

CERTIFICADO DE CALIBRACIÓN / CALIBRATION CERTIFICATE

INNOVATECIS CIA LTDA

General José María Guerrero N69-170 y Alfonso del Hierro

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Certificado No. (Certificate #): 60221

Fecha de Recepción (Reception Date): 2025-08-20

Fecha de Calibración (Calibration Date): 2025-08-20

Próxima Fecha de Calibración (Calibration Due):

Fecha de Emisión (Emission Date): 2025-08-20

Cliente (Client): JAMES BROWN PHARMA C.A.
AVENIDA INTEROCEÁNICA KM 23 1/2 Y PASAJE COSTA SAMBRONE (SEDE PRINCIPAL)

Información del Instrumento (Instrument Information)

Equipo (Instrument): Microbaño	Int. de Medición: (50 a 135) °C	Ubicación: *****
Marca (Brand): BIOBASE	(Measurement Range)	(Location):
Modelo (Model): BOV-90VL	División de escala: 0.1 °C	Lugar de Calibración: In Situ
Serie/Código: 5261705 / JBP-ETU-012	(Resolution)	(Place of Calibration): On Site

Datos de Calibración (Calibration Info)

Procedimiento (Procedure): INN-PC-29

Condiciones Ambientales (Environmental Conditions)

Temp. Inicial (Initial Temp.): 21.5 °C	Hum. Inicial (Initial Hum.): 54.6 %HR
Temp. Final (Final Temp.): 22.3 °C	Hum. Final (Final Hum.): 55.1 %HR

Trazabilidad (Traceability Info)

Patrón (Standard)	Marca (Brand)	Cert. #	Última Calibración (Last Cal.)	Período (Period)
Termocupla	-	51727 / 51728	2024-11-26	1 año
Termocupla	-	51729 / 51730	2024-11-26	1 año
Termocupla	-	51731 / 51732	2024-11-26	1 año
Termocupla	-	51733 / 51734	2024-11-26	1 año
-	-	-	-	-
-	-	-	-	-

Resultados (Results)

Ver Resultados en Hoja Adjunta

See results in attached Sheet

El presente Certificado de Calibración posee la trazabilidad en esta magnitud hacia el Patrón Nacional, a través de la realización de la unidad de medida en el NPL, NIST, u otro Laboratorio Nacional reconocido al Sistema Internacional de Medidas. La calibración fue realizada bajo un Sistema de Gestión de Laboratorio conforme a la Norma ISO/IEC 17025:2017. Los resultados y su incertidumbre reportada con un nivel de confianza de k=2, 95% son relacionados a este instrumento y en el tiempo que se realizó las medidas. Este Laboratorio no se responsabiliza de los perjuicios que pueda ocasionar el uso inadecuado del instrumento calibrado. La reproducción parcial es prohibida, la reproducción total deberá hacerse con la autorización escrita aprobada por INNOVATEC Industrial Solutions. *This Certificate of Calibration provides traceability of measurement to the National Standard, through units of measurement realized at the NPL, NIST or other recognized National Standard Laboratories to the International System of Units. The calibration was performed under a Laboratory Management System in accordance with the ISO/IEC 17025:2017 Standard. The results and the reported uncertainty at a confidence level of k=2, 95% are related only to this instrument and at the time of measurement. This Laboratory is not responsible for any damages that may result from improper use of the calibrated instrument. Partial reproduction is forbidden, the total reproduction must have an approved written authorization by INNOVATEC Industrial Solutions.*

Comentarios: Los resultados son un promedio de los datos tomados durante la calibración.
Comments

Calibrado por: Jonathan Fonseca
Calibrated by:

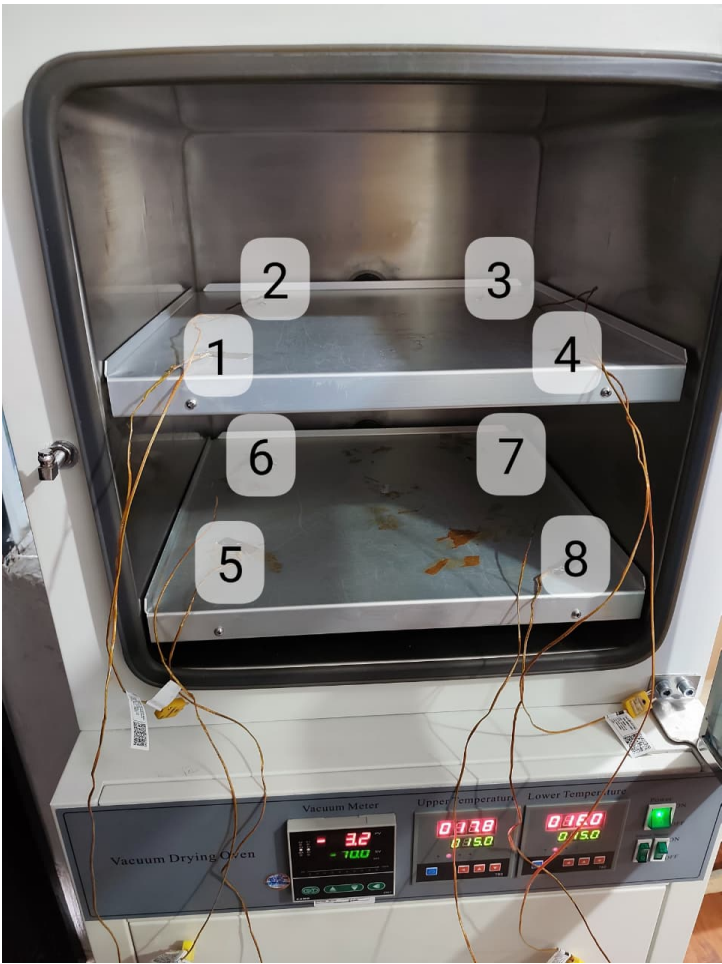
Aprobado por:
Approved by:



Fin de Certificado (End of Certificate)

Certificado No.:	60221	Equipo (Instrument): Microbaño					
Fecha de Calibración:	2025-08-20	Marca (Brand): BIOBASE					
Nominal (Nominal)	Patrón (Standard)	UBP (UUT)	Error (Error)	Precisión (Accuracy)	Estabilidad (Stability)	Uniformidad (Uniformity)	Incertidumbre (Uncertainty)
50 °C	50.789 °C	50.40 °C	-0.389 °C	± 1 °C	0.901 °C	0.843 °C	± 0.72 °C
80 °C	80.852 °C	80.67 °C	-0.187 °C	± 1 °C	3.158 °C	2.53 °C	± 4.7 °C
135 °C	134.863 °C	135.05 °C	0.187 °C	± 1 °C	3.113 °C	1.374 °C	± 3.9 °C

Diagram de Posición de Sensores (Sensor Position Diagram)

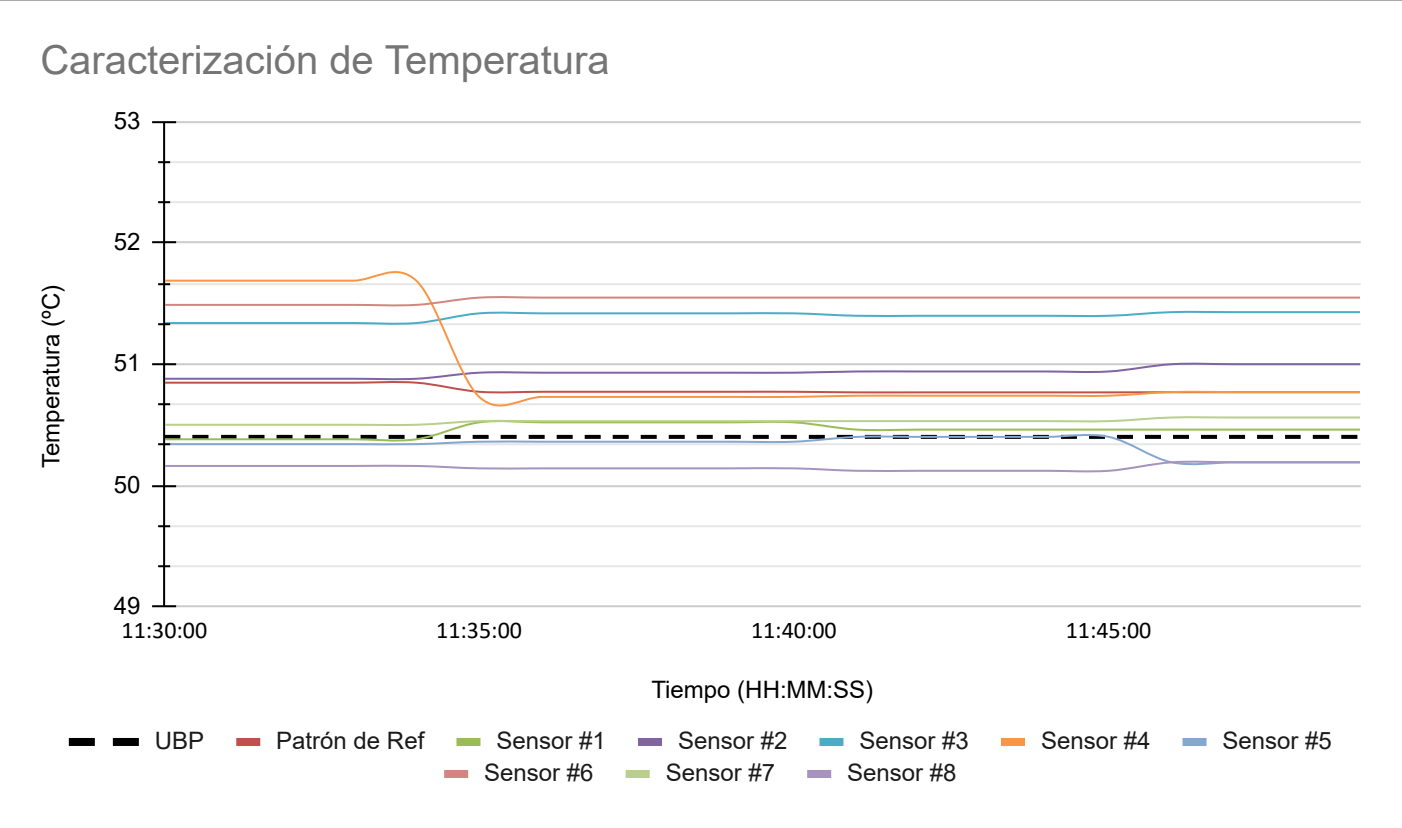


- Leyenda:**
- 1: Sensor #1
 - 2: Sensor #2
 - 3: Sensor #3
 - 4: Sensor #4
 - 5: Sensor #5
 - 6: Sensor #6
 - 7: Sensor #7
 - 8: Sensor #8

Las imagenes utilizadas solo son un ejemplo de lo puntos de medida empleados y posición de los sensores.

Hora (Time)	UBP (UUT)	Patrón de Ref (Ref. Standard)	Sensor #1 (Sensor #1)	Sensor #2 (Sensor #2)	Sensor #3 (Sensor #3)	Sensor #4 (Sensor #4)	Sensor #5 (Sensor #5)	Sensor #6 (Sensor #6)	Sensor #7 (Sensor #7)	Sensor #8 (Sensor #8)	Error (Error)
11:30:00	50.4 °C	50.848 °C	50.380 °C	50.880 °C	51.340 °C	51.690 °C	50.340 °C	51.490 °C	50.50 °C	50.160 °C	-0.447 °C
11:31:00	50.4 °C	50.848 °C	50.380 °C	50.880 °C	51.340 °C	51.690 °C	50.340 °C	51.490 °C	50.50 °C	50.160 °C	-0.4470 °C
11:32:00	50.4 °C	50.848 °C	50.380 °C	50.880 °C	51.340 °C	51.690 °C	50.340 °C	51.490 °C	50.50 °C	50.160 °C	-0.447 °C
11:33:00	50.4 °C	50.8480 °C	50.380 °C	50.880 °C	51.340 °C	51.690 °C	50.340 °C	51.490 °C	50.50 °C	50.160 °C	-0.4470 °C
11:34:00	50.4 °C	50.848 °C	50.380 °C	50.880 °C	51.340 °C	51.690 °C	50.340 °C	51.490 °C	50.50 °C	50.160 °C	-0.447 °C
11:35:00	50.4 °C	50.773 °C	50.520 °C	50.930 °C	51.420 °C	50.730 °C	50.360 °C	51.550 °C	50.530 °C	50.140 °C	-0.372 °C
11:36:00	50.4 °C	50.773 °C	50.520 °C	50.930 °C	51.420 °C	50.730 °C	50.360 °C	51.550 °C	50.530 °C	50.1400 °C	-0.372 °C
11:37:00	50.4 °C	50.773 °C	50.520 °C	50.930 °C	51.420 °C	50.730 °C	50.360 °C	51.550 °C	50.530 °C	50.140 °C	-0.372 °C
11:38:00	50.4 °C	50.773 °C	50.520 °C	50.930 °C	51.420 °C	50.730 °C	50.360 °C	51.550 °C	50.530 °C	50.140 °C	-0.372 °C
11:39:00	50.4 °C	50.773 °C	50.520 °C	50.930 °C	51.420 °C	50.730 °C	50.360 °C	51.550 °C	50.530 °C	50.140 °C	-0.372 °C
11:40:00	50.4 °C	50.773 °C	50.520 °C	50.930 °C	51.420 °C	50.730 °C	50.360 °C	51.550 °C	50.530 °C	50.140 °C	-0.372 °C
11:41:00	50.4 °C	50.768 °C	50.460 °C	50.940 °C	51.400 °C	50.740 °C	50.400 °C	51.550 °C	50.530 °C	50.1200 °C	-0.368 °C
11:42:00	50.4 °C	50.768 °C	50.460 °C	50.940 °C	51.400 °C	50.740 °C	50.400 °C	51.550 °C	50.530 °C	50.120 °C	-0.368 °C
11:43:00	50.4 °C	50.768 °C	50.460 °C	50.940 °C	51.400 °C	50.740 °C	50.400 °C	51.550 °C	50.530 °C	50.120 °C	-0.368 °C
11:44:00	50.4 °C	50.768 °C	50.460 °C	50.940 °C	51.400 °C	50.740 °C	50.400 °C	51.550 °C	50.530 °C	50.120 °C	-0.368 °C
11:45:00	50.4 °C	50.768 °C	50.460 °C	50.940 °C	51.400 °C	50.740 °C	50.400 °C	51.550 °C	50.530 °C	50.120 °C	-0.368 °C
11:46:00	50.4 °C	50.769 °C	50.460 °C	51.000 °C	51.430 °C	50.770 °C	50.190 °C	51.550 °C	50.560 °C	50.190 °C	-0.369 °C
11:47:00	50.4 °C	50.769 °C	50.460 °C	51.000 °C	51.430 °C	50.770 °C	50.190 °C	51.550 °C	50.560 °C	50.190 °C	-0.369 °C
11:48:00	50.4 °C	50.769 °C	50.460 °C	51.000 °C	51.4300 °C	50.770 °C	50.190 °C	51.550 °C	50.560 °C	50.190 °C	-0.369 °C
11:49:00	50.4 °C	50.769 °C	50.460 °C	51.000 °C	51.430 °C	50.770 °C	50.190 °C	51.550 °C	50.560 °C	50.190 °C	-0.369 °C

Graficos (Graphs):

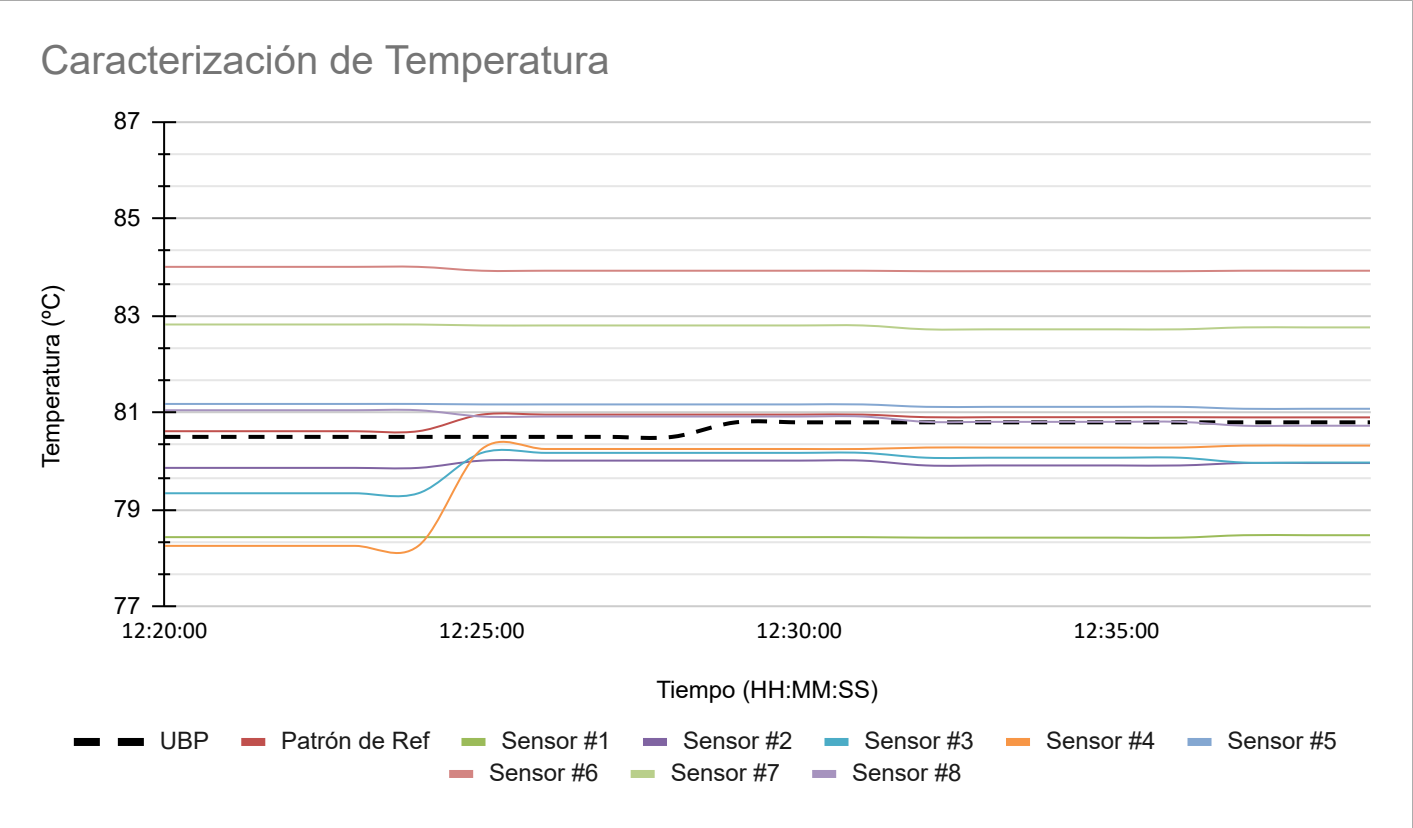


Certificado No.: 60221
Fecha de Calibraci3n 2025-08-20

Equipo (Instrument): Microba1o
Marca (Brand): BIOBASE

Hora (Time)	UBP (UUT)	Patr3n de Ref. Ref. Standard	Sensor #1 (Sensor #1)	Sensor #2 (Sensor #2)	Sensor #3 (Sensor #3)	Sensor #4 (Sensor #4)	Sensor #5 (Sensor #5)	Sensor #6 (Sensor #6)	Sensor #7 (Sensor #7)	Sensor #8 (Sensor #8)	Error (Error)
12:20:00	80.5 3C	80.617 3C	78.43 3C	79.86 3C	79.336 3C	78.25 3C	81.18 3C	84.01 3C	82.82 3C	81.05 3C	-0.117 3C
12:21:00	80.5 3C	80.617 3C	78.43 3C	79.86 3C	79.336 3C	78.25 3C	81.18 3C	84.01 3C	82.82 3C	81.05 3C	-0.117 3C
12:22:00	80.5 3C	80.617 3C	78.43 3C	79.86 3C	79.336 3C	78.25 3C	81.18 3C	84.01 3C	82.82 3C	81.05 3C	-0.117 3C
12:23:00	80.5 3C	80.617 3C	78.43 3C	79.86 3C	79.336 3C	78.25 3C	81.18 3C	84.01 3C	82.82 3C	81.05 3C	-0.117 3C
12:24:00	80.5 3C	80.617 3C	78.43 3C	79.86 3C	79.336 3C	78.25 3C	81.18 3C	84.01 3C	82.82 3C	81.05 3C	-0.117 3C
12:25:00	80.5 3C	80.96 3C	78.43 3C	80.01 3C	80.17 3C	80.25 3C	81.17 3C	83.93 3C	82.8 3C	80.92 3C	-0.46 3C
12:26:00	80.5 3C	80.96 3C	78.43 3C	80.01 3C	80.17 3C	80.25 3C	81.17 3C	83.93 3C	82.8 3C	80.92 3C	-0.46 3C
12:27:00	80.5 3C	80.96 3C	78.43 3C	80.01 3C	80.17 3C	80.25 3C	81.17 3C	83.93 3C	82.8 3C	80.92 3C	-0.46 3C
12:28:00	80.5 3C	80.96 3C	78.43 3C	80.01 3C	80.17 3C	80.25 3C	81.17 3C	83.93 3C	82.8 3C	80.92 3C	-0.46 3C
12:29:00	80.8 3C	80.96 3C	78.43 3C	80.01 3C	80.17 3C	80.25 3C	81.17 3C	83.93 3C	82.8 3C	80.92 3C	-0.16 3C
12:30:00	80.8 3C	80.96 3C	78.43 3C	80.01 3C	80.17 3C	80.25 3C	81.17 3C	83.93 3C	82.8 3C	80.92 3C	-0.16 3C
12:31:00	80.8 3C	80.96 3C	78.43 3C	80.01 3C	80.17 3C	80.25 3C	81.17 3C	83.93 3C	82.8 3C	80.92 3C	-0.16 3C
12:32:00	80.8 3C	80.906 3C	78.42 3C	79.91 3C	80.07 3C	80.28 3C	81.12 3C	83.92 3C	82.72 3C	80.81 3C	-0.1063 3C
12:33:00	80.8 3C	80.906 3C	78.42 3C	79.91 3C	80.07 3C	80.28 3C	81.12 3C	83.92 3C	82.72 3C	80.81 3C	-0.106 3C
12:34:00	80.8 3C	80.906 3C	78.42 3C	79.91 3C	80.07 3C	80.28 3C	81.12 3C	83.92 3C	82.72 3C	80.81 3C	-0.106 3C
12:35:00	80.8 3C	80.906 3C	78.42 3C	79.91 3C	80.07 3C	80.28 3C	81.12 3C	83.92 3C	82.72 3C	80.81 3C	-0.106 3C
12:36:00	80.8 3C	80.906 3C	78.42 3C	79.91 3C	80.07 3C	80.28 3C	81.12 3C	83.92 3C	82.72 3C	80.81 3C	-0.106 3C
12:37:00	80.8 3C	80.903 3C	78.47 3C	79.96 3C	79.97 3C	80.32 3C	81.08 3C	83.93 3C	82.76 3C	80.73 3C	-0.103 3C
12:38:00	80.8 3C	80.903 3C	78.47 3C	79.96 3C	79.97 3C	80.32 3C	81.08 3C	83.93 3C	82.76 3C	80.73 3C	-0.103 3C
12:39:00	80.8 3C	80.903 3C	78.47 3C	79.96 3C	79.97 3C	80.32 3C	81.08 3C	83.93 3C	82.76 3C	80.73 3C	-0.103 3C

Graficos (Graphs):



Hora (Time)	UBP (UUT)	Patrón de Ref. Ref. Standard	Sensor #1 (Sensor #1)	Sensor #2 (Sensor #2)	Sensor #3 (Sensor #3)	Sensor #4 (Sensor #4)	Sensor #5 (Sensor #5)	Sensor #6 (Sensor #6)	Sensor #7 (Sensor #7)	Sensor #8 (Sensor #8)	Error (Error)
13:03:00	135 °C	134.573 °C	134.030 °C	133.430 °C	135.130 °C	135.070 °C	134.960 °C	136.490 °C	135.270 °C	132.20 °C	0.427 °C
13:04:00	135 °C	134.573 °C	134.030 °C	133.430 °C	135.130 °C	135.070 °C	134.960 °C	136.490 °C	135.270 °C	132.20 °C	0.427 °C
13:05:00	135 °C	134.573 °C	134.030 °C	133.430 °C	135.130 °C	135.070 °C	134.960 °C	136.490 °C	135.270 °C	132.20 °C	0.427 °C
13:06:00	135 °C	134.573 °C	134.030 °C	133.430 °C	135.130 °C	135.070 °C	134.960 °C	136.490 °C	135.270 °C	132.20 °C	0.427 °C
13:07:00	135 °C	134.573 °C	134.030 °C	133.430 °C	135.130 °C	135.070 °C	134.960 °C	136.490 °C	135.270 °C	132.20 °C	0.427 °C
13:08:00	135 °C	134.573 °C	134.030 °C	133.430 °C	135.130 °C	135.070 °C	134.960 °C	136.490 °C	135.270 °C	132.20 °C	0.427 °C
13:09:00	135 °C	134.886 °C	134.030 °C	133.590 °C	136.260 °C	135.890 °C	134.850 °C	136.460 °C	136.230 °C	131.780 °C	0.114 °C
13:10:00	135 °C	134.886 °C	134.030 °C	133.590 °C	136.260 °C	135.890 °C	134.850 °C	136.460 °C	136.230 °C	131.780 °C	0.114 °C
13:11:00	135 °C	134.886 °C	134.030 °C	133.590 °C	136.260 °C	135.890 °C	134.850 °C	136.460 °C	136.230 °C	131.780 °C	0.114 °C
13:12:00	135 °C	134.886 °C	134.030 °C	133.590 °C	136.260 °C	135.890 °C	134.850 °C	136.460 °C	136.230 °C	131.780 °C	0.114 °C
13:13:00	135.1 °C	134.886 °C	134.030 °C	133.590 °C	136.260 °C	135.890 °C	134.850 °C	136.460 °C	136.230 °C	131.780 °C	0.214 °C
13:14:00	135.1 °C	134.886 °C	134.030 °C	133.590 °C	136.260 °C	135.890 °C	134.850 °C	136.460 °C	136.230 °C	131.780 °C	0.214 °C
13:15:00	135.1 °C	134.886 °C	134.030 °C	133.590 °C	136.260 °C	135.890 °C	134.850 °C	136.460 °C	136.230 °C	131.780 °C	0.214 °C
13:16:00	135.1 °C	134.886 °C	134.030 °C	133.590 °C	136.260 °C	135.890 °C	134.850 °C	136.460 °C	136.230 °C	131.780 °C	0.214 °C
13:17:00	135.1 °C	134.886 °C	134.030 °C	133.590 °C	136.260 °C	135.890 °C	134.850 °C	136.460 °C	136.230 °C	131.780 °C	0.214 °C
13:18:00	135.1 °C	135.17 °C	134.90 °C	134.960 °C	136.250 °C	136.010 °C	134.860 °C	136.40 °C	136.230 °C	131.750 °C	-0.07 °C
13:19:00	135.1 °C	135.17 °C	134.90 °C	134.960 °C	136.250 °C	136.010 °C	134.860 °C	136.40 °C	136.230 °C	131.750 °C	-0.07 °C
13:20:00	135.1 °C	135.17 °C	134.90 °C	134.960 °C	136.250 °C	136.010 °C	134.860 °C	136.40 °C	136.230 °C	131.750 °C	-0.07 °C
13:21:00	135.1 °C	135.17 °C	134.90 °C	134.960 °C	136.250 °C	136.010 °C	134.860 °C	136.40 °C	136.230 °C	131.750 °C	-0.07 °C
13:22:00	135.1 °C	135.17 °C	134.90 °C	134.960 °C	136.250 °C	136.010 °C	134.860 °C	136.40 °C	136.230 °C	131.750 °C	-0.07 °C

Graficos (Graphs):

