	<b>Catatan Hasil Kalibrasi Internal</b> <i>Internal Calibration Record</i> <b>Labu Tentukur / Volumetric Flask</b>	No. : F-PM-01-54
		Rev. : 00
		Date : 3 September 2014

<b>Merek</b> :	<b>Bidang/Lokasi</b> :
<i>Brand</i>	<i>Department/Location</i>
<b>Type/Kelas</b> :	<b>Suhu ruang</b> : °C
<i>Type/Class</i>	<i>Room temperature</i>
<b>No.Seri</b> :	<b>Kelembaban</b> : % RH
<i>Serial no.</i>	<i>Humidity</i>
<b>Kode kalibrasi</b> :	<b>No. Protap</b> : PKVK057
<i>Calibration code</i>	<i>SOP No.</i>
<b>Kapasitas</b> : ml	<b>Petugas</b> :
<i>Capacity</i>	<i>Operator</i>
<b>Syarat (kelas A)</b> : ml	<b>Tanggal kalibrasi</b> :
<i>Requirement (Class A)</i>	<i>Calibration date</i>

Kalibrator yang digunakan <i>Calibrator used</i>	Kode Kalibrasi <i>Calibration Code</i>	Tanggal kalibrasi Kalibrator <i>Cal. date of Calibrator</i>
1. Neraca Analitik		
2. Termometer		

**Catatan/Note :**

$T_{Air} = 28.4$ °C	$\rho_{Air} = 0.99623$ g/ml	$\rho_{air\ 20^{\circ}C} = 998.202$ kg/m <sup>3</sup>	$\rho_{AT} = 8$ g/ml
$\rho_{Udara} = 0.0012$ g/ml	$\gamma_{borosilikat} = 1.E-05$ /°C	$\gamma_{soda\ lime} = 2.5.E-05$ /°C	$LOP_{Neraca} = 0.002$ gram
Meniscus = 0.21 ml	$U_{Sert\ Termometer} = 0.7$ °C	$\Delta\rho/\Delta T = -0.00026$ g/ml°C	$\Delta\ Suhu = 28.4$ °C


**Data :**

Ulangan <i>Rep.</i>	$W_{kosong}$ $W_{Empty}$ (g)	$W_{isi(air)}$ $W_{Water}$ (g)	$\Delta R$ $\Delta R$ (g)	$\sigma_{n-1}$ $\sigma_{n-1}$ (g)	$\Delta R_{rata-rata}$ $\Delta R_{Average}$ (g)	Isi, $v_{T20^{\circ}C}$ <i>Volume, <math>v_{T20^{\circ}C}</math></i> (ml)
1			0.0000	0.0000	0.0000	0.0000
2			0.0000			
3			0.0000			
4			0.0000			
5			0.0000			

**Perhitungan ketidakpastian volume nominal labu ukur**

*Calculation the uncertainty of volumetric flask*

No. <i>No.</i>	Sumber Ketidakpastian <i>Source of Uncertainty</i>	Satuan <i>Unit</i>	Distribusi <i>Distribution</i>	Nilai $U_i$ <i>U<sub>i</sub> value</i>	Pembagi <i>Divisor</i>	$u_i$ $u_i$	Coeff. $C_i$		$u_i C_i$	$V$
							Coeff.	$C_i$		
1	Reproducibility, $U_{Vol} = \sigma_{n-1} (\delta\Delta R_{max})$	gram	Normal	0.0000	$\sqrt{5}$	0.0000	1.003	1.003	0.00000	4
2	LOP of Balance, $U_{Sert} = LOP$	gram	Normal	0.0020	2.0	0.0010	1.003	1.003	0.00100	$\infty$
3	Density of Air ( $\rho_{Air}$ ) = 10 % x 0,0012	g/ml	Rectangular	0.00012	$\sqrt{3}$	0.00007	1,003 $\Delta R$	0.00.E+00	0.00000	$\infty$
4	Density of Water, $U(\rho_{H2O}) = T_{sert} \times \Delta\rho/\Delta T$	g/ml	Normal	-0.00018	1.0	-0.00018	-1,003 $\Delta R$	0.00.E+00	0.000000	$\infty$
5	Dens. of Weights, $U_{Weights} = 10\% \times \rho_{Weights}$	g/ml	Rectangular	0.8	$\sqrt{3}$	0.46	1,88E-5 $\Delta R$	0.00E+00	0.0.E+00	$\infty$
6	Temp. of water, $u_{(TH2O)} = U_{\Delta T\ room}$	°C	Normal	28.40	$\sqrt{3}$	16.3967	1,003E-6 $\Delta R$	0.00E+00	0.000000	$\infty$
7	Coef. thermal, $(U\gamma) = 10\% \times \gamma$	/°C	Rectangular	0.000001	$\sqrt{3}$	6.E-07	-5,015 $\Delta R$	0.00E+00	0.000000	$\infty$
8	Seting Meniskus, $U_{Meniscus} = 10\% \text{ Set}$	ml	Rectangular	0.021	$\sqrt{3}$	0.0121	1	1.00	0.01212	$\infty$
9	Drift of Balance	gram	Rectangular	0.00020	$\sqrt{3}$	1.15E-04	1.003	1.003	0.00012	$\infty$
Ketidakpastian baku gabungan / <i>Combined Uncertainty, <math>u(D) = \text{SQRT}(\sum(u_i C_i)^2)</math></i>									0.01217	
Derajat kebebasan efektif / <i>Effective degree of freedom, <math>V_{eff}</math></i>									#DIV/0!	
Faktor cakupan pada tingkat kepercayaan 95 % / <i>Coverage Factor on uncertainty 95%, <math>K_{95\%}</math></i>									2	

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Ketidakpastian gabungan perluasan / Expanded Uncertainty,  $U(D) = u(D) \times K_{95\%}$ , dalam / in ml 0.024

**3. Hasil Kalibrasi**  
*Calibration Results*

No.	$V_{Nominal}$ <i>V<sub>Nominal</sub></i> ( ml )	$V_{Kalibrasi}$ <i>V<sub>Calibration</sub></i> ( ml )	Koreksi <i>Correction</i> ( ml )	Ketidakpastian, $U_{95\%}$ <i>Uncertainty, U<sub>95%</sub></i> ( ml )
1	0.00	0.000	0.000	0.024

Dihitung Oleh <i>Calculated by</i>	Tanggal <i>Date</i>	Diperiksa oleh <i>Checked by</i>	Tanggal <i>Date</i>	Catatan / Kesimpulan <i>Note / Conclusion</i>