

Certificate No. 2

24PTP\_0104240127

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### **Certificate of Calibration**

EQUIPMENT : VENTILATORS, INTENSIVE CARE

ID CODE : PTP00259

MANUFACTURER : CAREFUSION

MODEL : VELA

SERIAL No. : BFT02392

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 : 3 MAY 2024

Supatcha 5

Performed by : Approved by : 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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DATE OF CALIBRATION : 18 APRIL 2024

ENVIRONMENT : TEMPERATURE 24 °C

RELATIVE HUMIDITY 56 %

### **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	382.35	-17.65	-4.41	± 14.4671		
600	610.43	10.43	1.74	± 21.7697		
800	818.05	18.05	2.26	± 28.9026		

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	1.01	0.01	1.00	± 0.0231		
2	1.99	-0.01	-0.50	± 0.0462		
3	2.94	-0.06	-2.00	± 0.0693		

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EQUIPMENT : VENTILATORS, INTENSIVE CARE

ID CODE : PTP00259 SERIAL No. : BFT02392

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	19.62	-0.38	-1.90	± 0.3200		
30	29.19	-0.81	-2.70	± 0.3200		
40	38.72	-1.28	-3.20	± 0.3200		

PEEP						
UUC* Setting	Standard Reading	Error	% Error	Uncertainty		
(cmH2O)	(cmH2O)	(cmH2O)	(%)	(cmH2O)		
5	5.27	0.27	5.40	± 0.0577		
10	10.67	0.67	6.70	± 0.1155		
15	16.04	1.04	6.94	± 0.1732		

% OXYGEN						
UUC* Setting	Standard Reading	Error	% Error	Uncertainty		
(%O <sub>2</sub> )	(%O <sub>2</sub> )	$(\%O_2)$	(%)	(%O <sub>2</sub> )		
21	22.10	1.10	5.24	± 0.4850		
60	63.40	3.40	5.67	± 1.3857		
100	98.60	-1.40	-1.40	± 2.3095		

### **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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