

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
Diterbitkan untuk : Jl. Raya Bogor No. 52, Cisalak, Kec. Sukmajaya, Kota Depok
Jawa Barat, 16416

Date of Calibration : June 2, 2025
Tanggal Kalibrasi

Performer : Hikmat Ramdani
Pelaksana

Instrument Identification: RD LC 06 PDA RID
Identifikasi Instrumen

Instrument Name	Model Number	Serial Number
Pump	Alliance e2695	A24SM4216A
Injector	Alliance e2695	A24SM4216A
Sample Cooler	SHC	A24SHC575A
Detector	2414 RID	A24214067M
Detector	2998 PDA	M23998300A
Column Heater	SMC	J23SMC107G
Integrator	Empower 3 Software	N/A

This Certificate includes 2 pages
Sertifikat ini terdiri dari 2 halaman

Jakarta, June 2, 2025
Performed By,

Hikmat Ramdani
Technical Support

Calibration Result

Performance Under Test	Results	Acceptable Range	Status
Pump Flowrate Accuracy Test			
1 ml/min	10 min 04 sec	10 min $\pm$ 18 sec	Passed
0.5 ml/min	10 min 01 sec	10 min $\pm$ 36 sec	Passed
GPV Accuracy Test	0.2 %	< 0.5 %	Passed
Injection Volume Accuracy Test	49.78 uL	50 $\pm$ 1 uL	Passed
Temperature Column Heater	40.4 $^{\circ}$ C	40.0 $\pm$ 3 $^{\circ}$ C	Passed
Temperature Sample Cooler	16.8 $^{\circ}$ C	15.0 $\pm$ 4 $^{\circ}$ C	Passed
2998 PDA :			
Detector wavelength Accuracy Test	256.536 nm	256.46 $\pm$ 1.5 nm	Passed
	379.206 nm	378.914 $\pm$ 1.5 nm	Passed
	522.015 nm	521.40 $\pm$ 1.5 nm	Passed
Detector Linearity Test	2.3 %	< 5 %	Passed
Overall System Performance PDA:			
% RSD (Propyl Paraben)			
- Retention Time	0.1 %	$\leq$ 1 %	Passed
- Area	0.1 %	$\leq$ 1 %	Passed
- Injector Linearity Test	0.9999	$\geq$ 0.9990	Passed
Overall System Performance RID:			
% RSD (Caffeine)			
- Retention Time	0.0 %	$\leq$ 1.0 %	Passed
- Area	0.5 %	$\leq$ 1.0 %	Passed
- Height	1.2 %	$\leq$ 1.5 %	Passed
- Injector Linearity Test	0.999	$\geq$ 0.990	Passed
-Sensitivity	0.8	< 1.5 %	Passed