

Certificate No.

24PTP\_0104240183

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### **Certificate of Calibration**

EQUIPMENT : DEFIBRILLATORS, EXTERNAL, MANUAL

ID CODE : PTP00306

MANUFACTURER : PHILIPS

MODEL : EFFICIA DFM100

SERIAL No. : CN32605631

LOCATION : I.C.U

SUBMITTED BY : PHYATHAI PHAHOLYOTHIN HOSPITAL

670/1 Phaholyothin Road, Samsen Nai, Phaya Thai, Bangkok 10400

Tel: 02-271-7000 Fax: -

CALIBRATED DATE : 18 APRIL 2024

ISSUE DATE : 1 MAY 2024

Supatcha

Approved by :

SUPATCHA BUAPUEAN PHUWASIN YIWKIM

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#### **CONDITION OF THIS RESULT OF TEST**

#### 1. REFERENCE STANDARD INSTRUMENT:

MASTERMANUFACTURERMODELSERIAL NO.CERTIFICATE NO.DUE DATEDefibrillatorFlukeImpulse 7000DP207933523MD7757 Jun 2024

Analyzer

Performed by:

Vitalsign Simulator Fluke ProSim8 2541031 23MD777 7 Jun 2024

#### 2. THIS CERTIFICATION IS TRACEABLE TO:

- Technology Promotion Association (Thai-Japan)
- Technology Promotion Association (Thai-Japan)

# 3. THIS RESULT OF TEST WAS FOUND ACCURATE AS SHOW ON DATE AND PLACE OF TEST ONLY



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SERIAL No. : CN32605631

DATE OF CALIBRATION : 18 APRIL 2024

ENVIRONMENT : TEMPERATURE 24 °C

RELATIVE HUMIDITY 55 %

#### PROCEDURE USED:

This instrument was calibration by comparison with standard

#### **MEASURMENT RESULT:**

/	Without Adjustment		Before Adjustment		After Adjustment
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Output Energy						
UUC* Setting	Standard Reading	Error	% Error	Uncertainty		
(Joule)	(Joule)	(Joule)	(%)	(Joule)		
10	10.00	0.00	0.00	± 0.1400		
100	99.15	-0.85	-0.85	± 0.2859		
200	198.85	-1.15	-0.58	± 0.5530		

Output Energy (Energy after 50 Sec (Manual Mode) ≥85%)					
UUC* Setting	Standard Reading	Error	% Error	Uncertainty	
(Joule)	(Joule)	(Joule)	(%)	(Joule)	
100	99.25	-0.75	-0.75	± 0.2859	

Heart Rate						
Standard Setting	UUC* Reading	Error	% Error	Uncertainty		
(BPM)	(BPM)	(BPM)	(%)	(BPM)		
60	60.00	0.00	0.00	± 0.0150		
80	80.00	0.00	0.00	± 0.0460		
120	120.00	0.00	0.00	± 0.0460		

%Spo2					
Standard Setting	UUC* Reading	Error	% Error	Uncertainty	
(%SPO <sub>2</sub> )	(%SPO <sub>2</sub> )	(%SPO <sub>2</sub> )	(%)	(%SPO <sub>2</sub> )	
90	90.00	0.00	0.00	± 0.1039	
96	96.00	0.00	0.00	± 0.1109	



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%Spo2 (Continues)						
Standard Setting	UUC* Reading	Error	% Error	Uncertainty		
(%SPO <sub>2</sub> )	(%SPO <sub>2</sub> )	(%SPO <sub>2</sub> )	(%)	(%SPO <sub>2</sub> )		
100	100.00	0.00	0.00	± 0.1155		

Gain					
Standard Setting	UUC* Reading	Error	% Error	Uncertainty	
(mm/mV)	(mm/mV)	(mm/mV)	(%)	(mm/mV)	
5	5.00	0.00	0.00	± 0.0577	
10	10.00	0.00	0.00	± 0.0577	
20	20.00	0.00	0.00	± 0.0577	

Amplitude					
Standard Setting	UUC* Reading	Error	% Error	Uncertainty	
(mV)	(mV)	(mV)	(%)	(mV)	
1	1.00	0.00	0.00	± 0.0042	
2	2.00	0.00	0.00	± 0.0042	

Paper Speed					
Standard Setting	UUC* Reading	Error	% Error	Uncertainty	
(mm/sec)	(mm/sec)	(mm/sec)	(%)	(mm/sec)	
25	25.00	0.00	0.00	± 0.2887	

Heart Rate(Noninvasive Pacing)					
Standard Setting	UUC* Reading	Error	% Error	Uncertainty	
(PPM)	(PPM)	(PPM)	(%)	(PPM)	
60	60.00	0.00	0.00	± 0.0150	
180	180.00	0.00	0.00	± 0.1500	

Current (Noninvasive Pacing)						
Standard Setting	UUC* Reading	Error	% Error	Uncertainty		
(mA)	(mA)	(mA)	(%)	(mA)		
60	60.85	0.85	1.42	± 0.6953		
140	141.50	1.50	1.07	± 1.6166		

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#### **UUC\***: Unit Under Calibration

The reported uncertainty of measurement was based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%

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