

Certificate No. 24PTP_0104240250

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Certificate of Calibration

EQUIPMENT : INFUSION PUMPS

ID CODE : PTP02357

MANUFACTURER : TOP

MODEL : TOP-2200

SERIAL No. : ELZ8643S

LOCATION : Patient Wards 16

SUBMITTED BY : PHYATHAI PHAHOLYOTHIN HOSPITAL

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

Tel: 02-271-7000 Fax: -

CALIBRATED DATE : 23 APRIL 2024

ISSUE DATE : 3 MAY 2024

Performed by:

3,1024

ed by : _____ Approved by : _____

USANEE CHALONGPHOKSILCHAI PHUWASIN YIWKIM

PHUWASIN YIWKIM

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CONDITION OF THIS RESULT OF TEST

1. REFERENCE STANDARD INSTRUMENT:

MASTERMANUFACTURERMODELSERIAL NO.CERTIFICATE NO.DUE DATEInfusion PumpRIGEL MedicalMulti-Flo23Q-141223MD116924 Aug 2024

Tester

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

MANUFACTURER : TOP MODEL : TOP-2200 SERIAL No. : ELZ8643S DATE OF CALIBRATION : 23 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 Flow Rate UUC* Setting Standard Reading Error % Error Uncertain (ml/hr) (ml/hr) (%) (ml/hr) 5 5.14 0.14 2.80 ± 0.062 80 81.44 1.44 1.80 ± 0.260 200 216.53 16.53 8.26 ± 0.710 Occlusion Pressure < 1000 mmHg UUC* Setting Standard Reading (mmHg) (mmHg) 1000 261.00		: IN	NFUSION PUMPS		
MODEL : TOP-2200 SERIAL No. : ELZ8643S DATE OF CALIBRATION : 23 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 Flow Rate UUC* Setting Standard Reading Error % Error Uncertain (ml/hr) (ml/hr) (%) (ml/hr) 5 5.14 0.14 2.80 ±0.062 80 81.44 1.44 1.80 ±0.260 200 216.53 16.53 8.26 ±0.710 Occlusion Pressure < 1000 mmHg UUC* Setting Standard Reading (mmHg) (mmHg) 1000 261.00	D CODE	: P'	ГР02357		
DATE OF CALIBRATION : 23 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 Flow Rate UUC* Setting (ml/hr) (ml/hr) (ml/hr) (%) (ml/hr) 5 5.14 0.14 2.80 ± 0.062 80 81.44 1.44 1.80 ± 0.260 200 216.53 16.53 8.26 ± 0.710 Occlusion Pressure < 1000 mmHg UUC* Setting Standard Reading (mmHg) (mmHg) 1000 261.00	MANUFACTURER	: T	OP		
DATE OF CALIBRATION : 23 APRIL 2024 ENVIRONMENT : TEMPERATURE 25 °C RELATIVE HUMIDITY 55 % PROCEDURE USED: This instrument was calibration by comparison with standard MEASURMENT RESULT: Without Adjustment	MODEL	: To	OP-2200		
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 Flow Rate UUC* Setting Standard Reading Error % Error Uncertain (ml/hr) (ml/hr) (%) (ml/hr) 5 5.14 0.14 2.80 ± 0.062 80 81.44 1.44 1.80 ± 0.260 200 216.53 16.53 8.26 ± 0.710 Occlusion Pressure < 1000 mmHg UUC* Setting Standard Reading (mmHg) (mmHg) 1000 261.00	SERIAL No.	: E	LZ8643S		
RENVIRONMENT : TEMPERATURE 25 °C RELATIVE HUMIDITY 55 % PROCEDURE USED: This instrument was calibration by comparison with standard MEASURMENT RESULT: Without Adjustment					
RELATIVE HUMIDITY 55 % PROCEDURE USED: This instrument was calibration by comparison with standard MEASURMENT RESULT: ✓ Without Adjustment Before Adjustment After Adjustment Flow Rate UUC* Setting (ml/hr) (ml/hr) (ml/hr) (ml/hr) (%) (ml/hr) 5 5.14 0.14 2.80 ±0.062 80 81.44 1.44 1.80 ±0.260 200 216.53 16.53 8.26 ±0.710 Occlusion Pressure < 1000 mmHg UUC* Setting (mmHg) (mmHg) Standard Reading (mmHg) 1000 261.00 261.00				25. °C	
### PROCEDURE USED: This instrument was calibration by comparison with standard #### MEASURMENT RESULT: Without Adjustment	AV IRONNILIVI				
UUC* Setting (ml/hr) Standard Reading (ml/hr) Error (ml/hr) Uncertain (ml/hr) 5 5.14 0.14 2.80 ± 0.062 80 81.44 1.44 1.80 ± 0.260 200 216.53 16.53 8.26 ± 0.710 Occlusion Pressure < 1000 mmHg		stment	Before Adjustment	After	Adjustment
(ml/hr) (ml/hr) (ml/hr) (%) (ml/hr) 5 5.14 0.14 2.80 ± 0.062 80 81.44 1.44 1.80 ± 0.260 200 216.53 16.53 8.26 ± 0.710 Occlusion Pressure < 1000 mmHg UUC* Setting (mmHg) (mmHg) (mmHg) 1000 261.00 261.00		Standard Reading	Error	% Error	Uncertainty
80 81.44 1.44 1.80 ± 0.260 200 216.53 16.53 8.26 ± 0.710 Occlusion Pressure < 1000 mmHg	Č	_	1		(ml/hr)
200 216.53 16.53 8.26 ± 0.710 Occlusion Pressure < 1000 mmHg	()	5.14	0.14	2.80	± 0.0622
Occlusion Pressure < 1000 mmHg UUC* Setting Standard Reading (mmHg) (mmHg) 1000 261.00				1.90	± 0.2601
UUC* Setting Standard Reading (mmHg) (mmHg) 1000 261.00	5		1.44	1.80	
UUC* Setting Standard Reading (mmHg) (mmHg) 1000 261.00	5 80	81.44	+ +		± 0.7100
(mmHg) (mmHg) 1000 261.00	5 80 200	81.44 216.53	+ +		± 0.7100
1000 261.00	5 80 200 Occlusion Pressure	81.44 216.53 e < 1000 mmHg	16.53		± 0.7100
Use IV Set Brand: BEVER Drope/ml: 20	5 80 200 Occlusion Pressure UUC* Setting	81.44 216.53 e < 1000 mmHg Standard Reading	16.53		± 0.7100
Use IV Set Brand: BEVER Drops/ml: 20	5 80 200 Occlusion Pressure UUC* Setting (mmHg)	81.44 216.53 e < 1000 mmHg Standard Reading (mmHg)	16.53		± 0.7100
OSC IV SCI DIGHG. DEVER DIOPS/III. 20	5 80 200 Occlusion Pressure UUC* Setting (mmHg)	81.44 216.53 e < 1000 mmHg Standard Reading (mmHg)	16.53		± 0.7100
	5 80 200 Occlusion Pressure UUC* Setting (mmHg)	81.44 216.53 e < 1000 mmHg Standard Reading (mmHg)	16.53	8.26	± 0.7100 20 ml.
UUC* : Unit Under Calibration	5 80 200 Occlusion Pressure UUC* Setting (mmHg) 1000	81.44 216.53 e < 1000 mmHg Standard Reading (mmHg) 261.00	16.53	8.26	
The reported uncertainty of measurement was based on a standard uncertainty multiplied by a cover	5 80 200 Occlusion Pressure UUC* Setting (mmHg) 1000 Use IV Set Brand:	81.44 216.53 e < 1000 mmHg Standard Reading (mmHg) 261.00 BEVER	16.53	8.26	
factor $k = 2$, providing a level of confidence of approximately 95%	5 80 200 Occlusion Pressure UUC* Setting (mmHg) 1000 Use IV Set Brand:	81.44 216.53 e < 1000 mmHg Standard Reading (mmHg) 261.00 BEVER Calibration	16.53 Drops	8.26	20 ml.