777
43	PG Relative Humidity 49	[%]	75,30559776	75,3055936	75,30558475	75,30559776	100	1,30025E-05	0,058403154
44	PG Relative Humidity 5	[%]	75,23440907	75,23634214	75,23172095	75,24701396	100	0,015293012	2,250822907
45	PG Relative Humidity 6	[%]	75,2109619	75,21390685	75,2109619	75,22608747	100	0,015125568	2,254449893
46	PG Relative Humidity 7	[%]	75,23951348	75,23973757	75,2394689	75,24417038	100	0,004701479	2,251201189
47	PG Relative Humidity 8	[%]	75,23973261	75,23996081	75,2396938	75,24443473	100	0,004740936	2,251155355
48	PG Relative Humidity 9	[%]	75,16026043	75,16296074	75,16026043	75,16762804	100	0,00736761	2,261851048

Tabel Hasil simulasi Suhu waktu Siang

No	Goal Name	Unit	Value	Averaged Value	Min Value	Max Value	Progress [%]	Delta	Criteria
1	PG Temperature (Fluid) 1	[°C]	31,32597902	31,34001958	31,32575626	31,42707532	100	0,101319061	0,811516517
2	PG Temperature (Fluid) 10	[°C]	35,94302968	35,95177747	35,94302968	36,04711861	100	0,104088923	0,704161431
3	PG Temperature (Fluid) 11	[°C]	34,70675147	34,72713489	34,70675147	34,9043958	100	0,197644323	0,883782926
4	PG Temperature (Fluid) 12	[°C]	30,47877056	30,50003184	30,47769552	30,61893314	100	0,141237619	0,842830577
5	PG Temperature (Fluid) 13	[°C]	31,06224435	31,06759116	31,0610536	31,07817774	100	0,017124132	0,80278143
6	PG Temperature (Fluid) 14	[°C]	31,52010509	31,52186446	31,51868703	31,52779548	100	0,009108451	0,779166982
7	PG Temperature (Fluid) 15	[°C]	36,01	36,01	36,01	36,01	100	0	3,0916E-06
8	PG Temperature (Fluid) 16	[°C]	35,98089047	35,98116098	35,97989696	35,98532115	100	0,005424191	0,698964841
9	PG Temperature (Fluid) 17	[°C]	36,00157804	36,00115176	36,00044226	36,00157804	100	0,001135773	0,695916083
10	PG Temperature (Fluid) 18	[°C]	36,009986	36,009986	36,009986	36,009986	100	0	0,003132314
11	PG Temperature (Fluid) 19	[°C]	36,01080689	36,0109947	36,01080689	36,01212694	100	0,001320056	0,694378967
12	PG Temperature (Fluid) 2	[°C]	35,85709893	35,8713246	35,85670474	36,00882344	100	0,152118696	0,71694167
13	PG Temperature (Fluid) 20	[°C]	36,01160164	36,01160164	36,01160164	36,01160164	100	0	0,694259754
14	PG Temperature (Fluid) 21	[°C]	36,01000115	36,01000115	36,01000115	36,01000115	100	0	0,002100464
15	PG Temperature (Fluid) 22	[°C]	35,98400667	35,98410419	35,9838993	35,98442978	100	0,000530478	0,698289954
16	PG Temperature (Fluid) 23	[°C]	35,99785903	35,99786212	35,99759875	35,99811559	100	0,000516843	0,696281151
17	PG Temperature (Fluid) 24	[°C]	36,00999391	36,00999391	36,00999391	36,00999391	100	0	0,001022518
18	PG Temperature (Fluid) 25	[°C]	35,98437097	35,9844891	35,9842658	35,984798	100	0,0005322	0,698230889
19	PG Temperature (Fluid) 26	[°C]	35,99800054	35,9979942	35,99770423	35,99815662	100	0,000452389	0,696265148
20	PG Temperature (Fluid) 27	[°C]	36,00998727	36,00998727	36,00998727	36,00998727	100	0	0,002105749
21	PG Temperature (Fluid) 28	[°C]	35,98415325	35,98429672	35,98404533	35,98505014	100	0,00100481	0,698281588
22	PG Temperature (Fluid) 29	[°C]	35,99769911	35,99773138	35,99764734	35,99798824	100	0,000340901	0,696266819
23	PG Temperature (Fluid) 3	[°C]	35,96777188	35,97614848	35,96777188	36,07433387	100	0,106561992	0,700697375
24	PG Temperature (Fluid) 30	[°C]	36,01	36,01	36,01	36,01	100	0	3,0916E-06

25	PG Temperature (Fluid) 32	[°C]	35,97114833	35,97161762	35,97110828	35,97288118	100	0,001772896	0,700128057
26	PG Temperature (Fluid) 33	[°C]	35,99235971	35,99240628	35,99211104	35,9931128	100	0,001001764	0,697094031
27	PG Temperature (Fluid) 34	[°C]	36,00996933	36,00996931	36,00996888	36,00996933	100	4,5725E-07	0,003183786
28	PG Temperature (Fluid) 35	[°C]	35,96020937	35,96097491	35,96013644	35,96312255	100	0,00298611	0,7016723
29	PG Temperature (Fluid) 36	[°C]	35,98763452	35,98770442	35,98741377	35,98833337	100	0,000919607	0,697759249
30	PG Temperature (Fluid) 37	[°C]	36,01	36,01	36,01	36,01	100	0	3,0916E-06
31	PG Temperature (Fluid) 38	[°C]	35,99119403	35,99156828	35,99113704	35,99274948	100	0,001612441	0,697190673
32	PG Temperature (Fluid) 39	[°C]	36,00330181	36,00329558	36,0030749	36,00336417	100	0,000289272	0,69551966
33	PG Temperature (Fluid) 4	[°C]	36,01079044	36,01875459	36,01079044	36,11649854	100	0,105708099	0,694380032
34	PG Temperature (Fluid) 40	[°C]	36,0099975	36,0099975	36,0099975	36,0099975	100	0	0,003181545
35	PG Temperature (Fluid) 41	[°C]	35,98330814	35,98371716	35,98323613	35,98526428	100	0,002028144	0,69835262
36	PG Temperature (Fluid) 42	[°C]	36,00025727	36,0002943	36,00003968	36,00062136	100	0,000581683	0,695934714
37	PG Temperature (Fluid) 43	[°C]	36,00999926	36,00999926	36,00999926	36,00999926	100	0	0,001026014
38	PG Temperature (Fluid) 44	[°C]	32,11247692	32,11558816	32,10801424	32,14877905	100	0,040764807	0,892099268
39	PG Temperature (Fluid) 45	[°C]	32,82190278	32,82078693	32,81549141	32,82191005	100	0,006418639	0,792562803
40	PG Temperature (Fluid) 46	[°C]	36,00817963	36,00817963	36,00817963	36,00817963	100	0	0,011157858
41	PG Temperature (Fluid) 47	[°C]	31,96376958	31,96580153	31,95909894	31,995465	100	0,036366058	0,886095034
42	PG Temperature (Fluid) 48	[°C]	32,6862497	32,68405625	32,67838463	32,6862497	100	0,007865072	0,788705717
43	PG Temperature (Fluid) 49	[°C]	36,00655504	36,00655504	36,00655504	36,00655504	100	0	0,019367439
44	PG Temperature (Fluid) 5	[°C]	35,96808484	35,97708786	35,96537646	36,07665111	100	0,111274649	0,700571637
45	PG Temperature (Fluid) 6	[°C]	35,95430831	35,96313115	35,9522108	36,06276325	100	0,110552449	0,702472349
46	PG Temperature (Fluid) 7	[°C]	35,96830316	35,97672404	35,96830316	36,07500278	100	0,106699618	0,700612675
47	PG Temperature (Fluid) 8	[°C]	35,96807778	35,97652044	35,96807778	36,07544967	100	0,107371892	0,70065255
48	PG Temperature (Fluid) 9	[°C]	35,92472461	35,93390057	35,92472461	36,03127151	100	0,106546895	0,706783328

Tabel Hasil simulasi kelembaban waktu Siang

No	Goal Name	Unit	Value	Averaged Value	Min Value	Max Value	Progress [%]	Delta	Criteria
1	PG Relative Humidity 2	[%]	35,30	35,30	35,29	35,30	100	0,006773968	1,61
2	PG Relative Humidity 3	[%]	35,11	35,11	35,11	35,11	100	0,006376269	1,63
3	PG Relative Humidity 4	[%]	35,03	35,03	35,03	35,04	100	0,005847436	1,65
4	PG Relative Humidity 5	[%]	35,10	35,10	35,10	35,11	100	0,009560036	1,64
5	PG Relative Humidity 6	[%]	35,13	35,13	35,12	35,13	100	0,006926752	1,63
6	PG Relative Humidity 7	[%]	35,11	35,11	35,11	35,11	100	0,006339209	1,63
7	PG Relative Humidity 8	[%]	35,11	35,11	35,11	35,11	100	0,006409113	1,63
8	PG Relative Humidity 9	[%]	35,18	35,18	35,18	35,19	100	0,007822486	1,62
9	PG Relative Humidity 10	[%]	35,15	35,15	35,15	35,16	100	0,007912347	1,63
10	PG Relative Humidity 11	[%]	37,38	37,38	37,37	37,38	100	0,011682937	1,27
11	PG Relative Humidity 12	[%]	46,58	46,56	46,46	46,58	100	0,119215376	2,31
12	PG Relative Humidity 13	[%]	45,28	45,27	45,25	45,28	100	0,029588234	2,33
13	PG Relative Humidity 14	[%]	43,42	43,42	43,41	43,42	100	0,013659615	2,18
14	PG Relative Humidity 15	[%]	35,03	35,03	35,03	35,03	100	8,77578E-06	0,00
15	PG Relative Humidity 16	[%]	35,08	35,08	35,08	35,08	100	0,001540523	1,64
16	PG Relative Humidity 17	[%]	35,05	35,05	35,05	35,05	100	0,001468996	1,64
17	PG Relative Humidity 18	[%]	35,03	35,03	35,03	35,03	100	8,72122E-06	0,01
18	PG Relative Humidity 19	[%]	35,03	35,03	35,03	35,03	100	0,000117553	1,65
19	PG Relative Humidity 20	[%]	35,03	35,03	35,03	35,03	100	7,16778E-06	1,65
20	PG Relative Humidity 21	[%]	35,03	35,03	35,03	35,03	100	8,39813E-06	0,00
21	PG Relative Humidity 22	[%]	35,08	35,08	35,08	35,08	100	0,000316711	1,64
22	PG Relative Humidity 23	[%]	35,06	35,06	35,06	35,06	100	0,000262184	1,64
23	PG Relative Humidity 24	[%]	35,03	35,03	35,03	35,03	100	8,26394E-06	0,00
24	PG Relative Humidity 25	[%]	35,08	35,08	35,08	35,08	100	0,000328413	1,64

25	PG Relative Humidity 26	[%]	35,06	35,06	35,06	35,06	100	9,31175E-05	1,64
26	PG Relative Humidity 27	[%]	35,03	35,03	35,03	35,03	100	8,28208E-06	0,00
27	PG Relative Humidity 28	[%]	35,08	35,08	35,08	35,08	100	5,66901E-05	1,64
28	PG Relative Humidity 29	[%]	35,06	35,06	35,06	35,06	100	0,000286477	1,64
29	PG Relative Humidity 30	[%]	35,03	35,03	35,03	35,03	100	8,25369E-06	0,00
30	PG Relative Humidity 32	[%]	35,10	35,10	35,10	35,10	100	0,000721105	1,63
31	PG Relative Humidity 33	[%]	35,06	35,07	35,06	35,07	100	0,000239028	1,64
32	PG Relative Humidity 34	[%]	35,03	35,03	35,03	35,03	100	8,28901E-06	0,01
33	PG Relative Humidity 35	[%]	35,12	35,12	35,12	35,12	100	0,000914264	1,63
34	PG Relative Humidity 36	[%]	35,07	35,07	35,07	35,07	100	0,000305345	1,64
35	PG Relative Humidity 37	[%]	35,03	35,03	35,03	35,03	100	8,27094E-06	0,00
36	PG Relative Humidity 38	[%]	35,07	35,07	35,07	35,07	100	0,000965401	1,64
37	PG Relative Humidity 39	[%]	35,05	35,05	35,05	35,05	100	9,38357E-05	1,64
38	PG Relative Humidity 40	[%]	35,03	35,03	35,03	35,03	100	8,46618E-06	0,01
39	PG Relative Humidity 41	[%]	35,08	35,08	35,08	35,08	100	0,000767587	1,64
40	PG Relative Humidity 42	[%]	35,05	35,05	35,05	35,05	100	7,2151E-06	1,64
41	PG Relative Humidity 43	[%]	35,03	35,03	35,03	35,03	100	8,3169E-06	0,00
42	PG Relative Humidity 44	[%]	42,57	42,57	42,54	42,58	100	0,041578031	1,46
43	PG Relative Humidity 45	[%]	41,30	41,30	41,30	41,31	100	0,015485588	1,31
44	PG Relative Humidity 46	[%]	35,03	35,03	35,03	35,03	100	8,13216E-06	0,02
45	PG Relative Humidity 47	[%]	43,07	43,07	43,04	43,08	100	0,03637313	1,46
46	PG Relative Humidity 48	[%]	41,50	41,50	41,50	41,53	100	0,032607343	1,27
47	PG Relative Humidity 49	[%]	35,04	35,04	35,04	35,04	100	8,0426E-06	0,04
48	PG Relative Humidity 1	[%]	44,49	44,48	44,41	44,49	100	0,085160749	2,20

Tabel Hasil simulasi suhu waktu Sore

No	Goal Name	Unit	Value	Averaged Value	Min Value	Max Value	Progress [%]	Delta	Criteria
1	PG Temperature (Fluid) 2	[°C]	35,03	35,03	35,03	35,04	100	0,00680969	1,152777348
2	PG Temperature (Fluid) 3	[°C]	35,13	35,13	35,12	35,13	100	0,004986459	1,166880017
3	PG Temperature (Fluid) 4	[°C]	35,17	35,17	35,16	35,17	100	0,00469617	1,172706238
4	PG Temperature (Fluid) 5	[°C]	35,13	35,13	35,13	35,13	100	0,004960628	1,167607936
5	PG Temperature (Fluid) 6	[°C]	35,12	35,12	35,12	35,12	100	0,005870572	1,165718655
6	PG Temperature (Fluid) 7	[°C]	35,13	35,13	35,13	35,13	100	0,004964068	1,166981475
7	PG Temperature (Fluid) 8	[°C]	35,13	35,13	35,13	35,13	100	0,005017169	1,166954669
8	PG Temperature (Fluid) 9	[°C]	35,09	35,09	35,09	35,09	100	0,00642261	1,16145247
9	PG Temperature (Fluid) 10	[°C]	35,11	35,11	35,10	35,11	100	0,006415731	1,163737613
10	PG Temperature (Fluid) 11	[°C]	34,00	34,00	34,00	34,01	100	0,006524013	0,988682762
11	PG Temperature (Fluid) 12	[°C]	30,13	30,14	30,13	30,17	100	0,039125685	0,95611238
12	PG Temperature (Fluid) 13	[°C]	30,62	30,62	30,62	30,63	100	0,011219763	1,083776036
13	PG Temperature (Fluid) 14	[°C]	31,34	31,35	31,34	31,35	100	0,005467523	1,023645375
14	PG Temperature (Fluid) 15	[°C]	35,17	35,17	35,17	35,17	100	0	3,0832E-06
15	PG Temperature (Fluid) 16	[°C]	35,14	35,14	35,14	35,14	100	0,000770976	1,169082213
16	PG Temperature (Fluid) 17	[°C]	35,16	35,16	35,16	35,16	100	0,000748037	1,17140617
17	PG Temperature (Fluid) 18	[°C]	35,17	35,17	35,17	35,17	100	0	0,005338856
18	PG Temperature (Fluid) 19	[°C]	35,17	35,17	35,17	35,17	100	6,64202E-05	1,172754096
19	PG Temperature (Fluid) 20	[°C]	35,17	35,17	35,17	35,17	100	0	1,172807759
20	PG Temperature (Fluid) 21	[°C]	35,17	35,17	35,17	35,17	100	0	0,003583706
21	PG Temperature (Fluid) 22	[°C]	35,14	35,14	35,14	35,14	100	0,00016752	1,168881912
22	PG Temperature (Fluid) 23	[°C]	35,16	35,16	35,16	35,16	100	0,000134118	1,170815481
23	PG Temperature (Fluid) 24	[°C]	35,17	35,17	35,17	35,17	100	0	0,001741895
24	PG Temperature (Fluid) 25	[°C]	35,14	35,14	35,14	35,14	100	0,000167378	1,168932682

25	PG Temperature (Fluid) 26	[°C]	35,16	35,16	35,16	35,16	100	4,80717E-05	1,170852187
26	PG Temperature (Fluid) 27	[°C]	35,17	35,17	35,17	35,17	100	0	0,003586752
27	PG Temperature (Fluid) 28	[°C]	35,14	35,14	35,14	35,14	100	3,37658E-05	1,168988316
28	PG Temperature (Fluid) 29	[°C]	35,16	35,16	35,16	35,16	100	0,000145978	1,170834135
29	PG Temperature (Fluid) 30	[°C]	35,17	35,17	35,17	35,17	100	0	3,0832E-06
30	PG Temperature (Fluid) 32	[°C]	35,13	35,13	35,13	35,13	100	0,000362221	1,16733461
31	PG Temperature (Fluid) 33	[°C]	35,15	35,15	35,15	35,15	100	0,000122866	1,170121754
32	PG Temperature (Fluid) 34	[°C]	35,17	35,17	35,17	35,17	100	0	0,005418923
33	PG Temperature (Fluid) 35	[°C]	35,12	35,12	35,12	35,12	100	0,000461922	1,165999629
34	PG Temperature (Fluid) 36	[°C]	35,15	35,15	35,15	35,15	100	0,000155127	1,169531013
35	PG Temperature (Fluid) 37	[°C]	35,17	35,17	35,17	35,17	100	0	3,0832E-06
36	PG Temperature (Fluid) 38	[°C]	35,15	35,15	35,15	35,15	100	0,000488231	1,170225808
37	PG Temperature (Fluid) 39	[°C]	35,16	35,16	35,16	35,16	100	4,79233E-05	1,171658971
38	PG Temperature (Fluid) 40	[°C]	35,17	35,17	35,17	35,17	100	0	0,005426778
39	PG Temperature (Fluid) 41	[°C]	35,14	35,14	35,14	35,14	100	0,000386181	1,169127065
40	PG Temperature (Fluid) 42	[°C]	35,16	35,16	35,16	35,16	100	0	1,171269322
41	PG Temperature (Fluid) 43	[°C]	35,17	35,17	35,17	35,17	100	0	0,001750157
42	PG Temperature (Fluid) 44	[°C]	31,71	31,71	31,70	31,72	100	0,016838397	0,63423609
43	PG Temperature (Fluid) 45	[°C]	32,25	32,25	32,24	32,25	100	0,006687654	0,679496815
44	PG Temperature (Fluid) 46	[°C]	35,17	35,17	35,17	35,17	100	0	0,018239196
45	PG Temperature (Fluid) 47	[°C]	31,51	31,51	31,50	31,52	100	0,014659635	0,624213778
46	PG Temperature (Fluid) 48	[°C]	32,16	32,16	32,15	32,16	100	0,014007484	0,654738829
47	PG Temperature (Fluid) 49	[°C]	35,17	35,17	35,17	35,17	100	0	0,03158829
48	PG Temperature (Fluid) 1	[°C]	30,92	30,92	30,92	30,94	100	0,024124924	1,034482672

Tabel Hasil simulasi kelembaban waktu Sore

No	Goal Name	Unit	Value	Averaged Value	Min Value	MaxValue	Progress [%]	Delta	Criteria
1	PG Relative Humidity 1	[%]	56,40253885	56,77509893	56,39000199	60,88375195	100	4,493749967	6,541499702
2	PG Relative Humidity 10	[%]	43,56225704	43,67058955	43,55768244	44,99117228	100	1,43348983	7,030885293
3	PG Relative Humidity 11	[%]	46,64206095	46,84620246	46,62539126	49,24642371	100	2,62103245	7,409028338
4	PG Relative Humidity 12	[%]	59,25160934	59,52555286	59,18858317	62,94927369	100	3,760690525	6,103063597
5	PG Relative Humidity 13	[%]	57,28222223	57,27302186	57,25093596	57,34180204	100	0,090866087	6,395364792
6	PG Relative Humidity 14	[%]	55,77680384	55,77117039	55,75239649	55,78129058	100	0,02889409	6,640534597
7	PG Relative Humidity 15	[%]	43,40005546	43,40005288	43,40004898	43,40005569	100	6,705E-06	2,95404E-05
8	PG Relative Humidity 16	[%]	43,47057099	43,47118704	43,4689217	43,47942627	100	0,010504573	7,020644596
9	PG Relative Humidity 17	[%]	43,42050461	43,42153443	43,42050461	43,42324897	100	0,002744354	7,024653911
10	PG Relative Humidity 18	[%]	43,40013045	43,40012774	43,40012381	43,40013053	100	6,72601E-06	0,035655842
11	PG Relative Humidity 19	[%]	43,39813433	43,39863142	43,39658715	43,40979614	100	0,013208981	7,028021856
12	PG Relative Humidity 2	[%]	43,77049349	43,91822182	43,76541713	45,67819283	100	1,912775698	7,030277626
13	PG Relative Humidity 20	[%]	43,39623915	43,39623688	43,39623372	43,39623915	100	5,43337E-06	7,02809909
14	PG Relative Humidity 21	[%]	43,4001278	43,40012502	43,40012136	43,4001278	100	6,44721E-06	0,023940565
15	PG Relative Humidity 22	[%]	43,4630321	43,46376387	43,46250282	43,47711051	100	0,014607691	7,027231199
16	PG Relative Humidity 23	[%]	43,42950846	43,42949874	43,42888235	43,43013493	100	0,00125258	7,026509073
17	PG Relative Humidity 24	[%]	43,40015036	43,40014763	43,40014398	43,40015036	100	6,38362E-06	0,011646457
18	PG Relative Humidity 25	[%]	43,46214947	43,46283289	43,46143551	43,47624215	100	0,014806635	7,026799161
19	PG Relative Humidity 26	[%]	43,42916578	43,4291789	43,42878238	43,42987947	100	0,001097092	7,026252367
20	PG Relative Humidity 27	[%]	43,40016719	43,40016445	43,40016079	43,40016719	100	6,39175E-06	0,023980675
21	PG Relative Humidity 28	[%]	43,46267564	43,46331118	43,46183302	43,47583451	100	0,014001497	7,026774684
22	PG Relative Humidity 29	[%]	43,42989579	43,42981542	43,42919015	43,43001727	100	0,000827119	7,026601771
23	PG Relative Humidity 3	[%]	43,50232317	43,61137486	43,50148091	44,92357903	100	1,422098117	7,028797902
24	PG Relative Humidity 30	[%]	43,40013653	43,40013382	43,40013017	43,40013653	100	6,3587E-06	7,69459E-06

25	PG Relative Humidity 32	[%]	43,4941739	43,49401078	43,49121654	43,50516724	100	0,0139507	7,02691869
26	PG Relative Humidity 33	[%]	43,44282403	43,44270905	43,44099878	43,44342246	100	0,002423673	7,025590736
27	PG Relative Humidity 34	[%]	43,40021326	43,40021061	43,40020691	43,40021326	100	6,3556E-06	0,036243913
28	PG Relative Humidity 35	[%]	43,52068067	43,51981548	43,51607982	43,52906577	100	0,012985955	7,027349172
29	PG Relative Humidity 36	[%]	43,45426734	43,45409582	43,45257294	43,45479824	100	0,002225296	7,025041939
30	PG Relative Humidity 37	[%]	43,40013938	43,4001367	43,40013307	43,40013938	100	6,30652E-06	7,80319E-06
31	PG Relative Humidity 38	[%]	43,44562373	43,44569991	43,44303186	43,45718013	100	0,014148268	7,027637351
32	PG Relative Humidity 39	[%]	43,41633058	43,41634344	43,41617417	43,41687614	100	0,000701969	7,026997881
33	PG Relative Humidity 4	[%]	43,39812826	43,50614118	43,39805161	44,79763096	100	1,399579352	7,02778664
34	PG Relative Humidity 40	[%]	43,40013843	43,40013562	43,40013188	43,40013843	100	6,54834E-06	0,036256348
35	PG Relative Humidity 41	[%]	43,46472005	43,4647313	43,46280905	43,47559747	100	0,012788415	7,027640164
36	PG Relative Humidity 42	[%]	43,42370049	43,4236086	43,42281434	43,42422341	100	0,001409071	7,026490432
37	PG Relative Humidity 43	[%]	43,40013486	43,40013213	43,40012845	43,40013486	100	6,40787E-06	0,01169536
38	PG Relative Humidity 44	[%]	53,99739157	53,99125803	53,93591818	54,01096808	100	0,075049895	6,845418755
39	PG Relative Humidity 45	[%]	51,87364872	51,87693241	51,87362708	51,89221826	100	0,018591187	7,103963562
40	PG Relative Humidity 46	[%]	43,40455724	43,4045546	43,40455104	43,40455724	100	6,20084E-06	0,124482786
41	PG Relative Humidity 47	[%]	54,46802883	54,46481547	54,41468214	54,48276954	100	0,068087403	6,77391358
42	PG Relative Humidity 48	[%]	52,28115826	52,28773045	52,28115826	52,30462396	100	0,023465702	7,041338951
43	PG Relative Humidity 49	[%]	43,40848991	43,40848727	43,40848373	43,40848991	100	6,17875E-06	0,215615254
44	PG Relative Humidity 5	[%]	43,5015766	43,61105923	43,49515154	44,94192305	100	1,44677151	7,02981253
45	PG Relative Humidity 6	[%]	43,53495223	43,64672418	43,52889808	44,99746889	100	1,468570808	7,030694202
46	PG Relative Humidity 7	[%]	43,501035	43,60995559	43,50006356	44,92161851	100	1,421554954	7,028625447
47	PG Relative Humidity 8	[%]	43,50158095	43,61141176	43,50083961	44,93208021	100	1,431240606	7,028831895
48	PG Relative Humidity 9	[%]	43,60663453	43,71607804	43,60134858	45,05538158	100	1,454032998	7,031272349

Lampiran 5. Rata-rata Hasil Pengukuran Suhu dan Kelembaban Internal dan External Rakkeang

Tabel Rata-rata hasil pengukuran tiap waktu

Waktu	Bagian 1		Bagian 2		Bagian 3		Bagian 4		Rata-rata Internal		Rata-rata External	
	suhu	RH	suhu	RH	suhu	RH	suhu	RH	suhu	RH	suhu	RH
18:00	31,46	52,56	31,46	52,78	31,27	52,56	31,53	53,67	31,43	52,89	26,65	65,50
18:30	30,27	55,33	30,42	57,11	30,37	58,33	30,38	56,89	30,36	56,92	25,60	69,00
19:00	28,70	58,67	29,22	61,56	29,24	60,22	29,33	59,11	29,13	59,89	24,90	70,00
19:30	27,86	60,78	28,38	63,89	28,62	61,78	28,46	61,22	28,33	61,92	24,10	73,50
20:00	27,19	63,33	27,49	67,00	27,67	65,00	27,74	63,44	27,52	64,69	23,95	74,00
20:30	26,54	64,89	26,96	67,67	27,08	64,56	27,41	64,56	27,00	65,42	23,20	75,00
21:00	26,06	66,89	26,24	69,22	26,28	66,78	24,81	72,22	25,85	68,78	22,75	77,00
21:30	25,49	69,11	25,90	70,78	25,71	69,44	25,90	67,89	25,75	69,31	22,55	77,00
22:00	25,27	70,22	25,68	71,33	25,56	69,33	25,54	68,44	25,51	69,83	22,25	78,00
22:30	24,89	71,33	25,30	72,67	25,41	70,33	25,30	69,67	25,23	71,00	22,00	77,00
23:00	24,79	72,00	25,09	72,22	25,38	69,33	25,06	69,67	25,08	70,81	21,55	79,50
23:30	24,24	73,78	24,54	74,22	24,94	71,00	24,61	70,89	24,59	72,47	21,10	82,00
0:00	23,80	76,11	24,22	76,11	24,64	73,33	24,29	72,89	24,24	74,61	20,90	86,50
0:30	23,63	78,22	23,93	77,78	24,44	76,33	24,17	74,89	24,04	76,81	21,25	83,50
1:00	23,98	78,67	24,17	77,78	24,63	75,33	24,51	74,11	24,32	76,47	21,20	84,00
1:30	23,89	79,89	23,97	79,33	24,57	76,56	24,33	79,56	24,19	78,83	21,10	88,00
2:00	23,60	81,89	23,68	81,44	23,86	79,33	24,26	80,44	23,85	80,78	20,70	88,50
2:30	23,44	81,11	23,52	80,33	23,50	80,44	24,19	77,33	23,66	79,81	21,00	88,00
3:00	23,66	81,00	23,73	80,78	23,51	79,89	24,30	77,44	23,80	79,78	21,05	88,00
3:30	23,79	81,00	23,76	80,67	23,48	80,33	24,31	77,89	23,83	79,97	21,10	88,00
4:00	23,66	81,56	23,73	81,00	23,52	79,78	23,82	78,89	23,68	80,31	21,00	89,00
4:30	23,47	82,33	23,66	81,78	23,38	80,56	23,77	80,67	23,57	81,33	20,50	90,00

5:00	23,04	83,56	23,46	83,78	22,84	83,11	23,34	82,78	23,17	83,31	20,35	92,00
5:30	22,86	86,89	23,16	87,22	22,89	84,44	23,31	84,44	23,05	85,75	20,60	90,50
6:00	23,36	86,33	23,66	86,89	22,96	83,22	23,40	84,44	23,34	85,22	20,65	89,50
6:30	23,38	86,67	23,81	86,56	23,20	83,44	23,49	84,78	23,47	85,36	21,05	86,50
7:00	23,47	87,89	23,88	87,33	23,46	84,78	24,12	84,44	23,73	86,11	21,60	84,00
7:30	24,43	83,44	24,96	83,33	24,97	80,11	25,59	78,67	24,99	81,39	23,50	76,50
8:00	25,53	79,44	25,94	79,44	26,96	72,89	26,92	73,11	26,34	76,22	25,65	67,00
8:30	26,18	75,44	26,70	76,11	28,31	67,67	27,83	72,11	27,26	72,83	29,25	55,50
9:00	29,16	67,56	29,34	68,11	30,94	56,67	30,49	57,67	29,98	62,50	30,25	49,00
9:30	33,17	49,22	32,84	48,67	32,66	46,67	32,18	52,33	32,71	49,22	31,35	44,50
10:00	32,69	49,33	33,01	49,56	33,40	46,56	32,31	50,67	32,85	49,03	31,95	43,00
10:30	32,88	48,33	33,07	49,67	33,24	47,78	33,52	47,44	33,18	48,31	32,95	40,50
11:00	34,08	43,11	34,60	43,44	34,49	41,33	34,64	41,11	34,45	42,25	35,15	32,50
11:30	37,32	37,22	37,07	36,67	37,28	34,33	36,73	35,56	37,10	35,94	36,95	25,00
12:00	41,11	31,44	40,74	30,11	41,41	29,11	40,36	31,00	40,91	30,42	39,60	23,00
12:30	43,63	27,56	43,82	25,44	43,44	25,11	37,68	35,89	42,14	28,50	41,90	23,00
13:00	41,73	29,33	42,03	29,11	41,31	29,67	42,50	31,22	41,89	29,83	40,60	27,00
13:30	40,93	30,67	41,30	31,67	40,71	30,56	42,67	30,11	41,40	30,75	40,15	28,00
14:00	42,46	31,78	42,98	31,44	40,94	31,78	42,34	29,67	42,18	31,17	39,10	30,00
14:30	40,90	33,89	41,42	33,11	41,11	32,11	40,30	34,22	40,93	33,33	39,30	33,00
15:00	36,32	40,78	36,84	39,44	36,72	39,33	38,20	37,44	37,02	39,25	37,90	36,00
15:30	35,10	43,56	35,62	42,67	35,89	41,78	35,38	43,00	35,50	42,75	36,05	38,50
16:00	34,40	46,22	34,92	45,00	35,03	44,44	35,42	42,67	34,94	44,58	34,55	41,00
16:30	37,76	38,67	38,28	37,56	38,72	39,33	35,61	42,33	37,59	39,47	32,85	42,00
17:00	33,39	48,89	33,91	48,00	33,97	48,56	32,96	50,78	33,56	49,06	30,80	49,00
17:30	31,52	52,11	32,04	51,33	32,11	51,67	31,86	52,33	31,88	51,86	27,65	58,50

Lampiran 6. Kalibrasi Sensor

Tabel Perbandingan nilai hasil pengukuran sensor DHT 11 dan alat ukur (Termometer dan Hygrometer)

Sensor 1				Sensor 2				Sensor 3				Sensor 4			
Alat ukur		Sensor													
Suhu	RH	Suhu	RH												
32	66	32	66	32	65	33,6	64	33	66	31	62	33	65	32,9	65
33	63	33,6	63	33	64	34,2	63	34	64	32,5	60	34	64	34,5	63
34	60	34,2	61	35	61	35	59	35	62	33,8	59	35	61	35,3	60
Sensor 5				Sensor 6				Sensor 7				Sensor 8			
Alat ukur		Sensor		Alat ukur		Sensor		Alat ukur		Sensor		Alat ukur		Sensor	
Suhu	RH	Suhu	RH												
32	64	31,7	63	33	64	33,3	63	33	65	32	66	32	65	33,2	65
34	63	33,8	61	35	62	34,9	61	34	63	33,8	64	34	64	34,7	63
35	61	34,4	59	36	60	35,5	58	36	61	35,5	61	36	61	35,9	60
Sensor 9				Sensor 10				Sensor 11				Sensor 12			
Alat ukur		Sensor		Alat ukur		Sensor		Alat ukur		Sensor		Alat ukur		Sensor	
Suhu	RH	Suhu	RH												
33	65	32	64	33	64	32,8	66	33	64	32,1	66	32	65	33,2	65
34	64	33,7	63	34	63	34,5	63	35	62	33,8	63	33	61	34,4	63
36	61	34,8	61	36	61	35,8	60	36	60	34,9	61	35	59	36	61
Sensor 13				Sensor 14				Sensor 15				Sensor 16			
Alat ukur		Sensor		Alat ukur		Sensor		Alat ukur		Sensor		Alat ukur		Sensor	
Suhu	RH	Suhu	RH												
32	65	31,8	62	33	65	32,5	66	32	65	31,9	63	33	65	33,5	64
34	63	33,5	60	35	63	34,9	63	34	63	33,7	61	35	63	34,9	62

36	61	34,9	59	36	61	35,7	61	35	60	34,8	59	36	61	35,7	61
Sensor 17				Sensor 18				Sensor 19				Sensor 20			
Alat ukur		Sensor		Alat ukur		Sensor		Alat ukur		Sensor		Alat ukur		Sensor	
Suhu	RH	Suhu	RH												
33	65	32,8	66	32	65	33,4	65	33	65	32,2	66	33	65	32,5	66
34	64	34,7	64	34	64	34,6	63	34	62	33,7	64	34	63	34,3	63
36	62	36,1	61	36	61	35,9	60	36	60	34,9	61	36	61	35,9	61
Sensor 21				Sensor 22				Sensor 23				Sensor 24			
Alat ukur		Sensor		Alat ukur		Sensor		Alat ukur		Sensor		Alat ukur		Sensor	
Suhu	RH	Suhu	RH												
32	66	32	65	32	66	33,4	65	33	65	31	66	33	65	32,8	65
33	63	33,6	63	33	63	34,2	63	34	63	32,5	64	34	64	34,3	63
35	60	34,9	60	36	61	35,6	61	35	60	33,8	60	36	61	35,8	60
Sensor 25				Sensor 26				Sensor 27				Sensor 28			
Alat ukur		Sensor		Alat ukur		Sensor		Alat ukur		Sensor		Alat ukur		Sensor	
Suhu	RH	Suhu	RH												
32	65	31,4	64	33	65	33,4	65	33	65	32,7	66	32	66	33,2	65
34	63	32,8	61	35	63	34,7	62	34	63	34,1	63	34	63	34,7	63
35	61	34,1	59	36	60	35,8	59	36	61	35,9	61	36	60	36,1	60
Sensor 29				Sensor 30				Sensor 31				Sensor 32			
Alat ukur		Sensor		Alat ukur		Sensor		Alat ukur		Sensor		Alat ukur		Sensor	
Suhu	RH	Suhu	RH												
33	65	32,1	66	33	65	32,5	65	33	65	32	66	32	66	33,6	66
34	63	33,4	63	34	63	34,1	63	34	63	33,6	64	33	64	34,9	63
36	60	35,2	61	36	61	35,8	60	36	60	34,9	62	35	62	36,2	61

Sensor 33				Sensor 34				Sensor 35				Sensor 36			
Alat ukur		Sensor		Alat ukur		Sensor		Alat ukur		Sensor		Alat ukur		Sensor	
Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH
33	65	32,3	66	33	65	32,9	66	32	66	31,7	64	33	65	33,2	63
34	63	33,5	63	34	62	34,1	63	34	64	33,8	61	35	62	34,6	61
35	61	34,9	61	36	60	35,9	60	35	61	34,4	59	36	60	35,9	59
Sensor 37				Sensor 38				Sensor 39				Sensor 40			
Alat ukur		Sensor		Alat ukur		Sensor		Alat ukur		Sensor		Alat ukur		Sensor	
Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH
33	65	32,9	64	32	66	33,3	64	33	64	32,9	66	33	65	33,1	64
34	63	34,2	62	34	63	34,5	62	34	62	34,1	64	34	63	34,6	63
36	60	35,8	60	36	60	35,8	59	36	60	35,4	61	36	60	35,7	59
Sensor 41				Sensor 42				Sensor 43				Sensor 44			
Alat ukur		Sensor		Alat ukur		Sensor		Alat ukur		Sensor		Alat ukur		Sensor	
Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH
33	65	33,1	64	33	65	33,6	64	33	65	32	62	33	65	33,9	64
35	62	34,6	63	34	63	34,2	63	34	63	33,5	60	34	63	34,5	62
36	60	35,2	61	35	61	35	61	36	60	34,8	59	35	61	35,3	59
Sensor 45				Sensor 46				Sensor 47 (External)				Sensor 48 (External)			
Alat ukur		Sensor		Alat ukur		Sensor		Alat ukur		Sensor		Alat ukur		Sensor	
Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH
33	65	33,2	63	33	65	31	66	32	65	33,4	65	32	64	31,7	63
34	63	34,4	61	34	63	32,5	64	34	64	34,6	63	34	63	33,8	61
35	60	35,8	59	35	60	33,8	60	36	61	35,9	60	35	61	34,4	59

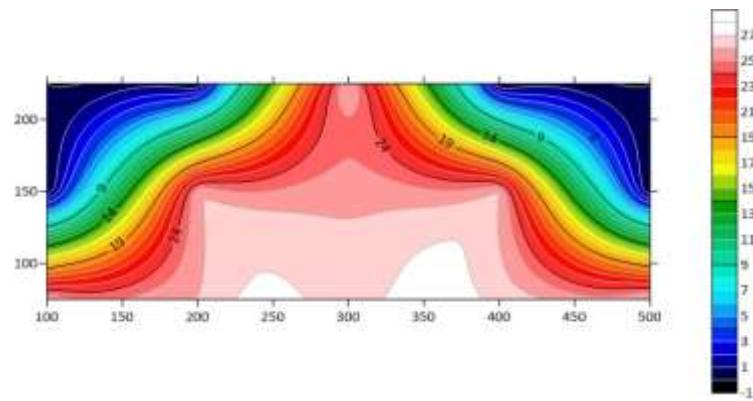
Lampiran 7. Kalibrasi Hasil Pengukuran Sensor dan Alat Ukur

Tabel Nilai Rengskuer hasil kalibrasi sensor

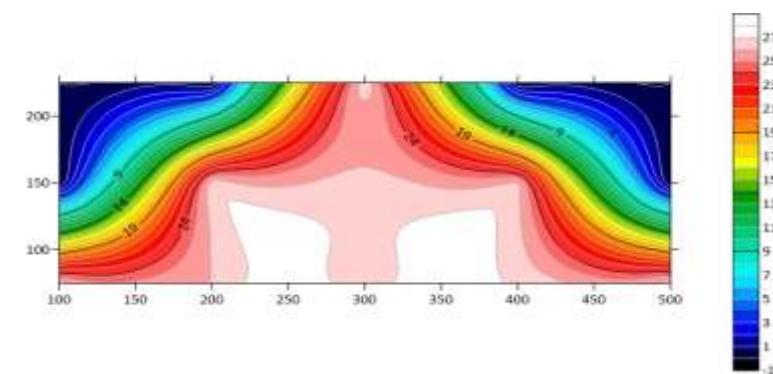
Sensor 1		Sensor 2		Sensor 3		Sensor 4	
Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH
0,9356	0,9868	0,9884	0,9973	0,9983	0,9643	0,9643	0,9727
Sensor 5		Sensor 6		Sensor 7		Sensor 8	
Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH
0,9856	0,9643	0,9956	0,9868	0,9579	0,9868	0,9959	0,9727
Sensor 9		Sensor 10		Sensor 11		Sensor 12	
Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH
0,9051	0,9727	0,9304	0,9643	0,9955	0,9869	0,9884	0,9643
Sensor 13		Sensor 14		Sensor 15		Sensor 16	
Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH
0,9969	0,9643	0,9918	0,9868	0,9973	0,9868	0,9988	0,9643
Sensor 17		Sensor 18		Sensor 19		Sensor 20	
Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH
0,925	0,9944	0,9995	0,9727	0,9368	0,9481	0,9506	0,9868
Sensor 21		Sensor 22		Sensor 23		Sensor 24	
Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH
0,9389	0,9868	0,9845	0,9868	0,9983	0,9944	0,9643	0,9727
Sensor 25		Sensor 26		Sensor 27		Sensor 28	
Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH
0,9718	0,9868	0,98	0,9868	0,9861	0,9868	0,9996	0,9868
Sensor 29		Sensor 30		Sensor 31		Sensor 32	
Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH
0,9906	0,9481	0,9705	0,9868	0,9389	0,9868	0,9643	0,9868

Sensor 33		Sensor 34		Sensor 35		Sensor 36	
Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH
0,998	0,9868	0,9944	0,9868	0,9856	0,9481	0,9718	0,9868
Sensor 37		Sensor 38		Sensor 39		Sensor 40	
Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH
0,9831	0,9868	0,9995	0,9868	0,9724	0,9868	0,9243	0,953
Sensor 41		Sensor 42		Sensor 43		Sensor 44	
Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH
0,9973	0,9098	0,9932	0,9643	0,9474	0,9098	0,9932	0,9868
Sensor 45		Sensor 46		Sensor 47 (Eksternal)		Sensor 48 (Eksternal)	
Suhu	RH	Suhu	RH	Suhu	RH	Suhu	RH
0,998	0,9868	0,9983	0,9944	0,9995	0,9727	0,9856	0,9643

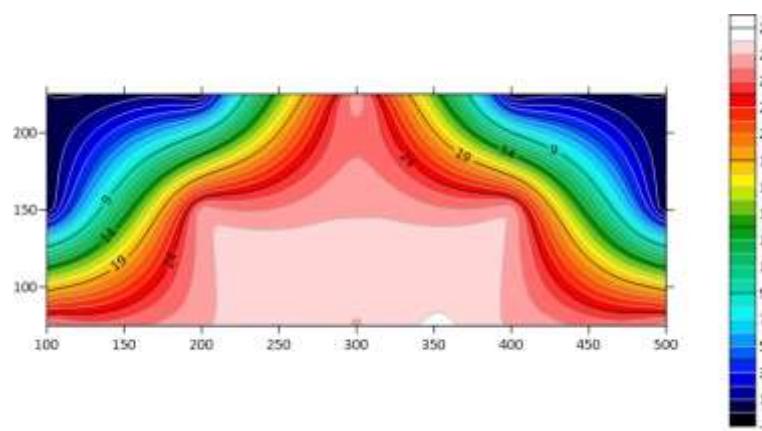
Lampiran 8. Simulasi Hasil Pengukuran Menggunakan Surfer



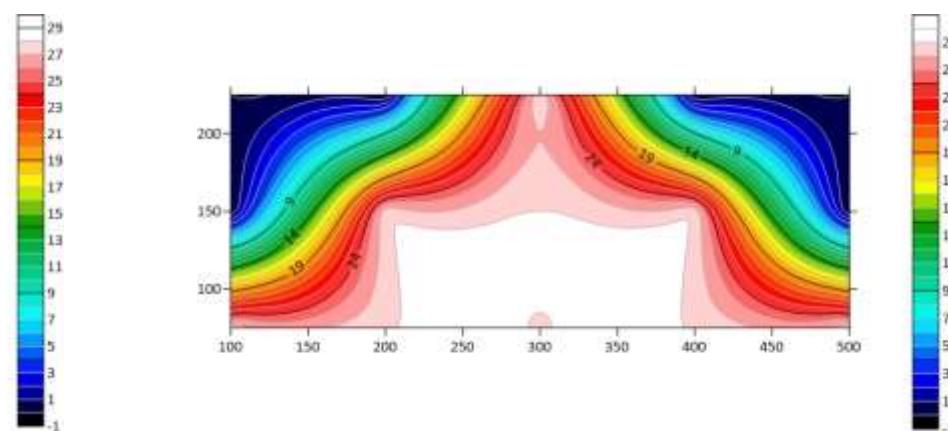
Gambar Hasil simulasi Arduino 1 (Waktu Pagi)



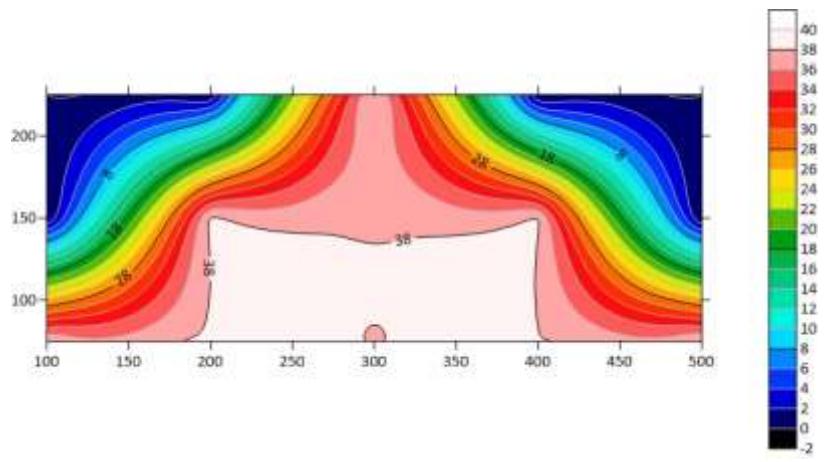
Gambar Hasil simulasi Arduino 2 (Waktu Pagi)



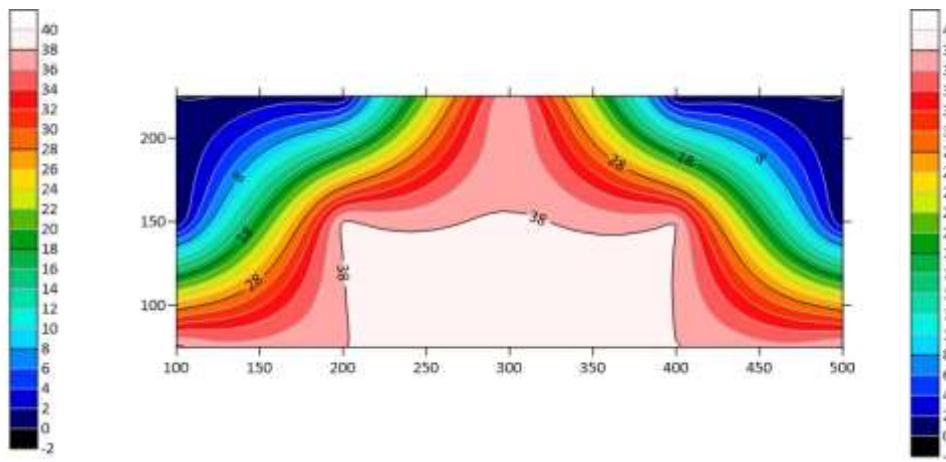
Gambar Hasil simulasi Arduino 3 (Waktu Pagi)



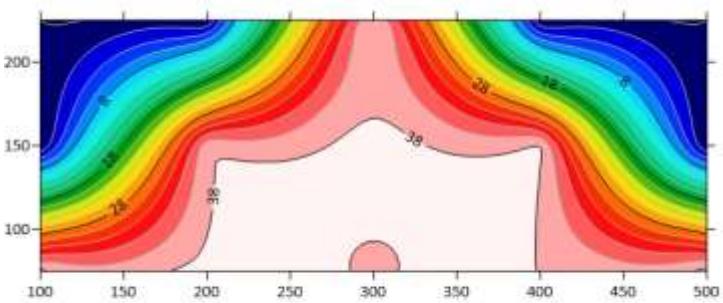
Gambar Hasil simulasi Arduino 4 (Waktu Pagi)



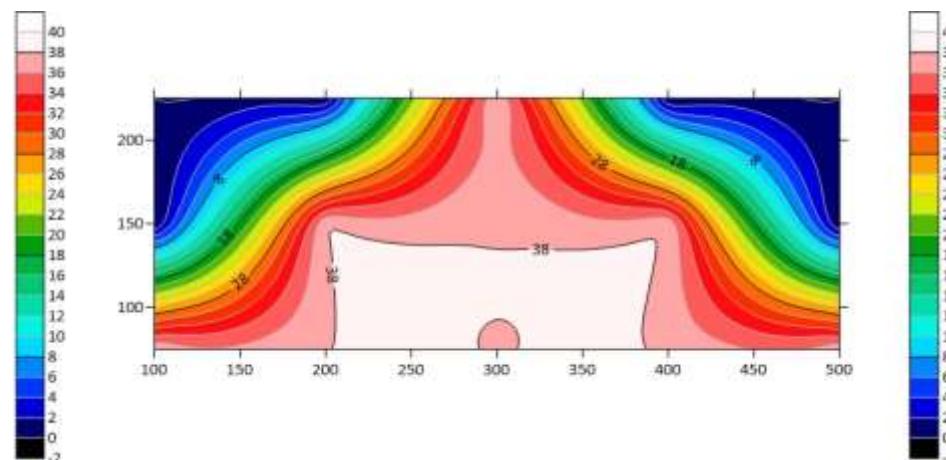
Gambar Hasil simulasi Arduino 1 (Waktu Siang)



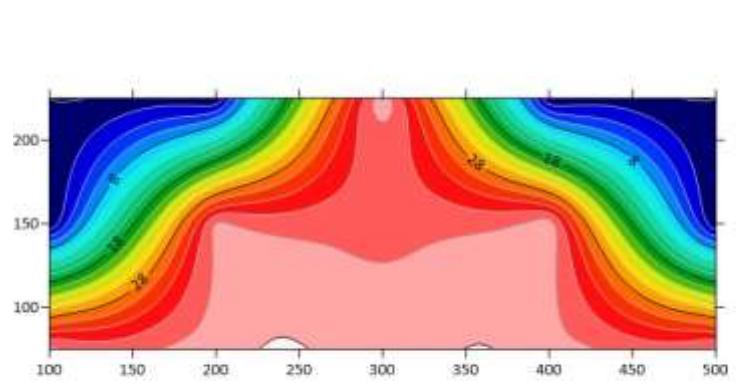
Gambar Hasil simulasi Arduino 2 (Waktu Siang)



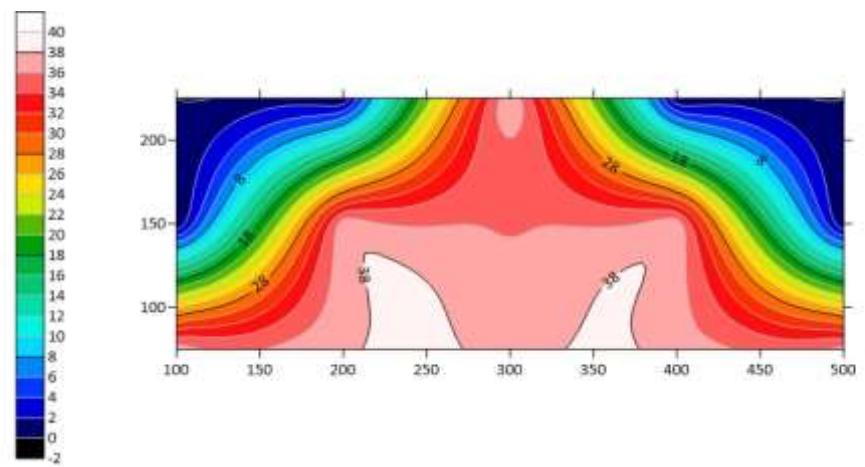
Gambar Hasil simulasi Arduino 3 (Waktu Siang)



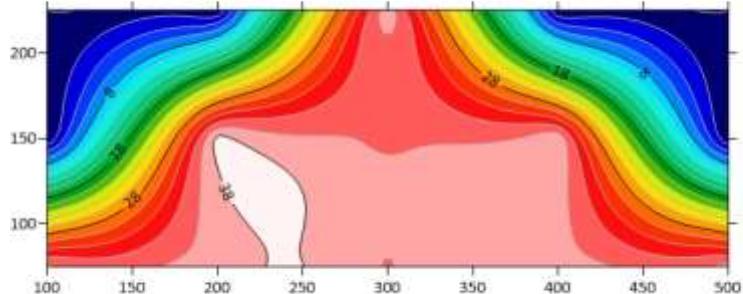
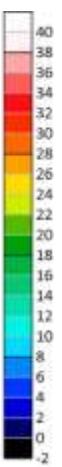
Gambar Hasil simulasi Arduino 4 (Waktu Siang)



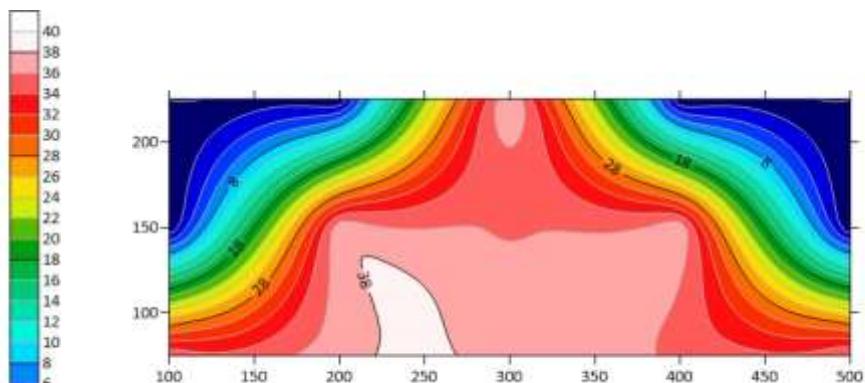
Gambar Hasil simulasi Arduino 1 (Waktu Sore)



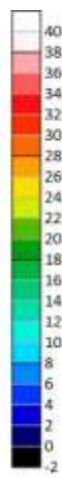
Gambar Hasil simulasi Arduino 2 (Waktu Sore)

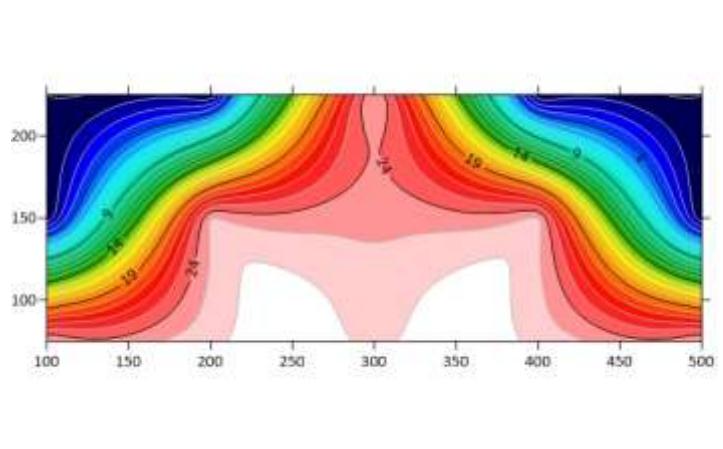


Gambar Hasil simulasi Arduino 3 (Waktu Sore)

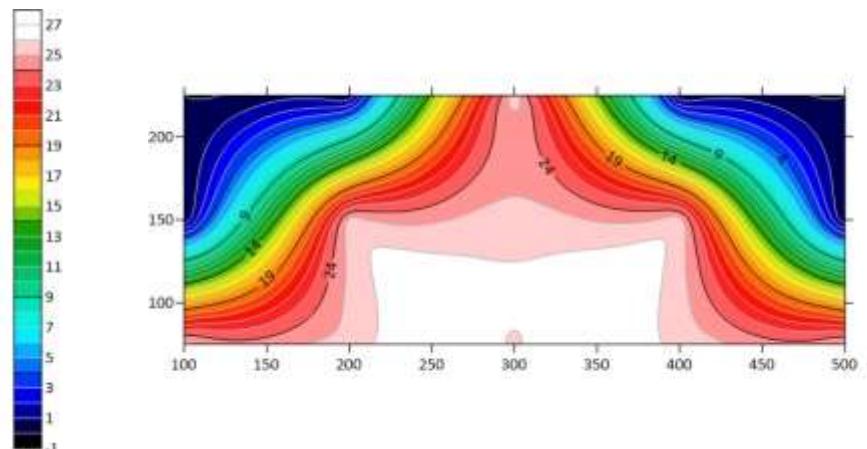


Gambar Hasil simulasi Arduino 4 (Waktu Sore)

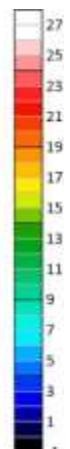




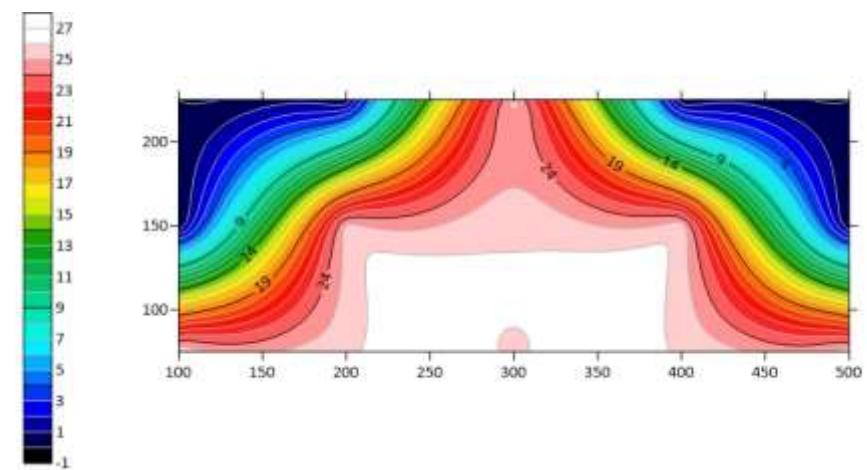
Gambar Hasil simulasi Arduino 1 (Waktu Malam)



Gambar Hasil simulasi Arduino 2 (Waktu Malam)



Gambar Hasil simulasi Arduino 3 (Waktu Malam)



Gambar Hasil simulasi Arduino 4 (Waktu Malam)

Lampiran 9. Dokumentasi Penelitian



Gambar Pengukuran suhu *rakkeang* secara manual



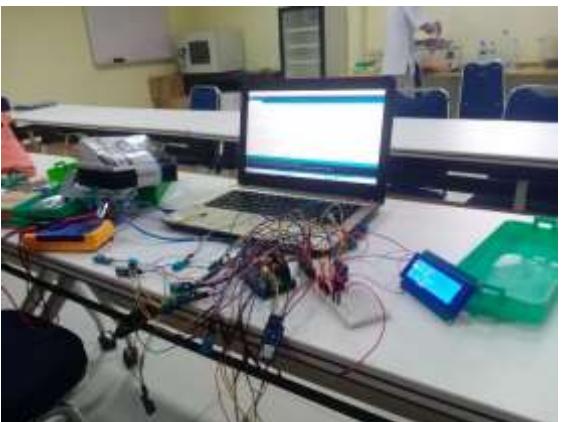
Gambar Pengukuran Dimensi *rakkeang*



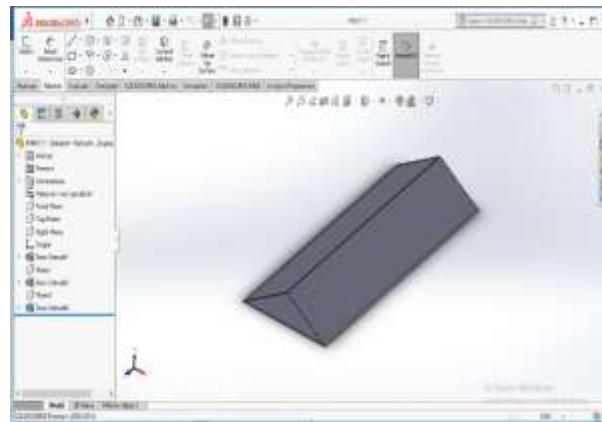
Gambar Perakitan sensor



Gambar Pembuatan Bahasa program



Gambar Kalibrasi sensor



Gambar Pembuatan Dimensi *rakkeang*



Gambar Pemasangan Sensor



Gambar Pemasangan Sensor