

PT. Kromtekindo Utama

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Certificate of Qualification

This is to certify that the stated instrument has been successfully
passed all qualification tests

Issued for : PT. MERSIFARMA TIRMAKU
Diterbitkan untuk : Jl. Raya Bogor No 52
Cisalak, Kota Depok, Jawa Barat 16416

Date of Calibration : June 16, 2025
Tanggal Kalibrasi

Performer : AHMAD HASAN TOLABI
Pelaksana

Instrument Identification : RD LC 07 UV
Identifikasi Instrumen

Instrument Name	Model Number	Serial Number
Pump	Alliance e2695	B24SM4259A
Injector	Alliance e2695	B24SM4259A
Detector	2489 UV/VIS	M2387E813A
Column H/C	SMC	J23SMC114G
Sample Heater	SHC	B24SHC631A
Integrator	Empower 3	N/A

This Certificate includes 2 pages
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Jakarta, June 16, 2025
Performed by,

Ahmad Hasan Tolabi
Technical Support



Dr. K. K. Kulkarni, Director

Calibration Result

Instrument Name	Model Number	Serial Number
Pump	Alliance e2695	B24SM4259A
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Integrator	Empower 3	N/A

Performance Under Test	Results	Acceptable Range	Status
Flow rate Accuracy Test			
- Flow 1.0 ml/min	10 min 05 sec	10 min $\pm$ 18 sec	Passed
- Flow 0.5 ml/min	10 min 07 sec	10 min $\pm$ 36 sec	Passed
GPV Accuracy Test	0.2 %	< 0.5 %	Passed
Injection Volume Accuracy Test	49.7 μ l	50 μ l $\pm$ 1	Passed
Column Heater Temperature Accuracy	40.4 $^{\circ}$ C	40 $\pm$ 3 $^{\circ}$ C	Passed
Sample Heater Temperature Accuracy	15.2 $^{\circ}$ C	15 $\pm$ 4 $^{\circ}$ C	Passed
2489 UV/Vis			
Abs.Detector Wavelength Accuracy	256 nm	255 $\pm$ 2 nm	Passed
Erbium Filter	378 nm	379 $\pm$ 2 nm	Passed
	521 nm	522 $\pm$ 2 nm	Passed
Detector linearity	3.5 %	< 4.5 %	Passed
2489 UV/Vis			
Overall System Performance:			
- Retention Time (%RSD)	0.1 %	< 1 %	Passed
- Area (%RSD)	0.1 %	< 1 %	Passed
Injection Volume Linearity Test	1.0000	$\geq$ 0.9990	Passed