

Certificate No. 24PTP\_0104240203

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### **Certificate of Calibration**

EQUIPMENT : VENTILATORS, INTENSIVE CARE

ID CODE : PTP00262

MANUFACTURER : PURITAN BENNETT

MODEL: 840

SERIAL No. : 3510073348

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 : 19 APRIL 2024

ISSUE DATE : 3 MAY 2024

Performed by: \_\_\_\_\_ Approved by:

2024

USANEE CHALONGPHOKSILCHAI PHUWASIN YIWKIM

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

#### 1. REFERENCE STANDARD INSTRUMENT:

MASTERMANUFACTURERMODELSERIAL NO.CERTIFICATE NO.DUE DATEGas Flow AnalyzerFluke BiomedicalVT650606972523MD115827 Aug 2024

#### 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**

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DATE OF CALIBRATION : 19 APRIL 2024

ENVIRONMENT : TEMPERATURE 25 °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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TIDAL VOLUME						
UUC* Setting	Standard Reading	Error	% Error	Uncertainty		
(mL)	(mL)	(mL)	(%)	(mL)		
400	403.68	3.68	0.92	± 14.4008		
600	592.93	-7.08	-1.18	± 21.7004		
800	794.60	-5.40	-0.67	± 28.9014		

BREATH RATE						
UUC* Setting	Standard Reading	Error	% Error	Uncertainty		
(BPM)	(BPM)	(BPM)	(%)	(BPM)		
30	30.00	0.00	0.00	± 0.3464		
20	20.00	0.00	0.00	± 0.2309		
15	15.00	0.00	0.00	± 0.1732		

I:E RATIO						
UUC* Setting	Standard Reading	Error	% Error	Uncertainty		
((1:x))	((1:x))	((1:x))	(%)	((1:x))		
1	1.00	0.00	0.00	± 0.0231		
2	1.99	-0.01	-0.50	± 0.0462		
3	2.98	-0.02	-0.67	± 0.0693		

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EQUIPMENT : VENTILATORS, INTENSIVE CARE

ID CODE : PTP00262 SERIAL No. : 3510073348

PIP						
UUC* Setting	Standard Reading	Error	% Error	Uncertainty		
(cmH <sub>2</sub> O)	(cmH <sub>2</sub> O)	(cmH <sub>2</sub> O)	(%)	(cmH <sub>2</sub> O)		
20	19.92	-0.08	-0.39	± 0.3200		
30	29.72	-0.28	-0.93	± 0.3200		
40	40.56	0.56	1.40	± 0.3212		

PEEP						
UUC* Setting	Standard Reading	Error	% Error	Uncertainty		
(cmH2O)	(cmH2O)	(cmH2O)	(%)	(cmH2O)		
5	5.21	0.21	4.15	± 0.0580		
10	10.72	0.72	7.23	± 0.1162		
15	15.43	0.43	2.85	± 0.1733		

% OXYGEN						
UUC* Setting	Standard Reading	Error	% Error	Uncertainty		
(%O <sub>2</sub> )	(%O <sub>2</sub> )	$(\%O_2)$	(%)	(%O <sub>2</sub> )		
21	20.50	-0.50	-2.38	± 0.5052		
60	60.60	0.60	1.00	± 1.3905		
100	98.18	-1.83	-1.83	± 2.3115		

### **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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