CCPR-K6, EUROMET-K6, EURAMET.PR-K6.1 and EURAMET.PR-K6.2

MEASURAND : Spectral regular transmittance

Key comparison CCPR-K6

Measurements involve five different filters designated as "Filter A", Filter B", "Filter C", "Filter D", and "Filter E", and 8 wavelengths (380 nm, 400 nm, 500 nm, 600 nm, 700 nm, 800 nm, 900 nm, and 1000 nm). The filter characteristics are detailed in Table 3 on page 7 of the Final Report. Absolute transmission measurements and associated uncertainties of all participants are available in the Annex B of the Final Report.

Key comparison EUROMET.PR-K6

Measurements involve five different filters designated as "Filter A", Filter B", "Filter C", "Filter D", and "Filter E", and 8 wavelengths (380 nm, 400 nm, 500 nm, 600 nm, 700 nm, 800 nm, 900 nm, and 1000 nm). The filter standards used are detailed in section 3.1 of the EUROMET.PR-K6 Final Report.

Absolute transmission measurements and associated uncertainties of all participants in EUROMET.PR-K6 are available in the Annex B of the EUROMET.PR-K6 Final Report.

Key comparison EURAMET.PR-K6.1

Measurements involve five different filters designated as "Filter A", Filter B", "Filter C", "Filter D", and "Filter E", and 8 wavelengths (380 nm, 400 nm, 500 nm, 600 nm, 700 nm, 800 nm, 900 nm, and 1000 nm). The filter standards used are detailed in section 3.1 of the EURAMET.PR-K6.1 Final Report.

Absolute transmission measurements and associated uncertainties of the participants in EURAMET.PR-K6.1 are available in page 17 of the EURAMET.PR-K6.1 Final Report.

Note:

The Spanish laboratory IFA-CSIC is now IO-CSIC (Instituto de Óptica Daza de Valdés). The corresponding results are presented here under the acronym IODV.

Key comparison EURAMET.PR-K6.2

Measurements involve four different filters designated as "Filter A", Filter B", "Filter C" and "Filter D", and 5 wavelengths (380 nm, 400 nm, 500 nm, 600 nm, 700 nm). Measurements were also carried out at 546 nm and 635 nm. The filter standards used are detailed on p. 2 of the EURAMET.PR-K6.2 Final Report. The measurement results of this bi-lateral comparison are listed on pp. 4 to 10 of the EURAMET.PR-K6.2 Final Report.

CCPR-K6, EUROMET-K6, EURAMET.PR-K6.1 and EURAMET.PR-K6.2

MEASURAND : Spectral regular transmittance

Key comparison CCPR-K6

Measurements involve five different filters designated as "Filter A", Filter B", "Filter C", "Filter D", and "Filter E", and 8 wavelengths (380 nm, 400 nm, 500 nm, 600 nm, 700 nm, 800 nm, 900 nm, and 1000 nm). The filter characteristics are detailed in Table 3 on page 7 of the Final Report.

The key comparison reference value, x_R , and its standard uncertainty, u_R , are deduced from the participants' results compared to the Pilot's results, using a weighted mean with application of a cut-off, outliers being excluded, as explained in Sections 5 and 8 of the Final Report.

	Filt	er A	Filte	er B	Filte	er C	Filte	er D	Filte	er E
λ / nm	x _R	u _R								
380	4.357E-04	1.058E-04	1.540E-03	1.637E-04	1.211E-04	3.114E-05	-1.599E-06	3.689E-06	1.049E-06	2.379E-06
400	3.701E-04	8.210E-05	1.093E-03	1.187E-04	-3.117E-05	2.835E-05	-1.185E-05	4.792E-06	-6.444E-09	1.209E-06
500	3.234E-04	6.338E-05	9.756E-04	1.139E-04	1.156E-04	2.193E-05	8.555E-06	4.187E-06	2.954E-06	1.125E-06
600	3.075E-04	6.302E-05	7.611E-04	6.358E-05	1.777E-04	1.765E-05	4.101E-05	4.668E-06	8.210E-06	1.484E-06
700	4.225E-04	6.926E-05	3.424E-04	5.251E-05	9.633E-05	2.987E-05	3.374E-05	1.090E-05	7.620E-06	4.124E-06
800	6.383E-04	4.380E-05	2.010E-04	5.879E-05	1.455E-05	2.755E-05	6.546E-06	8.918E-06	1.543E-05	3.869E-06
900	5.228E-04	6.047E-05	7.263E-05	5.819E-05	8.838E-06	1.978E-05	-4.104E-06	6.348E-06	-2.187E-06	3.015E-06
1000	4.211E-04	6.443E-05	1.051E-04	6.384E-05	-1.840E-06	1.555E-05	-3.835E-06	5.411E-06	-9.511E-06	2.903E-06

The degree of equivalence of laboratory *i* with respect to the key comparison reference value is given by a pair of terms: D_i and its expanded uncertainty (k = 2), U_i , computed according to equations 16 and 17 on page 52 of the Final Report (see also Section 9 on page 62).

Linking EUROMET.PR-K6 to CCPR-K6

The linking process is described in section 6 of the EUROMET.PR-K6 Final Report. For each wavelength and each filter, the Matrix and the Graph of equivalence obtained in CCPR-K6 are extended to the participants in EUROMET.PR-K6 only.

Linking EURAMET.PR-K6.1 to CCPR-K6

The linking process is described in section 6 of the EURAMET.PR-K6.1 Final Report. For each wavelength and each filter, the Matrix and the Graphs of equivalence obtained in CCPR-K6 are extended to DMDM participant in EURAMET.PR-K6.1 only.

Linking EURAMET.PR-K6.2 to CCPR-K6

The linking is made via the VSL who participated both in CCPR-K6 and EURAMET.PR-K6.2.

The BIPM key comparison database, July 2017

Degrees of equivalence for Filter A

MEASURAND : Spectral regular transmittance

Lab i	Wavelength: 380 nm		
4	D _i	U _i	
IODV	1.188E-03	4.840E-03	
KRISS	4.932E-05	8.171E-04	
LNE-INM	-4.357E-04	7.857E-04	
MIKES	-4.457E-04	1.371E-03	
MSL	7.868E-04	6.202E-04	
NIST	1.188E-03	1.851E-03	
VSL	7.432E-05	9.790E-04	
NMIA	1.443E-04	5.994E-04	
NMIJ	4.213E-04	8.004E-04	
NPL	-3.032E-04	6.115E-04	
NRC	3.493E-04	6.965E-04	
РТВ	2.994E-03	2.688E-03	
SMU	4.217E-03	5.806E-04	
A*STAR	1.682E-05	8.454E-04	
VNIIOFI	-2.478E-03	1.157E-03	
BEV	3.336E-04	2.709E-03	
CMI	-4.490E-04	1.717E-03	
GUM	9.703E-04	1.172E-03	
INM(RO)	2.206E-03	4.639E-03	
INRIM	4.102E-03	1.358E-03	
IPQ	-1.866E-05	9.762E-03	
METAS	1.418E-04	1.126E-03	
MKEH	6.760E-04	2.497E-03	
SP	-2.307E-04	2.984E-03	
UME	1.466E-02	2.806E-03	
DMDM	-1.77E-03	2.47E-03	
BIM	9.74E-04	3.16E-03	

Black : participants in CCPR-K6 Blue: participants in EUROMET.PR-K6 Green: participant in EURAMET.PR-K6.1 Orange: participant in EURAMET.PR-K6.2

All reported values are absolute Nominal transmittance at 546 nm: 92 %

Lab i 🛛	Wavelength: 400 nm		
\mathcal{V}	Di	U _i	
IODV	1.217E-03	5.618E-03	
KRISS	-6.512E-05	9.082E-04	
LNE-INM	-3.701E-04	7.065E-04	
MIKES	-4.426E-04	9.666E-04	
MSL	7.324E-04	3.961E-04	
NIST	8.749E-04	1.752E-03	
VSL	7.488E-05	1.030E-03	
NMIA	1.499E-04	4.035E-04	
NMIJ	4.239E-04	6.612E-04	
NPL	-4.026E-04	5.566E-04	
NRC	5.874E-04	7.552E-04	
РТВ	3.257E-03	2.539E-03	
SMU	4.088E-03	3.881E-04	
A*STAR	2.499E-04	7.795E-04	
VNIIOFI	-2.098E-03	7.658E-04	
BEV	9.624E-04	2.633E-03	
CMI	-8.826E-04	1.131E-03	
GUM	1.326E-03	7.342E-04	
INM(RO)	3.363E-03	3.756E-03	
INRIM	4.865E-03	1.417E-03	
IPQ	1.342E-03	8.374E-03	
METAS	9.774E-04	1.378E-03	
MKEH	1.418E-03	2.155E-03	
SP	5.624E-04	2.857E-03	
UME	1.515E-02	2.639E-03	
DMDM	-1.15E-03	2.41E-03	
BIM	1.28E-03	3.17E-03	

Degrees of equivalence for Filter A

MEASURAND : Spectral regular transmittance

Lab i	Wavelength: 500 nm		
\mathbf{A}	D _i	U _i	
IODV	1.082E-03	1.161E-03	
KRISS	-1.059E-04	7.621E-04	
LNE-INM	-3.234E-04	5.026E-04	
MIKES	-3.159E-04	6.418E-04	
MSL	5.291E-04	3.822E-04	
NIST	9.016E-04	1.204E-03	
VSL	-3.559E-04	7.054E-04	
NMIA	2.541E-04	2.932E-04	
NMIJ	2.951E-04	5.430E-04	
NPL	-2.159E-04	3.165E-04	
NRC	1.841E-04	4.940E-04	
РТВ	2.717E-03	1.941E-03	
SMU	3.622E-03	3.586E-04	
A*STAR	5.162E-05	5.591E-04	
VNIIOFI	-1.208E-03	6.600E-04	
BEV	1.012E-03	2.527E-03	
СМІ	-1.123E-03	1.211E-03	
GUM	1.505E-03	7.045E-04	
INM(RO)	3.196E-03	2.396E-03	
INRIM	5.285E-03	1.207E-03	
IPQ	3.338E-03	6.384E-03	
METAS	5.912E-05	8.470E-04	
MKEH	1.380E-03	2.335E-03	
SP	4.416E-04	2.877E-03	
UME	1.552E-02	3.540E-03	
DMDM	-7.81E-04	2.24E-03	
BIM	8.44E-04	3.08E-03	

Black : participants in CCPR-K6 Blue: participants in EUROMET.PR-K6 only Green: participant in EURAMET.PR-K6.1 only Orange: participant in EURAMET.PR-K6.2

All reported values are absolute Nominal transmittance at 546 nm: 92 %

Lab i	Waveleng	th: 600 nm
\mathcal{V}	D _i	Ui
IODV	1.178E-03	1.574E-03
KRISS	-1.200E-04	6.633E-04
LNE-INM	-3.075E-04	5.498E-04
MIKES	-4.975E-04	7.523E-04
MSL	4.250E-04	5.171E-04
NIST	5.050E-04	1.387E-03
VSL	-3.150E-04	8.354E-04
NMIA	2.000E-04	2.216E-04
NMIJ	4.540E-04	4.679E-04
NPL	-5.746E-05	4.342E-04
NRC	2.150E-04	5.572E-04
РТВ	2.485E-03	1.584E-03
SMU	2.716E-03	3.255E-04
A*STAR	-9.246E-05	6.677E-04
VNIIOFI	-9.770E-04	5.970E-04
BEV	6.250E-04	3.045E-03
СМІ	6.004E-05	1.752E-03
GUM	2.082E-03	6.806E-04
INM(RO)	1.969E-03	2.400E-03
INRIM	3.445E-03	1.285E-03
IPQ	2.269E-05	3.851E-03
METAS	3.400E-04	9.177E-04
MKEH	-3.549E-04	1.659E-03
SP	1.275E-04	3.088E-03
UME	1.313E-02	2.161E-03
DMDM	-7.95E-04	2.26E-03
BIM	1.09E-03	3.11E-03

Degrees of equivalence for Filter A

MEASURAND : Spectral regular transmittance

Lab i	Waveleng	th: 700 nm
4.	D _i	U _i
IODV	1.267E-03	4.623E-03
KRISS	-3.688E-04	4.121E-04
LNE-INM	-4.225E-04	4.909E-04
MIKES	-6.813E-04	7.826E-04
MSL	1.940E-04	5.330E-04
NIST	5.033E-04	8.868E-04
VSL	-3.288E-04	6.721E-04
NMIA	1.082E-04	3.866E-04
NMIJ	4.206E-05	3.134E-04
NPL	2.372E-05	3.158E-04
NRC	1.371E-04	4.064E-04
РТВ	3.084E-03	1.502E-03
SMU	2.061E-03	9.129E-04
A*STAR	-1.378E-05	5.763E-04
VNIIOFI	-7.928E-04	7.161E-04
BEV	8.121E-04	3.479E-03
СМІ	-2.162E-05	1.619E-03
GUM	2.524E-03	9.472E-04
INM(RO)	2.247E-03	2.487E-03
INRIM	2.337E-03	1.618E-03
IPQ	1.248E-05	2.667E-03
METAS	2.973E-04	7.612E-04
MKEH	-4.695E-04	1.821E-03
SP	-5.609E-04	3.028E-03
UME	8.719E-03	9.100E-04
DMDM	-3.86E-04	2.26E-03
BIM	1.17E-03	3.07E-03

All reported values are absolute Nominal transmittance at 546 nm: 92 %

Lab i	Wavelength: 800 nm	
\uparrow	D _i	U _i
IODV	8.592E-04	1.203E-03
KRISS	-6.358E-04	2.872E-04
LNE-INM	-6.383E-04	4.711E-04
MIKES	-3.108E-04	9.060E-04
MSL	-1.133E-04	5.676E-04
NIST	4.442E-04	4.742E-04
VSL	-1.078E-05	7.564E-04
NMIA	-2.488E-04	4.095E-04
NMIJ	-3.018E-04	2.089E-04
NPL	1.922E-05	1.182E-04
NRC	-1.058E-04	2.450E-04
РТВ	3.479E-03	1.487E-03
SMU	2.082E-03	2.137E-03
A*STAR	8.117E-04	1.869E-04
VNIIOFI	-9.928E-04	6.068E-04
BEV	1.622E-03	3.666E-03
CMI	-6.040E-04	8.481E-04
GUM	1.581E-03	5.974E-04
INM(RO)	1.562E-03	2.174E-03
INRIM	1.379E-03	1.029E-03
IPQ	2.687E-04	1.897E-03
METAS	1.726E-04	5.243E-04
MKEH	-1.008E-03	1.812E-03
SP	-1.356E-03	3.256E-03
UME	4.317E-03	5.074E-04
DMDM	-3.93E-04	2.33E-03

Black : participants in CCPR-K6 Blue: participants in EUROMET.PR-K6 only Green: participant in EURAMET.PR-K6.1 only Orange: participant in EURAMET.PR-K6.2

Degrees of equivalence for Filter A

MEASURAND : Spectral regular transmittance

Lab i	Wavelength: 900 nm		
\mathcal{A}	D _i	U _i	
IODV	1.150E-03	4.204E-03	
KRISS	-4.478E-04	2.896E-04	
LNE-INM	-5.228E-04	4.736E-04	
MIKES	-2.703E-04	8.536E-04	
MSL	-5.263E-06	5.551E-04	
NIST	6.097E-04	6.165E-04	
VSL	6.474E-05	7.670E-04	
NMIA	-2.518E-04	4.969E-04	
NMIJ	2.512E-04	1.214E-03	
NPL	7.974E-05	2.069E-04	
NRC	3.974E-05	2.906E-04	
PTB	6.474E-05	3.678E-03	
SMU	1.228E-03	2.407E-03	
A*STAR	6.647E-04	2.804E-04	
VNIIOFI	-1.010E-03	6.742E-04	
BEV	1.797E-03	3.803E-03	
СМІ	-8.427E-04	1.059E-03	
GUM	1.261E-03	5.941E-04	
INM(RO)	2.910E-03	2.835E-03	
INRIM	2.579E-03	1.075E-03	
IPQ	1.828E-03	2.569E-03	
METAS	-4.767E-04	7.422E-04	
MKEH	-7.124E-04	2.018E-03	
SP	-9.026E-05	2.515E-03	
UME	4.137E-03	8.554E-04	
DMDM	-3 34E-04	2.43E-03	
	-3.346-04	2.456-05	

Black : participants in CCPR-K6 Blue: participants in EUROMET.PR-K6 only Green: participant in EURAMET.PR-K6.1 only

All reported values are absolute

Lab i	Wavelength: 1000 nm		
$\overline{\Lambda}$	D _i	U _i	
IODV	1.181E-03	4.004E-03	
KRISS	-3.786E-04	2.925E-04	
LNE-INM	-4.211E-04	4.943E-04	
MIKES	-2.961E-04	8.982E-04	
MSL	8.895E-05	5.919E-04	
NIST	7.114E-04	6.456E-04	
VSL	2.139E-04	7.862E-04	
NMIA	2.514E-04	2.628E-04	
NMIJ	4.314E-04	1.022E-03	
NPL	-1.605E-05	2.719E-04	
NRC	4.145E-05	2.849E-04	
PTB	8.089E-04	3.731E-03	
SMU	-	-	
A*STAR	7.581E-04	5.808E-04	
VNIIOFI	-6.481E-04	6.169E-04	
BEV	1.616E-03	4.285E-03	
СМІ	-5.164E-04	9.374E-04	
GUM	1.042E-03	6.114E-04	
INM(RO)	2.088E-03	3.099E-03	
INRIM	2.226E-03	1.060E-03	
IPQ	2.253E-03	2.426E-03	
METAS	5.047E-04	1.190E-03	
MKEH	-1.007E-03	2.411E-03	
SP	1.689E-04	2.471E-03	
UME	4.289E-03	1.081E-03	
DMDM	-3.76E-04	2.33E-03	

















Degrees of equivalence for Filter B

MEASURAND : Spectral regular transmittance

Lab i	Wavelength: 380 nm	
₹	D _i	Ui
IODV	-3.928E-03	2.009E-03
KRISS	6.248E-05	1.110E-03
LNE-INM	-1.540E-03	9.948E-04
MIKES	3.777E-03	1.182E-03
MSL	1.877E-03	1.260E-03
NIST	1.165E-03	2.383E-03
VSL	1.900E-04	2.015E-03
NMIA	-1.490E-04	1.622E-03
NMIJ	6.748E-05	2.469E-03
NPL	-1.358E-03	6.092E-04
NRC	-1.853E-03	1.451E-03
РТВ	-1.240E-03	1.801E-03
SMU	-7.902E-04	1.100E-03
A*STAR	6.925E-04	3.893E-03
VNIIOFI	1.194E-03	6.602E-04
BEV	-4.105E-03	9.017E-03
CMI	3.617E-03	4.104E-03
GUM	-8.615E-04	7.998E-04
INM(RO)	-7.098E-03	7.202E-03
INRIM	1.951E-03	5.084E-03
IPQ	-1.869E-03	7.334E-03
METAS	4.682E-03	1.923E-03
MKEH	-3.372E-03	1.904E-03
SP	-1.298E-03	3.220E-03
UME	1.967E-02	4.210E-03
DMDM	5.40E-03	2.48E-03
BIM	1.99E-03	2.91E-03

Black : participants in CCPR-K6 Blue: participants in EUROMET.PR-K6 Green: participant in EURAMET.PR-K6.1 Orange: participant in EURAMET.PR-K6.2 All reported values are absolute

Lab <i>i</i> 🛛	Wavelength: 400 nm		
\mathcal{V}	D _i	U _i	
IODV	-1.301E-03	3.517E-03	
KRISS	8.690E-04	1.228E-03	
LNE-INM	-1.093E-03	8.621E-04	
MIKES	6.700E-04	7.915E-04	
MSL	-2.260E-04	9.252E-04	
NIST	7.904E-05	6.988E-04	
VSL	-6.346E-05	1.121E-03	
NMIA	1.120E-04	6.524E-04	
NMIJ	9.354E-05	5.810E-04	
NPL	-3.185E-04	5.791E-04	
NRC	-6.385E-04	1.395E-03	
РТВ	9.923E-04	1.798E-03	
SMU	-9.642E-04	1.673E-03	
A*STAR	1.417E-03	1.038E-03	
VNIIOFI	-3.650E-04	8.107E-04	
BEV	7.615E-04	3.020E-03	
СМІ	-3.210E-04	6.581E-04	
GUM	-3.040E-04	7.236E-04	
INM(RO)	-5.541E-03	3.044E-03	
INRIM	-7.458E-04	2.374E-03	
IPQ	-2.039E-03	1.576E-03	
METAS	-7.035E-04	7.905E-04	
MKEH	-1.492E-03	1.822E-03	
SP	-5.135E-04	1.991E-03	
UME	1.615E-04	1.513E-03	
DMDM	-5.80E-04	2.08E-03	
BIM	4.37E-04	3.20E-03	

Degrees of equivalence for Filter B

MEASURAND : Spectral regular transmittance

Lab i	Wavelength: 500 nm	
\mathcal{V}	D _i	U _i
IODV	-1.018E-03	1.612E-03
KRISS	1.534E-03	8.127E-04
LNE-INM	-9.756E-04	8.164E-04
MIKES	2.269E-04	6.999E-04
MSL	-6.956E-04	8.934E-04
NIST	4.729E-04	9.318E-04
VSL	-2.856E-04	9.610E-04
NMIA	-3.796E-04	7.427E-04
NMIJ	-1.716E-04	5.435E-04
NPL	3.944E-04	6.485E-04
NRC	-7.406E-04	1.413E-03
PTB	2.944E-04	1.795E-03
SMU	-1.057E-03	1.044E-03
A*STAR	6.894E-04	9.243E-04
VNIIOFI	3.309E-04	7.756E-04
BEV	1.237E-03	2.109E-03
CMI	8.691E-05	8.804E-04
GUM	5.129E-04	7.564E-04
INM(RO)	-2.121E-03	8.757E-04
INRIM	5.796E-05	1.583E-03
IPQ	-1.533E-03	2.081E-03
METAS	-7.506E-04	1.095E-03
MKEH	-9.881E-04	1.761E-03
SP	-5.231E-04	2.033E-03
UME	2.454E-03	7.415E-04
DMDM	-1.36E-03	1.54E-03
BIM	-6.86E-04	3.06E-03

Black : participants in CCPR-K6 Blue: participants in EUROMET.PR-K6 Green: participant in EURAMET.PR-K6.1 Orange: participant in EURAMET.PR-K6.2 All reported values are absolute

Lab i	Wavelength: 600 nm	
\uparrow	D _i	U _i
IODV	-9.486E-04	1.361E-03
KRISS	1.366E-03	4.037E-04
LNE-INM	-7.611E-04	4.279E-04
MIKES	4.039E-04	5.923E-04
MSL	-6.461E-04	5.422E-04
NIST	5.314E-04	8.617E-04
VSL	-2.136E-04	8.780E-04
NMIA	-8.816E-04	4.675E-04
NMIJ	-2.706E-04	2.127E-04
NPL	6.689E-04	2.930E-04
NRC	-8.086E-04	1.029E-03
PTB	2.464E-04	1.439E-03
SMU	-1.071E-03	5.924E-04
A*STAR	6.339E-04	4.608E-04
VNIIOFI	-1.546E-04	5.824E-04
BEV	9.314E-04	2.223E-03
CMI	-2.336E-04	7.891E-04
GUM	8.049E-04	4.809E-04
INM(RO)	-2.356E-03	8.238E-04
INRIM	9.385E-04	1.321E-03
IPQ	-1.017E-03	1.143E-03
METAS	1.239E-04	6.361E-04
MKEH	-6.894E-04	1.630E-03
SP	-1.279E-03	2.383E-03
UME	2.501E-03	7.549E-04
DMDM	-6.60E-04	1.51E-03
BIM	-5.14E-04	3.13E-03

Degrees of equivalence for Filter B

MEASURAND : Spectral regular transmittance

Lab i	Wavelength: 700 nm	
47	D _i	U _i
IODV	-7.529E-04	2.852E-03
KRISS	1.085E-03	3.159E-04
LNE-INM	-3.424E-04	2.892E-04
MIKES	6.301E-04	6.125E-04
MSL	-2.212E-04	3.979E-04
NIST	2.561E-04	8.145E-04
VSL	-1.045E-04	9.031E-04
NMIA	-3.572E-04	2.207E-04
NMIJ	4.381E-05	3.486E-04
NPL	-2.154E-04	3.433E-04
NRC	-3.974E-04	5.121E-04
РТВ	2.878E-04	1.251E-03
SMU	-9.081E-04	3.295E-04
A*STAR	6.563E-04	2.574E-04
VNIIOFI	2.083E-04	6.801E-04
BEV	4.063E-04	2.158E-03
CMI	-1.262E-03	7.171E-04
GUM	7.321E-04	3.651E-04
INM(RO)	-2.430E-03	8.113E-04
INRIM	4.039E-04	1.217E-03
IPQ	-3.409E-04	7.615E-04
METAS	-4.476E-05	4.913E-04
MKEH	-8.967E-04	1.490E-03
SP	-1.071E-03	2.198E-03
UME	1.111E-03	5.066E-04
DMDM	5.12E-04	2.26E-03
BIM	-5.05E-04	3.13E-03

Black : participants in CCPR-K6 **Blue:** participants in EUROMET.PR-K6 Green: participant in EURAMET.PR-K6.1 **Orange:** participant in EURAMET.PR-K6.2

All reported values are absolute

Lab i	Wavelength: 800 nm	
\uparrow	D _i	U,
IODV	-7.985E-04	8.770E-04
KRISS	1.229E-03	7.287E-04
LNE-INM	-2.010E-04	3.370E-04
MIKES	5.365E-04	6.611E-04
MSL	-1.935E-04	3.419E-04
NIST	2.407E-04	6.483E-04
VSL	4.115E-04	8.396E-04
NMIA	-9.898E-05	4.304E-04
NMIJ	3.115E-04	3.876E-04
NPL	-3.785E-04	4.540E-04
NRC	1.565E-04	2.661E-04
PTB	9.115E-04	1.308E-03
SMU	-5.305E-04	2.870E-04
A*STAR	4.640E-04	3.329E-04
VNIIOFI	-3.085E-04	7.089E-04
BEV	9.365E-04	2.365E-03
CMI	-1.646E-03	6.724E-04
GUM	-1.320E-04	6.515E-04
INM(RO)	-1.956E-03	5.703E-04
INRIM	-1.688E-04	1.360E-03
IPQ	-3.630E-04	8.842E-04
METAS	-2.960E-04	5.865E-04
MKEH	-9.610E-04	1.459E-03
SP	-1.411E-03	2.249E-03
UME	6.569E-05	1.795E-03
DMDM	8.46E-04	1.61E-03

Degrees of equivalence for Filter B

MEASURAND : Spectral regular transmittance

Lab i	Wavelength: 900 nm	
\Diamond	Di	U _i
IODV	-2.078E-03	1.998E-03
KRISS	9.624E-04	7.184E-04
LNE-INM	-7.263E-05	3.578E-04
MIKES	4.099E-04	7.253E-04
MSL	-4.763E-05	3.369E-04
NIST	3.097E-04	9.092E-04
VSL	4.184E-04	6.998E-04
NMIA	-1.634E-06	2.651E-04
NMIJ	1.984E-04	1.264E-03
NPL	-4.051E-04	3.144E-04
NRC	2.812E-05	2.322E-04
РТВ	-2.351E-04	5.270E-04
SMU	-5.296E-04	3.917E-04
A*STAR	7.899E-04	4.284E-04
VNIIOFI	1.934E-04	8.109E-04
BEV	1 522E-03	2 378E-03
CMI	-1.458E-03	8 447E-04
GUM	1.865E-03	4.476E-04
INM(RO)	-2.650E-03	7.523E-04
INRIM	9.317E-03	1.199E-03
IPQ	6.296E-04	6.565E-04
METAS	-4.037E-04	3.638E-04
MKEH	-8.576E-04	1.521E-03
SP	5.070E-03	3.222E-03
UME	2.802E-03	7.137E-04
DMDM	6.80E-04	1.35E-03

Black : participants in CCPR-K6 Blue: participants in EUROMET.PR-K6 only Green: participant in EURAMET.PR-K6.1 only All reported values are absolute

Lab <i>i</i> 🛛	Wavelength: 1000 nm	
$\overline{1}$	D _i	U _i
IODV	-2.440E-03	2.599E-03
KRISS	5.874E-04	7.949E-04
LNE-INM	-1.051E-04	3.965E-04
MIKES	4.699E-04	8.428E-04
MSL	8.316E-05	4.166E-04
NIST	1.616E-04	7.961E-04
VSL	1.224E-04	6.555E-04
NMIA	-4.909E-05	3.279E-04
NMIJ	4.639E-04	1.151E-03
NPL	-3.326E-04	2.293E-04
NRC	-6.509E-05	2.545E-04
PTB	3.324E-04	5.843E-04
SMU	-	-
A*STAR	7.349E-04	4.755E-04
VNIIOFI	1.884E-04	9.018E-04
REV	3 260E-03	3 250E-03
	-9.626E-04	8.530E-03
GUM	1 50/F-03	3.072E-04
	-2.408E-03	2 641E-03
	8.643E-03	8.025E-04
IPQ	6.997E-04	8.919E-04
METAS	-1.490E-04	3.879E-04
MKEH	-7.651E-04	1.570E-03
SP	5.102E-03	3.203E-03
UME	3.699E-04	5.239E-04
DMDM	1.99E-05	1.14E-03

















Degrees of equivalence for Filter C

MEASURAND : Spectral regular transmittance

Lab i	Wavelength: 380 nm	
47	Di	U _i
IODV	-5.986E-04	2.766E-04
KRISS	-2.251E-04	1.984E-04
LNE-INM	-1.211E-04	3.009E-04
MIKES	8.371E-04	2.522E-04
MSL	5.334E-04	1.939E-04
NIST	2.267E-04	2.735E-04
VSL	-6.432E-05	7.506E-04
NMIA	2.106E-04	2.700E-04
NMIJ	6.276E-05	4.526E-04
NPL	-1.928E-04	1.345E-04
NRC	-2.091E-04	1.649E-04
РТВ	-1.358E-04	1.977E-04
SMU	-1.547E-04	1.189E-04
A*STAR	2.793E-05	7.778E-04
VNIIOFI	2.824E-04	6.350E-04
BEV	-6.776E-04	2.202E-03
CMI	1.269E-03	1.503E-03
GUM	-1.950E-04	1.800E-04
INM(RO)	-1.171E-03	2.009E-03
INRIM	2.714E-04	1.537E-03
IPQ	-1.879E-04	7.726E-04
METAS	1.051E-03	3.987E-04
MKEH	-3.462E-04	9.016E-04
SP	-1.571E-06	7.026E-04
UME	4.691E-03	7.527E-04
DMDM	8.45E-04	6.27E-04
BIM	2.66E-04	9.37E-04

Black : participants in CCPR-K6 Blue: participants in EUROMET.PR-K6 Green: participant in EURAMET.PR-K6.1 Orange: participant in EURAMET.PR-K6.2

All reported values are absolute Nominal transmittance at 546 nm: 10 %

Lab i	Wavelength: 400 nm	
\mathcal{V}	D _i	U _i
IODV	-2.726E-04	4.872E-04
KRISS	-4.223E-04	1.486E-04
LNE-INM	3.117E-05	1.491E-04
MIKES	2.199E-04	2.172E-04
MSL	3.637E-04	1.738E-04
NIST	1.515E-04	2.348E-04
VSL	-6.133E-05	4.165E-04
NMIA	2.967E-04	2.548E-04
NMIJ	2.784E-04	3.065E-04
NPL	-1.476E-04	1.136E-04
NRC	6.923E-06	1.492E-04
РТВ	3.204E-04	5.632E-04
SMU	-3.251E-04	2.351E-04
A*STAR	2.214E-04	3.429E-04
VNIIOFI	-3.808E-04	6.350E-04
BEV	-2.843E-04	2.002E-03
CMI	1.897E-04	1.947E-04
GUM	-2.519E-04	4.743E-04
INM(RO)	2.787E-04	1.220E-03
INRIM	1.188E-04	1.020E-03
IPQ	1.792E-04	3.024E-04
METAS	-6.533E-05	9.208E-04
MKEH	6.345E-04	6.803E-04
SP	1.146E-03	9.944E-04
UME	-1.126E-03	5.635E-04
DMDM	-2.51E-05	7.06E-04
BIM	2.89E-04	6.74E-04

Degrees of equivalence for Filter C

MEASURAND : Spectral regular transmittance

Lab i	Wavelength: 500 nm	
\mathcal{A}	D _i	U _i
IODV	-1.211E-04	2.851E-04
KRISS	1.209E-04	8.430E-05
LNE-INM	-1.156E-04	1.661E-04
MIKES	-2.609E-05	1.580E-04
MSL	-1.511E-04	1.268E-04
NIST	1.522E-04	2.225E-04
VSL	1.512E-04	4.292E-04
NMIA	-1.126E-04	1.792E-04
NMIJ	7.791E-05	2.718E-04
NPL	3.139E-04	1.023E-04
NRC	-1.078E-04	1.191E-04
PTB	3.584E-04	5.377E-04
SMU	-3.916E-04	1.817E-04
A*STAR	-9.909E-05	1.916E-04
VNIIOFI	5.991E-05	6.916E-04
BEV	4.412E-04	1.004E-03
CMI	-2.259E-02	1.087E-04
GUM	2.343E-05	3.046E-04
INM(RO)	4.254E-04	3.073E-04
INRIM	8.389E-05	4.192E-04
IPQ	3.981E-04	2.798E-04
METAS	-1.326E-04	2.536E-04
MKEH	7.944E-04	5.359E-04
SP	2.741E-05	4.613E-04
UME	6.791E-05	2.629E-04
DMDM	2.67E-04	2.84E-04
BIM	-1.29E-04	7.30E-04

All reported values are absolute Nominal transmittance at 546 nm: 10 %

Lab i Wavelength: 600 nm Ŷ Di Ui IODV -2.007E-04 2.526E-04 KRISS 2.278E-04 7.732E-05 LNE-INM -1.777E-04 1.311E-04 1.306E-04 MIKES 1.868E-04 MSL -1.717E-04 7.047E-05 NIST 1.145E-04 1.614E-04 VSL 1.251E-04 3.734E-04 NMIA -1.214E-04 1.046E-04 NMIJ -3.794E-05 1.756E-04 NPL 2.418E-04 8.810E-05 NRC -1.059E-04 1.382E-04 PTB 9.131E-05 4.584E-04 SMU -2.698E-04 1.976E-04 A*STAR -3.669E-05 1.169E-04 VNIIOFI 2.581E-05 7.001E-04 BEV 1.373E-04 2.402E-03 1.961E-04 6.881E-05 CMI GUM 1.572E-04 2.695E-04 INM(RO) 3.283E-04 5.511E-04 INRIM 3.636E-04 2.223E-04 -1.222E-05 2.728E-04 IPQ METAS 1.758E-04 9.793E-05 3.420E-04 MKEH 2.485E-04 6.872E-01 4.260E-04 SP UME 1.783E-04 1.254E-04 DMDM 2.44E-04 -1.30E-04 BIM -1.75E-04 7.24E-04

Black : participants in CCPR-K6 Blue: participants in EUROMET.PR-K6 Green: participant in EURAMET.PR-K6.1 Orange: participant in EURAMET.PR-K6.2

Degrees of equivalence for Filter C

MEASURAND : Spectral regular transmittance

Lab i	Waveleng	yth: 700 nm	
47	D _i	U _i	
IODV	-1.488E-04	6.950E-04	
KRISS	3.142E-05	1.709E-04	
LNE-INM	-9.633E-05	1.559E-04	
MIKES	1.487E-04	2.394E-04	
MSL	2.324E-04	1.939E-04	
NIST	6.842E-05	3.467E-04	
VSL	7.117E-05	6.723E-04	
NMIA	8.617E-05	1.628E-04	
NMIJ	-3.133E-05	3.930E-04	
NPL	1.118E-04	9.696E-05	
NRC	-1.632E-04	1.595E-04	
РТВ	-2.095E-05	8.373E-04	
SMU	-5.366E-04	2.451E-04	
A*STAR	-1.031E-04	4.638E-04	
VNIIOFI	6.053E-04	6.361E-04	
BEV	-4.909E-04	2.401E-03	
CMI	-1.505E-04	2.391E-04	
GUM	3.977E-05	4.793E-04	
INM(RO)	9.607E-04	9.055E-04	
INRIM	9.624E-05	9.331E-04	
IPQ	-7.338E-05	3.784E-04	
METAS	9.088E-05	4.005E-04	
MKEH	1.145E-04	3.256E-04	
SP	-1.967E-04	8.536E-04	
UME	-2.476E-04	2.084E-04	
DMDM	4.75E-04	4.59E-04	
BIM	-1.49E-04	1.05E-03	

All reported values are absolute Nominal transmittance at 546 nm: 10 %

Lab i	Wavelength: 800 nm	
$\overline{1}$	D _i	U _i
IODV	-1.846E-04	2.861E-04
KRISS	2.474E-04	2.340E-04
LNE-INM	-1.455E-05	2.618E-04
MIKES	-6.455E-05	2.144E-04
MSL	-6.705E-05	1.082E-04
NIST	5.545E-05	2.822E-04
VSL	1.859E-04	6.323E-04
NMIA	6.320E-05	5.117E-04
NMIJ	5.495E-05	2.920E-04
NPL	1.304E-04	1.465E-04
NRC	9.295E-05	9.598E-05
PTB	2.754E-04	8.518E-04
SMU	-4.078E-04	2.322E-04
A*STAR	5.449E-06	1.707E-04
VNIIOFI	-1.511E-04	6.605E-04
BEV	2.684E-04	2.201E-03
CMI	-6.918E-05	2.277E-04
GUM	7.797E-05	3.893E-04
INM(RO)	3.729E-04	7.452E-04
INRIM	7.460E-05	4.704E-04
IPQ	-2.391E-04	5.221E-04
METAS	-1.073E-04	4.957E-04
MKEH	4.254E-04	3.329E-04
SP	-2.616E-04	8.668E-04
UME	-2.246E-04	3.290E-04
DMDM	8.62E-04	4.64E-04

Black : participants in CCPR-K6 Blue: participants in EUROMET.PR-K6 Green: participant in EURAMET.PR-K6.1 Orange: participant in EURAMET.PR-K6.2

Degrees of equivalence for Filter C

MEASURAND : Spectral regular transmittance

Lab i	Wavelength: 900 nm	
$\langle h \rangle$	D _i	U _i
IODV	5.366E-05	4.075E-04
KRISS	1.502E-04	1.441E-04
LNE-INM	-8.838E-06	1.744E-04
MIKES	-4.834E-05	1.926E-04
MSL	-5.384E-05	9.642E-05
NIST	4.966E-05	1.936E-04
VSL	4.472E-04	5.307E-04
NMIA	-2.634E-05	1.736E-04
NMIJ	-8.534E-05	1.208E-03
NPL	-1.338E-06	6.122E-05
NRC	4.366E-05	6.298E-05
РТВ	1.012E-04	2.936E-04
SMU	-3.900E-04	1.952E-04
A*STAR	6.116E-05	1.349E-04
VNIIOFI	8.162E-06	5.839E-04
BEV	8.792E-04	2.202E-03
CMI	-3.332E-05	1.495E-04
GUM	9.643E-04	3.506E-04
INM(RO)	-2.608E-04	5.298E-04
INRIM	3.672E-03	4.112E-04
IPQ	5.416E-04	2.850E-04
METAS	-1.149E-04	2.326E-04
MKEH	2.462E-04	3.251E-04
SP	2.226E-03	1.183E-03
UME	1.594E-03	2.472E-04
DMDM	6.47E-04	3.17E-04

All reported values are absolute Nominal transmittance at 546 nm: 10 %

Lab i	Wavelength: 1000 nm	
\mathcal{V}	D _i	U _i
IODV	-1.466E-05	1.664E-04
KRISS	-4.091E-05	1.598E-04
LNE-INM	1.840E-06	1.355E-04
MIKES	6.590E-06	1.616E-04
MSL	2.034E-05	9.770E-05
NIST	2.084E-05	1.546E-04
VSL	2.381E-04	4.256E-04
NMIA	3.284E-05	1.526E-04
NMIJ	5.034E-05	1.017E-03
NPL	-1.566E-05	4.644E-05
NRC	-2.841E-05	4.572E-05
РТВ	1.582E-04	2.158E-04
SMU	-	-
A*STAR	-1.660E-06	1.113E-04
VNIIOFI	-4.516E-05	5.951E-04
BEV	1.533E-03	2.200E-03
CMI	5.458E-05	1.342E-04
GUM	6.872E-04	2.445E-04
INM(RO)	-5.407E-04	4.910E-04
INRIM	2.689E-03	1.614E-04
IPQ	3.629E-04	2.102E-04
METAS	6.426E-05	2.085E-04
MKEH	1.537E-04	3.416E-04
SP	1.561E-03	9.206E-04
UME	5.784E-05	5.594E-04
DMDM	3.41E-04	2.31E-04

Black : participants in CCPR-K6 Blue: participants in EUROMET.PR-K6 only Green: participant in EURAMET.PR-K6.1 only

















Degrees of equivalence for Filter D

MEASURAND : Spectral regular transmittance

Lab i	Wavelength: 380 nm	
4	D _i	U _i
IODV	-4.886E-05	4.246E-05
KRISS	-1.091E-05	1.973E-05
LNE-INM	1.599E-06	2.950E-05
MIKES	4.697E-05	3.430E-05
MSL	1.939E-05	2.818E-05
NIST	2.038E-05	6.193E-05
VSL	-2.030E-06	5.614E-05
NMIA	2.710E-05	1.180E-04
NMIJ	-1.319E-05	7.743E-05
NPL	-2.057E-05	2.651E-05
NRC	-3.214E-06	1.157E-05
РТВ	-1.438E-05	3.213E-05
SMU	6.978E-06	1.638E-05
A*STAR	8.932E-06	3.042E-05
VNIIOFI	-2.294E-05	6.540E-04
BEV	4.520E-05	1.685E-03
CMI	3.253E-04	2.072E-04
GUM	2.159E-05	1.027E-04
INM(RO)	6.826E-05	1.213E-04
INRIM	-	-
IPQ	-4.105E-07	2.000E-04
METAS	6.823E-05	8.156E-05
MKEH	-3.926E-06	9.465E-05
SP	-2.030E-05	1.261E-04
UME	3.136E-04	1.055E-04
DMDM	4.24E-06	1.27E-04
BIM	6.97E-06	5.72E-05

Black : participants in CCPR-K6 Blue: participants in EUROMET.PR-K6 Green: participant in EURAMET.PR-K6.1 Orange: participant in EURAMET.PR-K6.2

All reported values are absolute Nominal transmittance at 546 nm: 1 %

Lab i	Wavelength: 400 nm	
$\overline{1}$	D _i	U _i
IODV	-9.919E-05	6.334E-05
KRISS	-6.535E-05	2.764E-05
LNE-INM	1.185E-05	2.368E-05
MIKES	5.037E-05	2.714E-05
MSL	6.313E-05	3.393E-05
NIST	4.052E-05	5.484E-05
VSL	-3.011E-05	3.603E-05
NMIA	-3.655E-06	8.989E-05
NMIJ	2.362E-06	7.571E-05
NPL	-2.602E-05	2.041E-05
NRC	1.194E-05	2.570E-05
РТВ	-1.745E-05	3.942E-05
SMU	-2.091E-05	4.586E-05
A*STAR	5.844E-05	5.000E-05
VNIIOFI	-6.162E-05	6.622E-04
BEV	2.308E-06	1.542E-03
CMI	1.811E-04	1.324E-04
GUM	-7.222E-06	8.692E-05
INM(RO)	-2.688E-06	1.083E-04
INRIM	2.768E-05	1.470E-04
IPQ	1.184E-05	1.823E-04
METAS	3.815E-05	8.671E-05
MKEH	1.654E-05	1.186E-04
SP	6.802E-05	1.000E-04
UME	1.021E-04	1.098E-04
DMDM	3.65E-05	2.99E-04
BIM	1.59E-05	5.77E-05

Degrees of equivalence for Filter D

MEASURAND : Spectral regular transmittance

Lab i	Wavelength: 500 nm	
\mathcal{A}	D _i	U _i
IODV	-7.035E-06	2.736E-05
KRISS	3.273E-05	3.566E-05
LNE-INM	-8.555E-06	2.257E-05
MIKES	1.288E-05	1.565E-05
MSL	-1.500E-05	4.447E-05
NIST	4.406E-05	4.532E-05
VSL	-7.313E-07	5.254E-05
NMIA	-2.287E-05	6.204E-05
NMIJ	-9.400E-06	6.726E-05
NPL	2.495E-06	2.190E-05
NRC	-9.793E-06	1.975E-05
РТВ	-8.246E-06	5.608E-05
SMU	-2.728E-05	4.861E-05
A*STAR	-7.462E-06	3.268E-05
VNIIOFI	-1.655E-05	5.983E-04
BEV	6.428E-05	1.403E-03
CMI	-2.016E-03	9.717E-05
GUM	-1.335E-06	1.041E-04
INM(RO)	4.581E-05	1.049E-04
INRIM	2.237E-05	9.588E-05
IPQ	-2.954E-05	2.433E-04
METAS	5.015E-06	9.915E-05
MKEH	4.165E-05	1.266E-04
SP	4.833E-05	1.180E-04
UME	1.109E-04	1.176E-04
DMDM	5.63E-05	4.54E-05
BIM	-3.57E-05	9.66E-05

Black : participants in CCPR-K6 Blue: participants in EUROMET.PR-K6 Green: participant in EURAMET.PR-K6.1 Orange: participant in EURAMET.PR-K6.2

All reported values are absolute Nominal transmittance at 546 nm: 1 %

Lab i 🛛	Wavelength: 600 nm	
\mathcal{V}	D _i	U,
IODV	-4.026E-05	2.762E-05
KRISS	4.727E-05	2.816E-05
LNE-INM	-4.101E-05	2.917E-05
MIKES	2.298E-05	2.407E-05
MSL	-2.657E-05	4.437E-05
NIST	3.458E-05	3.412E-05
VSL	1.215E-05	6.303E-05
NMIA	-3.690E-05	6.277E-05
NMIJ	-7.012E-06	8.439E-05
NPL	2.055E-05	1.850E-05
NRC	-1.320E-05	2.760E-05
РТВ	-2.865E-05	5.616E-05
SMU	-2.572E-05	4.387E-05
A*STAR	3.476E-06	5.176E-05
VNIIOFI	4.505E-07	6.281E-04
BEV	-3.200E-05	2.404E-03
CMI	1.710E-05	1.564E-04
GUM	-3.877E-07	1.367E-04
INM(RO)	3.191E-05	1.374E-04
INRIM	1.764E-05	1.297E-04
IPQ	-2.106E-05	2.037E-04
METAS	8.243E-06	1.391E-04
MKEH	6.131E-05	2.134E-04
SP	-8.513E-06	1.455E-04
UME	1.185E-04	1.487E-04
DMDM	-1.35E-05	5.15E-05
BIM	-3.59E-05	1.03E-04

Degrees of equivalence for Filter D

MEASURAND : Spectral regular transmittance

Lab i	Wavelength: 700 nm	
$\langle h \rangle$	D _i	U _i
IODV	-5.891E-05	1.068E-04
KRISS	6.940E-05	9.470E-05
LNE-INM	-3.374E-05	5.525E-05
MIKES	1.007E-04	5.097E-05
MSL	2.035E-05	1.147E-04
NIST	5.957E-05	9.329E-05
VSL	2.424E-05	1.449E-04
NMIA	2.300E-05	1.183E-04
NMIJ	-1.200E-05	1.028E-04
NPL	6.769E-06	4.430E-05
NRC	-3.783E-05	4.611E-05
РТВ	-7.294E-05	1.296E-04
SMU	-1.114E-04	8.845E-05
A*STAR	-1.813E-05	1.840E-04
VNIIOFI	2.112E-04	5.707E-04
BEV	-4.614E-05	2.217E-03
СМІ	-1.261E-05	2.777E-04
GUM	-1.690E-05	2.941E-04
INM(RO)	1.083E-04	3.664E-04
INRIM	6.244E-06	3.350E-04
IPQ	-4.714E-05	3.208E-04
METAS	-4.886E-05	2.776E-04
MKEH	4.879E-05	3.257E-04
SP	-1.046E-04	3.774E-04
UME	1.482E-04	3.101E-04
DMDM	1.36E-04	1.33E-04
BIM	-4.48E-05	2.49E-04

All reported values are absolute Nominal transmittance at 546 nm: 1 %

Lab i	Wavelength: 800 nm	
\mathcal{V}	D _i	U _i
IODV	-9.859E-05	5.253E-05
KRISS	4.899E-05	3.588E-05
LNE-INM	-6.546E-06	6.089E-05
MIKES	1.464E-05	5.321E-05
MSL	-3.032E-06	1.049E-04
NIST	-2.094E-05	1.538E-04
VSL	9.077E-05	1.743E-04
NMIA	2.369E-05	2.961E-04
NMIJ	2.793E-05	8.228E-05
NPL	3.675E-05	3.963E-05
NRC	1.163E-05	3.733E-05
РТВ	2.990E-05	2.253E-04
SMU	-1.164E-04	9.684E-05
A*STAR	-6.850E-06	6.734E-05
VNIIOFI	7.777E-06	6.029E-04
BEV	8.182E-05	2.002E-03
CMI	7.213E-05	1.357E-04
GUM	-6.643E-05	1.106E-04
INM(RO)	7.914E-05	1.652E-04
INRIM	3.450E-05	8.407E-05
IPQ	-7.339E-05	1.824E-04
METAS	-7.603E-05	7.377E-05
MKEH	-3.626E-05	1.194E-04
SP	-9.073E-05	2.238E-04
UME	1.636E-04	1.054E-04
DMDM	2.18E-04	1.24E-04

Black : participants in CCPR-K6 Blue: participants in EUROMET.PR-K6 Green: participant in EURAMET.PR-K6.1 Orange: participant in EURAMET.PR-K6.2

Degrees of equivalence for Filter D

MEASURAND : Spectral regular transmittance

Lab i	Wavelength: 900 nm	
Λ	Di	U _i
IODV	5.728E-06	4.580E-05
KRISS	-2.911E-05	2.990E-05
LNE-INM	4.104E-06	4.531E-05
MIKES	1.145E-05	3.923E-05
MSL	-1.645E-05	8.108E-05
NIST	2.597E-05	5.219E-05
VSL	-6.347E-06	1.118E-04
NMIA	8.644E-05	1.639E-04
NMIJ	1.664E-05	1.178E-03
NPL	-1.361E-06	2.630E-05
NRC	1.962E-05	1.900E-05
PTB	5.666E-05	9.084E-05
SMU	-7.880E-05	7.454E-05
A*STAR	-1.012E-05	4.632E-05
VNIIOFI	-1.093E-05	6.081E-04
BEV	1.303E-04	2.000E-03
CMI	4.985E-05	8.976E-05
GUM	3.355E-04	9.129E-05
INM(RO)	-3.530E-06	1.267E-04
INRIM	9.023E-04	1.082E-04
IPQ	1.473E-04	2.301E-04
METAS	-4.296E-05	5.369E-05
MKEH	-2.274E-05	1.206E-04
SP	4.793E-04	4.019E-04
UME	-4.094E-05	1.102E-04
DMDM	2.07E-04	9.17E-05

All reported values are absolute

Nominal transmittance at 546 nm: 1 %

Lab i 🛛	Wavelength: 1000 nm	
\mathcal{V}	D _i	U _i
IODV	9.942E-05	4.055E-05
KRISS	-6.370E-05	2.626E-05
LNE-INM	3.835E-06	3.548E-05
MIKES	2.101E-05	3.323E-05
MSL	2.035E-07	6.676E-05
NIST	-3.192E-06	4.811E-05
VSL	-3.646E-05	8.361E-05
NMIA	7.118E-05	9.597E-05
NMIJ	-2.537E-05	1.030E-03
NPL	-1.192E-05	3.150E-05
NRC	4.595E-06	1.799E-05
PTB	4.045E-05	7.154E-05
SMU	-	-
A*STAR	-6.843E-06	2.597E-05
VNIIOFI	-6.447E-06	6.161E-04
BEV	2.788E-04	1.801E-03
СМІ	4.755E-05	7.968E-05
GUM	2.657E-04	7.792E-05
INM(RO)	-1.074E-04	1.138E-04
INRIM	6.069E-04	6.151E-05
IPQ	1.173E-04	2.138E-04
METAS	-1.556E-05	6.157E-05
MKEH	-3.024E-05	1.293E-04
SP	2.803E-04	3.830E-04
UME	-1.097E-04	1.545E-04
DMDM	1.10E-04	6.53E-05

Black : participants in CCPR-K6 Blue: participants in EUROMET.PR-K6 only Green: participant in EURAMET.PR-K6.1 only

















Degrees of equivalence for Filter E

MEASURAND : Spectral regular transmittance

Lab i	Wavelength: 380 nm	
47	D _i	U _i
IODV	7.840E-05	1.016E-04
KRISS	2.498E-06	1.257E-05
LNE-INM	-1.049E-06	1.406E-05
MIKES	2.338E-07	1.906E-05
MSL	1.256E-06	1.766E-05
NIST	4.332E-06	4.205E-05
VSL	-1.630E-06	2.028E-05
NMIA	-	-
NMIJ	-5.783E-07	6.407E-05
NPL	-1.921E-06	8.463E-06
NRC	-4.058E-06	2.034E-05
PTB	-7.642E-06	1.813E-05
SMU	6.279E-06	1.333E-05
A*STAR	6.442E-09	1.411E-05
VNIIOFI	9.914E-05	6.583E-04
BEV	-5.973E-05	1.686E-03
CMI	-2.767E-07	6.449E-05
GUM	1.071E-05	8.862E-05
INM(RO)	-	-
INRIM	-	-
IPQ	4.684E-05	1.750E-04
METAS	-9.170E-06	7.332E-05
MKEH	-3.190E-05	5.471E-05
SP	6.587E-06	1.355E-04
UME	3.500E-04	7.136E-05
DMDM	-	-

Black : participants in CCPR-K6 Blue: participants in EUROMET.PR-K6 only Green: participant in EURAMET.PR-K6.1 only

All reported values are absolute

Lab <i>i</i> 🛛	Wavelength: 400 nm	
\mathcal{V}	D _i	Ui
IODV	6.807E-05	8.056E-05
KRISS	-1.978E-06	7.732E-06
LNE-INM	6.444E-09	8.025E-06
MIKES	6.766E-07	8.462E-06
MSL	3.936E-06	1.769E-05
NIST	-2.309E-06	6.131E-05
VSL	-2.071E-06	3.839E-06
NMIA	-4.870E-05	5.824E-05
NMIJ	-1.455E-06	6.605E-05
NPL	-7.880E-07	9.120E-06
NRC	-3.766E-06	6.875E-06
PTB	-7.490E-07	9.127E-06
SMU	6.262E-06	6.969E-06
A*STAR	4.441E-06	7.735E-06
VNIIOFI	-3.343E-05	6.181E-04
BEV	2.708E-07	1.541E-03
CMI	1.057E-04	8.093E-05
GUM	-1.346E-05	2.704E-05
INM(RO)	1.916E-05	4.031E-05
INRIM	-	-
IPQ	1.748E-06	1.546E-04
METAS	3.964E-06	1.728E-05
MKEH	-6.467E-06	3.199E-05
SP	-3.832E-06	1.220E-05
UME	2.801E-04	7.619E-05
DMDM	-	-

Degrees of equivalence for Filter E

MEASURAND : Spectral regular transmittance

Lab i	Wavelength: 500 nm	
$\overline{\Lambda}$	D _i	U _i
IODV	-2.985E-05	2.078E-05
KRISS	1.537E-06	3.779E-06
LNE-INM	-2.954E-06	6.142E-06
MIKES	3.731E-06	6.680E-06
MSL	-1.711E-06	1.744E-05
NIST	4.460E-06	6.231E-06
VSL	-6.609E-07	1.171E-05
NMIA	-1.145E-05	4.011E-05
NMIJ	-1.102E-05	6.617E-05
NPL	-4.516E-06	7.668E-06
NRC	-3.987E-07	9.786E-06
PTB	4.892E-07	8.100E-06
SMU	5.598E-06	9.222E-06
A*STAR	-2.633E-06	7.393E-06
VNIIOFI	-1.594E-05	6.140E-04
BEV	-3.043E-06	1.400E-03
СМІ	3.831E-05	4.124E-05
GUM	-8.998E-06	2.079E-05
INM(RO)	-5.669E-06	6.501E-06
INRIM	2.871E-06	5.305E-06
IPQ	1.208E-05	1.520E-04
METAS	-7.600E-06	1.154E-05
MKEH	-8.764E-06	2.612E-05
SP	6.653E-06	2.515E-05
UME	5.921E-05	4.806E-05
DMDM	1.20E-05	2.91E-05

Black : participants in CCPR-K6 Blue: participants in EUROMET.PR-K6 only Green: participant in EURAMET.PR-K6.1 only

All reported values are absolute

Lab <i>i</i> ∏	Wavelength: 600 nm	
\mathcal{V}	D _i	U _i
IODV	4.551E-06	1.285E-05
KRISS	1.093E-05	3.255E-05
LNE-INM	-8.210E-06	1.001E-05
MIKES	3.908E-06	1.069E-05
MSL	-4.349E-06	1.787E-05
NIST	4.635E-06	7.636E-06
VSL	-8.743E-07	1.209E-05
NMIA	-2.713E-06	4.225E-05
NMIJ	-1.356E-05	6.619E-05
NPL	-1.443E-06	7.597E-06
NRC	-4.165E-06	7.603E-06
РТВ	-4.705E-06	1.111E-05
SMU	9.800E-06	1.157E-05
A*STAR	8.356E-07	6.426E-06
VNIIOFI	-4.087E-06	6.360E-04
BEV	1.170E-05	2.400E-03
СМІ	4.603E-05	7.306E-05
GUM	-7.587E-06	2.418E-05
INM(RO)	-4.606E-06	9.266E-06
INRIM	4.972E-06	1.834E-05
IPQ	6.228E-06	1.536E-04
METAS	-4.479E-05	6.715E-05
MKEH	-5.845E-07	3.330E-05
SP	1.372E-05	3.623E-05
UME	1.018E-05	5.434E-05
DMDM	-6.15E-06	2.33E-05

Degrees of equivalence for Filter E

MEASURAND : Spectral regular transmittance

Lab i	Wavelength: 700 nm	
	Di	U _i
IODV	-1.505E-05	2.605E-05
KRISS	3.836E-05	5.074E-05
LNE-INM	-7.620E-06	2.063E-05
MIKES	1.999E-05	2.054E-05
MSL	1.048E-05	3.039E-05
NIST	1.358E-05	3.559E-05
VSL	6.554E-07	3.719E-05
NMIA	-3.462E-05	6.849E-05
NMIJ	-1.616E-05	6.896E-05
NPL	-1.843E-06	2.550E-05
NRC	3.757E-06	1.827E-05
PTB	-1.373E-05	3.561E-05
SMU	-1.562E-05	3.033E-05
A*STAR	-5.719E-06	4.371E-05
VNIIOFI	4.379E-05	5.621E-04
BEV	4.879E-05	2.000E-03
CMI	2.389E-05	4.902E-05
GUM	1.026E-05	4.600E-05
INM(RO)	9.267E-06	5.791E-05
INRIM	2.813E-05	3.010E-05
IPQ	3.110E-05	1.565E-04
METAS	-3.472E-05	4.899E-05
MKEH	-3.116E-05	3.423E-05
SP	1.540E-05	4.947E-05
UME	2.781E-06	1.062E-04
DMDM	3.09E-05	2.70E-05

Black : participants in CCPR-K6 Blue: participants in EUROMET.PR-K6 only Green: participant in EURAMET.PR-K6.1 only

All reported values are absolute

Lab i	Wavelength: 800 nm	
\uparrow	Di	Ui
IODV	6.389E-05	2.310E-05
KRISS	-5.613E-06	1.821E-05
LNE-INM	-1.543E-05	2.232E-05
MIKES	-1.053E-05	1.949E-05
MSL	-6.210E-06	2.942E-05
NIST	8.533E-06	4.099E-05
VSL	-2.075E-05	6.438E-05
NMIA	2.677E-04	3.741E-04
NMIJ	-2.814E-05	6.845E-05
NPL	9.232E-06	1.994E-05
NRC	-4.962E-06	1.870E-05
PTB	-1.555E-05	5.734E-05
SMU	-5.503E-05	3.920E-05
A*STAR	-6.917E-06	3.124E-05
VNIIOFI	-1.768E-05	6.160E-04
BEV	-4.161E-05	2.000E-03
CMI	4.906E-05	4.432E-05
GUM	-1.271E-05	4.358E-05
INM(RO)	-2.576E-05	3.375E-05
INRIM	1.932E-06	1.506E-05
IPQ	-2.075E-06	1.636E-04
METAS	-1.638E-05	2.209E-05
MKEH	-1.354E-05	3.010E-05
SP	5.582E-05	8.748E-05
UME	-6.291E-06	4.730E-05
DMDM	5.46E-05	7.28E-05

Degrees of equivalence for Filter E

MEASURAND : Spectral regular transmittance

Lab i	Wavelength: 900 nm	
$\langle h \rangle$	D _i	U _i
IODV	1.296E-05	2.033E-05
KRISS	-1.752E-05	1.222E-05
LNE-INM	2.187E-06	1.757E-05
MIKES	6.480E-06	1.878E-05
MSL	3.958E-06	2.628E-05
NIST	1.270E-05	2.387E-05
VSL	-1.178E-05	5.560E-05
NMIA	3.380E-05	1.960E-04
NMIJ	-7.750E-06	1.194E-03
NPL	-3.229E-06	1.545E-05
NRC	1.733E-06	1.244E-05
PTB	5.115E-05	5.789E-05
SMU	-3.968E-05	3.648E-05
A*STAR	1.503E-06	2.146E-05
VNIIOFI	-2.235E-05	6.020E-04
BEV	-9.385E-06	2.000E-03
CMI	5.972E-05	4.062E-05
GUM	2.892E-04	4.061E-05
INM(RO)	-3.227E-05	2.879E-05
INRIM	3.580E-04	1.890E-05
IPQ	1.606E-04	2.010E-04
METAS	-1.324E-05	1.938E-05
MKEH	-2.253E-05	4.092E-05
SP	6.794E-05	3.204E-04
UME	-2.229E-04	7.100E-05
DMDM	4.27E-05	1.39E-04

Black : participants in CCPR-K6 Blue: participants in EUROMET.PR-K6 only Green: participant in EURAMET.PR-K6.1 only

All reported values are absolute Nominal transmittance at 546 nm: 0.1 %

Lab i Wavelength: 1000 nm Di Ui IODV 1.360E-05 2.422E-05 KRISS -2.973E-05 1.127E-05 LNE-INM 9.511E-06 1.559E-05 MIKES 1.752E-05 1.669E-05 MSL 1.619E-05 2.391E-05 8.853E-06 4.345E-05 NIST VSL -1.589E-05 4.696E-05 -9.105E-05 1.019E-04 NMIA 2.363E-05 1.006E-03 NMIJ 3.417E-06 NPL 1.981E-05 NRC -3.953E-06 1.109E-05 PTB 2.113E-05 3.065E-05 SMU -A*STAR -2.943E-06 1.793E-05 -1.473E-05 VNIIOFI 6.300E-04 BEV 1.800E-03 -1.170E-05 CMI 2.142E-05 -1.676E-03 GUM 2.525E-04 4.062E-05 -1.556E-04 4.545E-05 INM(RO) INRIM 2.970E-04 1.727E-05 IPQ 1.600E-04 2.311E-04 METAS -2.628E-06 2.600E-05 MKEH -5.499E-06 3.168E-05 SP 2.885E-04 2.402E-04 UME -1.661E-04 1.413E-04 DMDM 6.57E-05 4.21E-05















