

Certificate No.

24PTP\_0104240285

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### **Certificate of Calibration**

EQUIPMENT : ELECTROSURGICAL UNITS

ID CODE : PTP00668

MANUFACTURER : COVIDIEN

MODEL : FORCE FX

SERIAL No. : S4L16231AX

LOCATION : Operating Room

SUBMITTED BY : PHYATHAI PHAHOLYOTHIN HOSPITAL

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

Tel: 02-271-7000 Fax: -

CALIBRATED DATE : 24 APRIL 2024

ISSUE DATE : 1 MAY 2024

Kanittha.

KANITTHA SRIPRAPAD

Approved by :

· ·

PHUWASIN YIWKIM

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

Performed by :

#### 1. REFERENCE STANDARD INSTRUMENT:

MASTERMANUFACTURERMODELSERIAL NO.CERTIFICATE NO.DUE DATEElectrosurgeryFluke BiomedicalQA-ES III572872623MD85221 Jun 2024Analyzer

### 2. THIS CERTIFICATION IS TRACEABLE TO:

- 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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# **Calibration Report**

EQUIPMENT : ELECTROSURGICAL UNITS

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MODEL : FORCE FX

SERIAL No. : S4L16231AX

DATE OF CALIBRATION : 24 APRIL 2024

ENVIRONMENT : TEMPERATURE 23 °C

RELATIVE HUMIDITY 50 %

### **PROCEDURE USED:**

This instrument was calibration by comparison with standard

### **MEASURMENT RESULT:**

/	Without Adjustment		Before Adjustment		After Adjustment
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Energy Monopolar/Cut					
UUC* Setting	Standard Reading	Error	% Error	Uncertainty	
(Watt)	(Watt)	(Watt)	(%)	(Watt)	
20	17.40	-2.60	-13.00	± 1.1547	
50	44.80	-5.20	-10.40	± 2.8868	
100	87.40	-12.60	-12.60	± 5.7737	
200	175.00	-25.00	-12.50	± 11.5473	
300	264.00	-36.00	-12.00	± 17.3210	

Energy Monopolar/Coag					
UUC* Setting	Standard Reading	Error	% Error	Uncertainty	
(Watt)	(Watt)	(Watt)	(%)	(Watt)	
20	21.30	1.30	6.50	± 1.1547	
50	50.10	0.10	0.20	± 2.8868	
80	79.50	-0.50	-0.63	± 4.6189	
100	99.90	-0.10	-0.10	± 5.7737	
120	118.00	-2.00	-1.67	± 6.9284	

Energy Bipolar				
UUC* Setting	Standard Reading	Error	% Error	Uncertainty
(Watt)	(Watt)	(Watt)	(%)	(Watt)
10	9.00	-1.00	-10.00	± 0.5774
30	27.80	-2.20	-7.33	± 1.7321
50	44.60	-5.40	-10.80	± 2.8868

2301/2 New Petchburi Soi 47 (soonvijai), Bangkapi, Huaykwang, Bangkok 10310 Tel: (66) 2762 4000 Fax: (66) 2762 4072



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# **Calibration Report**

EQUIPMENT : ELECTROSURGICAL UNITS

ID CODE : PTP00668

SERIAL No. : S4L16231AX

Energy Bipolar (Continues)						
UUC* Setting	Standard Reading	Error	% Error	Uncertainty		
(Watt)	(Watt)	(Watt)	(%)	(Watt)		
60	53.90	-6.10	-10.17	± 3.4642		
70	62.90	-7.10	-10.14	± 4.0416		

### **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%

FI-BME-NHS-CP-024/1 Rev.03 Page 3/3 Issued Date 20/07/2023