## Key comparisons CCPR-K2.b and EURAMET.PR-K2.b

**MEASURAND : Spectral responsivity**
**WAVELENGTH : 300 nm to 1000 nm**

## Key comparison CCPR-K2.b

The laboratory individual measurements correspond to calibrations, expressed in A/W, of the BIPM reference by transfer of detectors.
These values, $x_i$, together with the associated relative standard uncertainties, $u_i$, are given in Table 48, page 64, of the CCPR-K2.b Final Report for all wavelengths.

For each wavelength, the key comparison reference value, $x_R$, is calculated as a weighted mean of the participants' results $x_i$, weighted by the inverse square of the individual uncertainties, $u_i$, with weights limited to a maximum of 20 %.
The key comparison reference values, expressed in A/W, obtained for each wavelength, together with the associated relative standard uncertainties, are given in Table 47, page 63, of the Final Report.

The degree of equivalence of each laboratory with respect to the reference value is given by a pair of terms:
$D_i = (x_i - x_R)$ and $U_i$, its expanded uncertainty ($k$ = 2), both expressed in %.
The degree of equivalence between two laboratories is given by a pair of terms:
$D_{ij} = (D_i - D_j)$ and $U_{ij}$, its expanded uncertainty ($k$ = 2), both expressed in %.
The detailed computation of the expanded uncertainties $U_i$ and $U_{ij}$ is given on pages 62 and 63 of the Final Report.

## Key comparison EURAMET.PR-K2.b

The individual laboratory measurements are given in Section 5 and 6, starting page 14, of the EURAMET.PR-K2.b Final Report.
These results are first treated inside EURAMET through the computation of EURAMET reference values for each of the wavelengths and corresponding degrees of equivalence (see Section 7 of the Final Report).
For each wavelength, linkage to the CCPR-K2.b reference value, is established through the common participation of LNE-INM, IO-CSIC and VSL in both key comparisons (see Section 8 of the Final Report).
This makes it possible to extend the tables of degrees of equivalence and the graphs of equivalence obtained for each wavelength, to the laboratories having participated in EURAMET.PR-K2.b only.

**Key comparisons CCPR-K2.b and EURAMET.PR-K2.b**   MEASURAND : Spectral responsivity

**Degrees of equivalence relative to the CCPR-K2.b key comparison reference value**

| Lab $i$ | 300 nm | | 320 nm | |
|---|---|---|---|---|
| | $D_i$ / $10^{-2}$ | $U_i$ / $10^{-2}$ | $D_i$ / $10^{-2}$ | $U_i$ / $10^{-2}$ |
| NMIA | -0.085 | 0.566 | 0.067 | 0.380 |
| NRC | -0.075 | 0.232 | -0.150 | 0.183 |
| IO-CSIC | -0.298 | 1.378 | -0.756 | 2.380 |
| NPL | -0.024 | 0.276 | 0.028 | 0.278 |
| MIKES | 0.598 | 1.669 | 0.472 | 1.475 |
| MKEH | -1.131 | 2.481 | -0.205 | 2.007 |
| SMU | -2.859 | 0.846 | -1.731 | 0.723 |
| VSL | -0.130 | 0.349 | -0.085 | 0.264 |
| NIST | 0.187 | 1.361 | 0.697 | 1.496 |
| NMIJ | 0.651 | 1.641 | 1.393 | 1.642 |
| VNIIOFI | -1.447 | 2.251 | -0.849 | 1.852 |
| NMISA | - | - | - | - |
| LNE-INM | 0.173 | 0.445 | 0.278 | 0.284 |
| MSL | 2.080 | 1.183 | 1.782 | 1.109 |
| PTB | -0.290 | 0.344 | -0.267 | 0.290 |
| INRIM | - | - | - | - |
| KRISS | 0.728 | 0.530 | 0.367 | 0.527 |
| BIPM | 0.613 | 0.860 | 0.176 | 0.858 |
| UME | -0.28 | 0.78 | -4.30 | 0.76 |
| GUM | - | - | - | - |
| INM(RO) | -4.80 | 5.70 | -3.50 | 4.50 |
| JV | 0.06 | 0.67 | 0.40 | 0.65 |
| METAS | 0.37 | 0.54 | 0.46 | 0.56 |
| CMI | -0.62 | 0.92 | -0.06 | 0.93 |
| SP | -0.10 | 1.80 | 0.50 | 1.80 |

**In black: laboratories having participated in CCPR-K2.b**

The acronymns given here are those in use at the time of publication of EURAMET.PR-K2.b results (August 2013)

**In blue:  laboratories having participated in EURAMET.PR-K2.b only**

**The linkage is ensured by the common participation of LNE-INM, IO-CSIC and VSL in both key comparisons**

**Pair-wise degrees of equivalence have been computed among participants in CCPR-K2.b. They are made available from the KCDB under the form of a separate PDF file.**

Continued on the following pages

# Key comparisons CCPR-K2.b and EURAMET.PR-K2.b
## Degrees of equivalence relative to the CCPR-K2.b key comparison reference value (Continued)

| Lab $i$ | 340 nm $D_i$ / $10^{-2}$ | 340 nm $U_i$ / $10^{-2}$ | 360 nm $D_i$ / $10^{-2}$ | 360 nm $U_i$ / $10^{-2}$ | 380 nm $D_i$ / $10^{-2}$ | 380 nm $U_i$ / $10^{-2}$ | 400 nm $D_i$ / $10^{-2}$ | 400 nm $U_i$ / $10^{-2}$ | 450 nm $D_i$ / $10^{-2}$ | 450 nm $U_i$ / $10^{-2}$ | 500 nm $D_i$ / $10^{-2}$ | 500 nm $U_i$ / $10^{-2}$ | 550 nm $D_i$ / $10^{-2}$ | 550 nm $U_i$ / $10^{-2}$ | 600 nm $D_i$ / $10^{-2}$ | 600 nm $U_i$ / $10^{-2}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NMIA | 0.025 | 0.317 | -0.029 | 0.266 | -0.032 | 0.248 | -0.084 | 0.211 | -0.269 | 0.178 | -0.175 | 0.130 | -0.173 | 0.118 | -0.097 | 0.120 |
| NRC | -0.096 | 0.162 | -0.060 | 0.152 | -0.168 | 0.187 | -0.227 | 0.130 | -0.063 | 0.095 | -0.019 | 0.081 | -0.010 | 0.078 | -0.034 | 0.076 |
| IO-CSIC | 0.145 | 2.780 | -0.534 | 10.620 | 0.510 | 2.179 | -0.678 | 1.500 | -0.201 | 1.040 | -0.345 | 0.720 | -0.266 | 0.680 | -0.156 | 0.680 |
| NPL | 0.087 | 0.287 | 0.089 | 0.267 | 0.044 | 0.265 | -0.007 | 0.285 | 0.042 | 0.111 | 0.015 | 0.111 | 0.017 | 0.110 | 0.017 | 0.110 |
| MIKES | 0.495 | 1.430 | 0.581 | 1.428 | 0.547 | 0.969 | 0.150 | 0.505 | 0.137 | 0.366 | 0.098 | 0.296 | 0.047 | 0.285 | -0.020 | 0.271 |
| MKEH | 0.408 | 1.741 | 0.513 | 1.645 | -0.073 | 1.444 | 0.358 | 1.051 | 0.042 | 0.633 | -0.028 | 0.622 | -0.023 | 0.622 | -0.005 | 0.629 |
| SMU | -1.553 | 0.526 | -1.289 | 0.539 | -1.213 | 0.462 | -0.050 | 0.354 | 0.148 | 0.341 | 0.093 | 0.342 | 0.158 | 0.341 | 0.027 | 0.302 |
| VSL | -0.123 | 0.229 | -0.139 | 0.277 | -0.131 | 0.263 | -0.091 | 0.118 | 0.019 | 0.089 | 0.024 | 0.088 | 0.033 | 0.081 | 0.005 | 0.077 |
| NIST | 0.500 | 1.870 | -0.094 | 1.563 | -0.124 | 0.900 | -0.079 | 0.541 | 0.172 | 0.303 | 0.194 | 0.262 | 0.149 | 0.242 | 0.107 | 0.242 |
| NMIJ | 0.633 | 1.642 | 1.285 | 1.639 | 0.549 | 1.641 | 0.387 | 1.641 | 0.519 | 1.640 | 0.375 | 1.640 | 0.320 | 0.881 | 0.273 | 0.881 |
| VNIIOFI | -0.898 | 1.852 | -0.503 | 1.699 | -0.340 | 1.701 | -0.311 | 1.601 | -0.134 | 1.101 | -0.023 | 1.001 | -0.118 | 1.001 | -0.053 | 0.801 |
| NMISA | - | - | - | - | - | - | 1.697 | 5.400 | 0.921 | 3.000 | 0.884 | 1.900 | 0.900 | 2.000 | 0.552 | 2.200 |
| LNE-INM | 0.324 | 0.253 | -0.033 | 0.313 | 0.317 | 0.235 | 0.144 | 0.267 | 0.233 | 0.237 | 0.165 | 0.234 | 0.295 | 0.440 | 0.157 | 0.245 |
| MSL | 1.444 | 1.098 | 1.117 | 1.114 | 0.748 | 1.115 | 0.507 | 1.101 | 0.014 | 0.068 | 0.072 | 0.062 | 0.092 | 0.077 | 0.075 | 0.059 |
| PTB | -0.132 | 0.204 | 0.014 | 0.174 | -0.033 | 0.254 | -0.054 | 0.135 | -0.094 | 0.112 | -0.049 | 0.050 | -0.037 | 0.046 | -0.043 | 0.045 |
| INRIM | - | - | 1.209 | 2.015 | 1.214 | 1.546 | 0.437 | 0.812 | 0.197 | 0.387 | 0.058 | 0.382 | -0.211 | 0.392 | 0.177 | 0.397 |
| KRISS | 0.031 | 0.522 | 0.258 | 0.458 | 0.137 | 0.469 | 0.643 | 0.169 | 0.041 | 0.150 | -0.099 | 0.145 | -0.073 | 0.145 | -0.085 | 0.145 |
| BIPM | 0.124 | 0.850 | -0.055 | 0.845 | -0.090 | 0.289 | -0.178 | 0.239 | 0.017 | 0.073 | 0.005 | 0.073 | 0.005 | 0.072 | 0.008 | 0.073 |
| UME | -7.14 | 0.74 | 0.63 | 0.67 | 0.65 | 0.67 | 0.35 | 0.48 | 0.06 | 0.37 | -0.02 | 0.32 | -0.01 | 0.29 | -0.04 | 0.30 |
| GUM | - | - | - | - | 0.39 | 0.70 | 0.39 | 0.48 | -0.02 | 0.31 | -0.05 | 0.30 | -0.08 | 0.32 | -0.11 | 0.32 |
| INM(RO) | -2.10 | 3.70 | -3.90 | 3.10 | -3.60 | 2.70 | -0.70 | 0.90 | 0.13 | 0.70 | 0.27 | 0.69 | 0.02 | 0.69 | 0.02 | 0.69 |
| JV | 0.33 | 0.58 | 0.52 | 0.62 | 0.16 | 0.56 | 0.22 | 0.53 | -0.16 | 0.32 | -0.16 | 0.29 | -0.08 | 0.28 | -0.09 | 0.28 |
| METAS | 0.25 | 0.50 | 0.46 | 0.55 | 0.39 | 0.49 | 0.21 | 0.44 | -0.06 | 0.25 | -0.17 | 0.23 | -0.03 | 0.22 | -0.08 | 0.22 |
| CMI | -0.10 | 0.90 | 0.25 | 0.93 | 0.05 | 0.78 | -0.14 | 0.77 | 0.35 | 0.42 | 0.20 | 0.33 | 0.17 | 0.33 | 0.08 | 0.33 |
| SP | 0.40 | 1.80 | 0.60 | 1.80 | 0.50 | 1.80 | 0.40 | 1.80 | 0.11 | 0.39 | 0.04 | 0.38 | 0.13 | 0.38 | 0.08 | 0.38 |

# Key comparisons CCPR-K2.b and EURAMET.PR-K2.b
## Degrees of equivalence relative to the CCPR-K2.b key comparison reference value (Continued)

| Lab $i$ | 650 nm | | 700 nm | | 750 nm | | 800 nm | | 850 nm | | 900 nm | | 950 nm | | 1000 nm | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $D_i$ /$10^{-2}$ | $U_i$ /$10^{-2}$ | $D_i$ /$10^{-2}$ | $U_i$ /$10^{-2}$ | $D_i$ /$10^{-2}$ | $U_i$ /$10^{-2}$ | $D_i$ /$10^{-2}$ | $U_i$ /$10^{-2}$ | $D_i$ /$10^{-2}$ | $U_i$ /$10^{-2}$ | $D_i$ /$10^{-2}$ | $U_i$ /$10^{-2}$ | $D_i$ /$10^{-2}$ | $U_i$ /$10^{-2}$ | $D_i$ /$10^{-2}$ | $U_i$ /$10^{-2}$ |
| NMIA | -0.101 | 0.122 | -0.033 | 0.140 | -0.020 | 0.156 | -0.002 | 0.176 | -0.062 | 0.181 | -0.093 | 0.193 | -0.071 | 0.195 | -0.435 | 0.304 |
| NRC | -0.025 | 0.073 | -0.030 | 0.071 | -0.012 | 0.072 | 0.003 | 0.099 | 0.042 | 0.093 | 0.022 | 0.081 | -0.023 | 0.090 | -0.149 | 0.375 |
| IO-CSIC | -0.223 | 0.620 | -0.388 | 0.620 | -0.548 | 0.680 | -0.253 | 1.720 | -0.313 | 1.680 | -0.627 | 1.660 | -0.615 | 1.679 | -1.035 | 1.690 |
| NPL | 0.026 | 0.109 | 0.024 | 0.109 | 0.023 | 0.108 | 0.021 | 0.108 | 0.031 | 0.105 | 0.047 | 0.105 | 0.031 | 0.251 | -0.056 | 0.318 |
| MIKES | -0.034 | 0.290 | -0.070 | 0.290 | -0.116 | 0.270 | -0.166 | 0.279 | -0.161 | 0.273 | -0.244 | 0.279 | 0.011 | 0.672 | -0.101 | 2.587 |
| MKEH | 0.041 | 0.627 | 0.054 | 0.722 | 0.051 | 0.801 | 0.046 | 0.925 | 0.072 | 0.964 | 0.098 | 1.077 | 0.056 | 2.651 | 0.065 | 1.837 |
| SMU | 0.015 | 0.302 | 0.016 | 0.302 | 0.021 | 0.301 | -0.043 | 0.301 | -0.009 | 0.300 | -0.018 | 0.300 | -0.049 | 0.397 | -0.075 | 0.504 |
| VSL | 0.024 | 0.073 | 0.024 | 0.071 | 0.024 | 0.068 | 0.022 | 0.067 | 0.017 | 0.069 | 0.026 | 0.072 | 0.015 | 0.110 | -0.032 | 0.531 |
| NIST | 0.112 | 0.241 | 0.104 | 0.241 | 0.084 | 0.241 | 0.076 | 0.240 | 0.075 | 0.239 | 0.112 | 0.239 | -0.111 | 2.579 | -0.164 | 1.759 |
| NMIJ | 0.254 | 0.881 | 0.254 | 0.881 | 0.279 | 1.240 | 0.255 | 1.240 | 0.148 | 1.240 | 0.050 | 1.240 | -0.119 | 1.239 | -0.154 | 1.270 |
| VNIIOFI | -0.050 | 0.516 | -0.035 | 0.516 | -0.042 | 0.516 | -0.115 | 0.516 | -0.080 | 0.515 | -0.029 | 0.575 | 0.080 | 0.774 | 0.258 | 0.942 |
| NMISA | -0.421 | 2.000 | 0.576 | 2.250 | 0.609 | 1.600 | 0.512 | 1.600 | 0.789 | 1.600 | 0.543 | 1.600 | 0.448 | 1.849 | 0.478 | 2.416 |
| LNE-INM | -0.118 | 0.223 | -0.124 | 0.194 | -0.092 | 0.182 | -0.022 | 0.228 | -0.134 | 0.258 | -0.047 | 0.176 | 0.123 | 0.183 | 1.038 | 0.356 |
| MSL | 0.092 | 0.085 | 0.080 | 0.084 | 0.065 | 0.103 | 0.021 | 0.085 | -0.027 | 0.150 | -0.064 | 0.151 | - | - | - | - |
| PTB | -0.024 | 0.044 | -0.025 | 0.045 | -0.033 | 0.046 | -0.037 | 0.047 | -0.030 | 0.052 | -0.018 | 0.053 | -0.024 | 0.075 | -0.122 | 0.258 |
| INRIM | 0.286 | 0.372 | 0.223 | 0.476 | 0.243 | 0.431 | 0.281 | 0.531 | 0.261 | 0.555 | 0.273 | 0.555 | - | - | - | - |
| KRISS | -0.084 | 0.145 | -0.095 | 0.144 | -0.068 | 0.456 | -0.023 | 0.451 | 0.003 | 0.460 | -0.082 | 0.460 | -0.127 | 0.458 | -0.062 | 0.545 |
| BIPM | 0.009 | 0.073 | 0.015 | 0.073 | -0.002 | 0.084 | -0.013 | 0.107 | -0.002 | 0.297 | 0.071 | 0.572 | 0.167 | 0.845 | 0.252 | 0.985 |
| UME | -0.07 | 0.33 | 0.03 | 0.31 | -0.02 | 0.35 | -0.06 | 0.39 | -0.03 | 0.46 | 0.06 | 0.55 | -0.47 | 0.65 | -4.37 | 0.71 |
| GUM | -0.06 | 0.32 | -0.11 | 0.34 | -0.14 | 0.35 | -0.14 | 0.40 | -0.05 | 0.42 | -0.07 | 0.40 | 0.05 | 0.45 | 0.38 | 0.63 |
| INM(RO) | 0.04 | 0.69 | -0.04 | 0.79 | -0.02 | 0.79 | -0.05 | 0.84 | -0.07 | 0.86 | -1.02 | 0.86 | -2.20 | 1.30 | -1.20 | 1.40 |
| JV | -0.15 | 0.28 | -0.13 | 0.28 | -0.02 | 0.28 | -0.12 | 0.28 | -0.12 | 0.39 | -0.15 | 0.41 | -0.01 | 0.47 | 0.24 | 0.70 |
| METAS | -0.10 | 0.22 | -0.08 | 0.22 | -0.10 | 0.22 | -0.08 | 0.23 | -0.11 | 0.35 | -0.11 | 0.37 | -0.07 | 0.53 | -0.74 | 0.55 |
| CMI | 0.02 | 0.33 | 0.01 | 0.33 | 0.04 | 0.33 | 0.02 | 0.33 | 0.06 | 0.43 | 0.07 | 0.44 | 0.18 | 0.58 | 0.46 | 1.00 |
| SP | 0.05 | 0.38 | 0.04 | 0.59 | 0.04 | 0.58 | 0.03 | 0.58 | 0.00 | 0.64 | 0.00 | 1.60 | 0.30 | 1.60 | 1.10 | 1.60 |

CCPR-K2.b and EURAMET.PR-K2.b   Spectral responsivity   Wavelength 300 nm

Degrees of equivalence: $D_i$ and expanded uncertainty $U_i$ ($k = 2$)
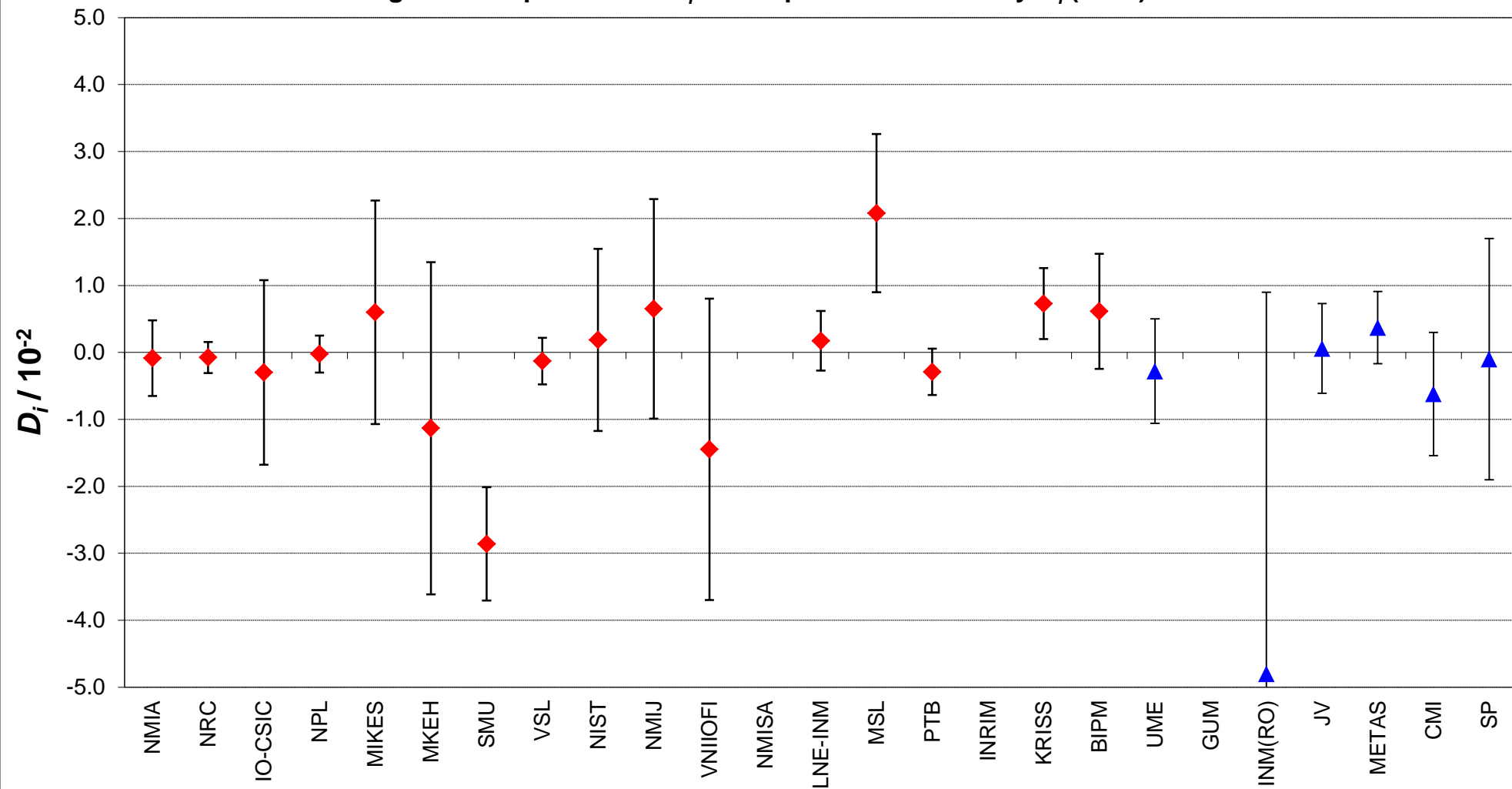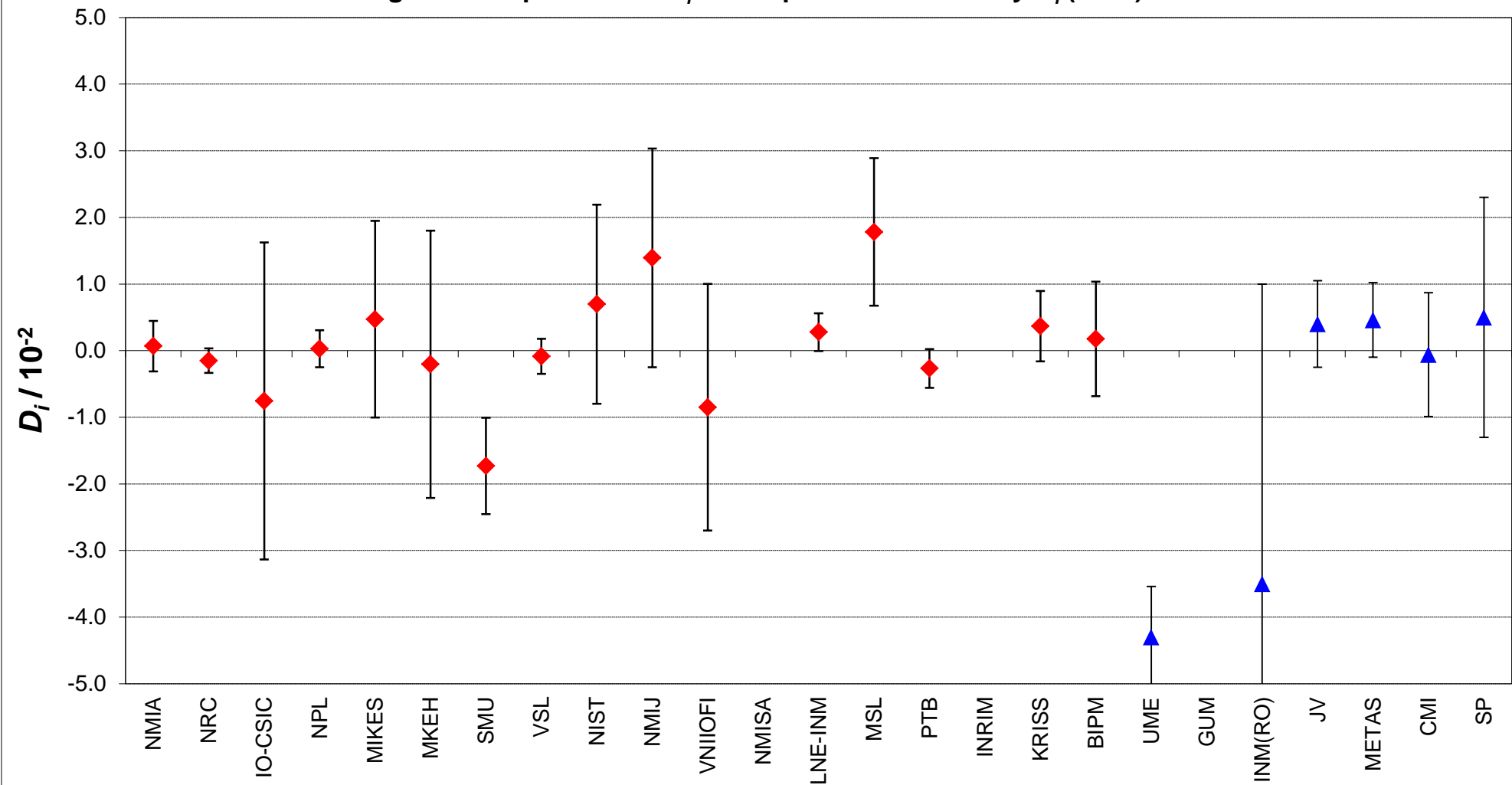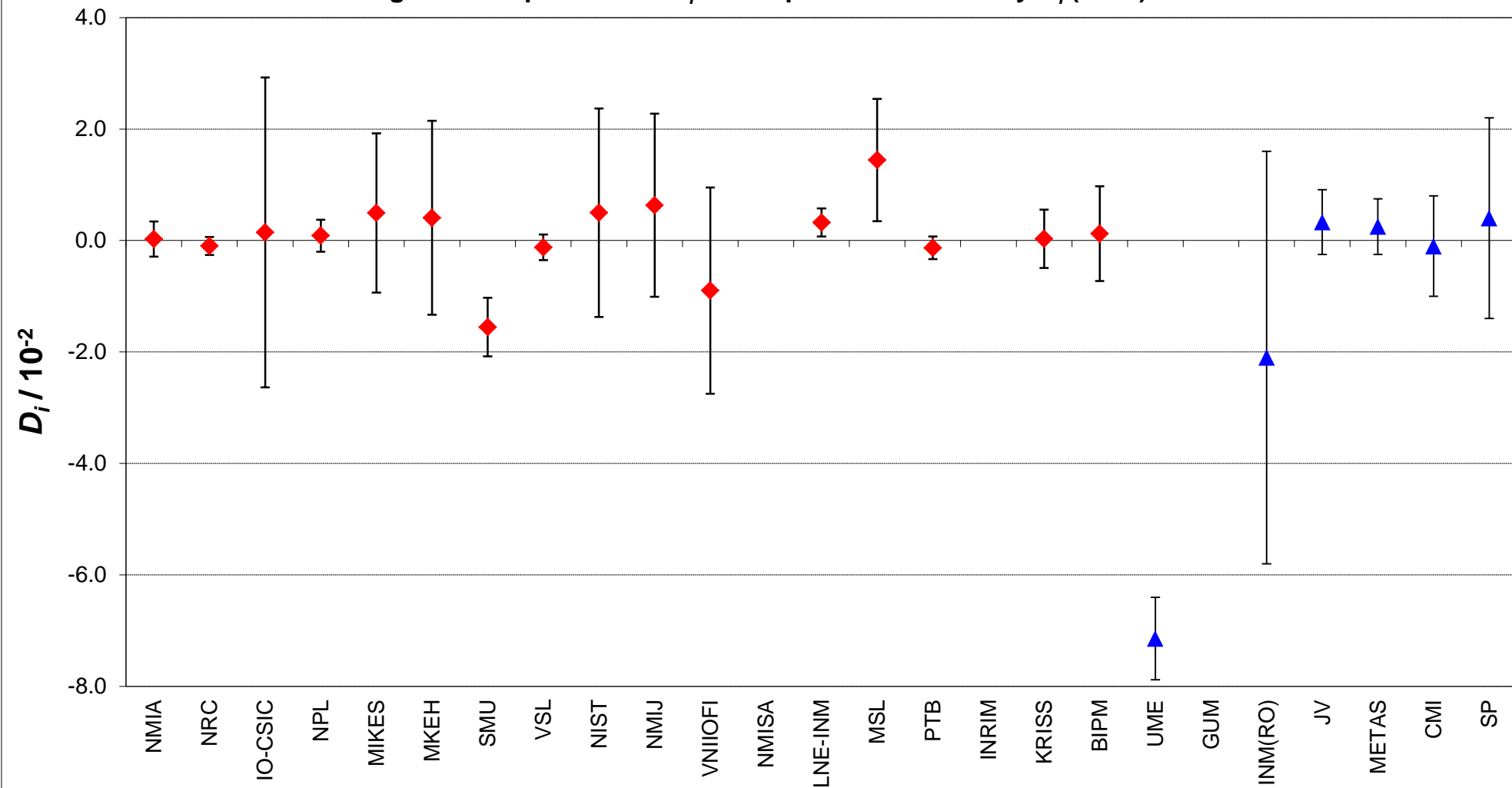
Red diamonds: participants in CCPR-K2.b          Blue triangles: participants in EURAMET.PR-K2.b only

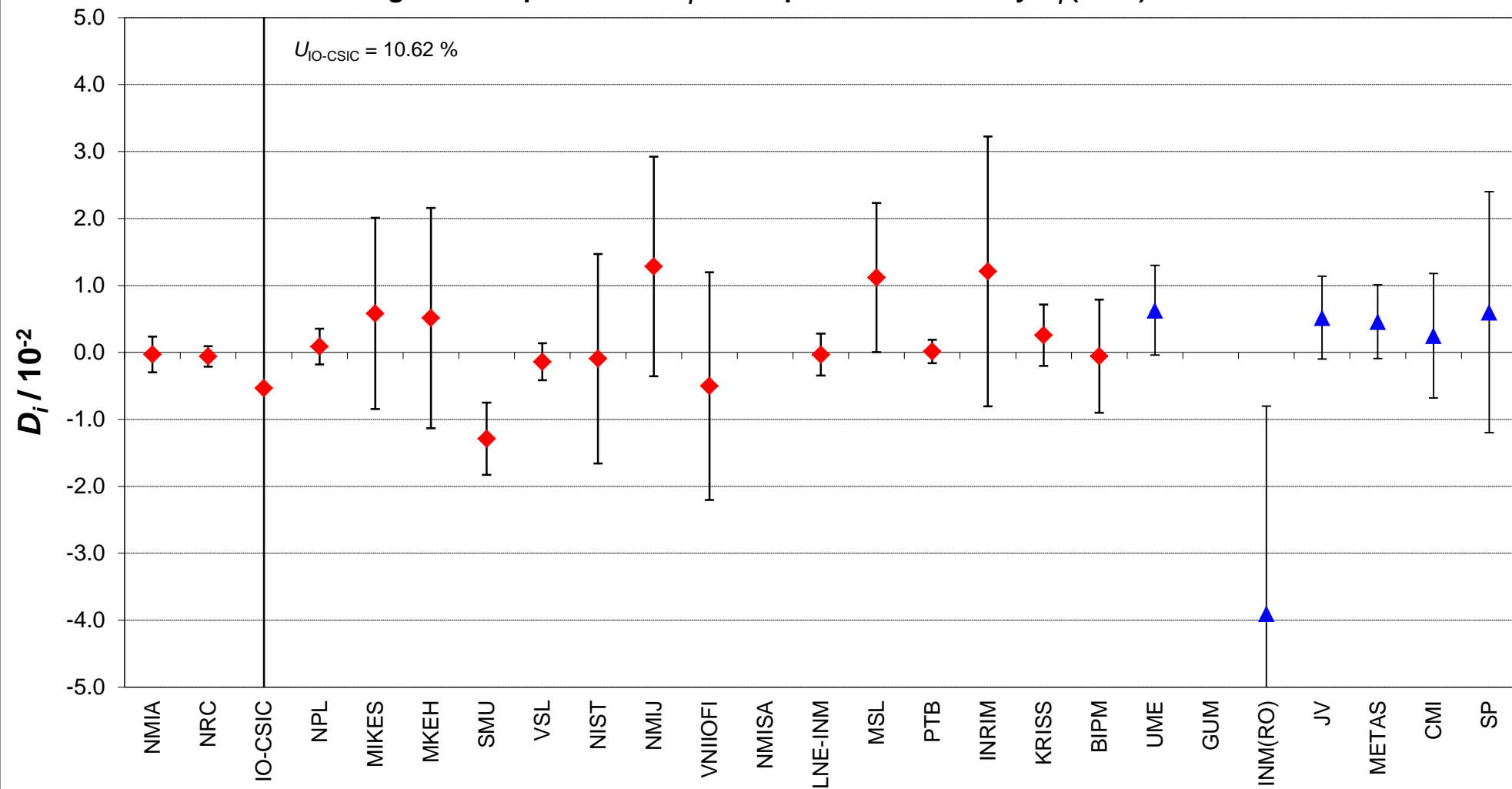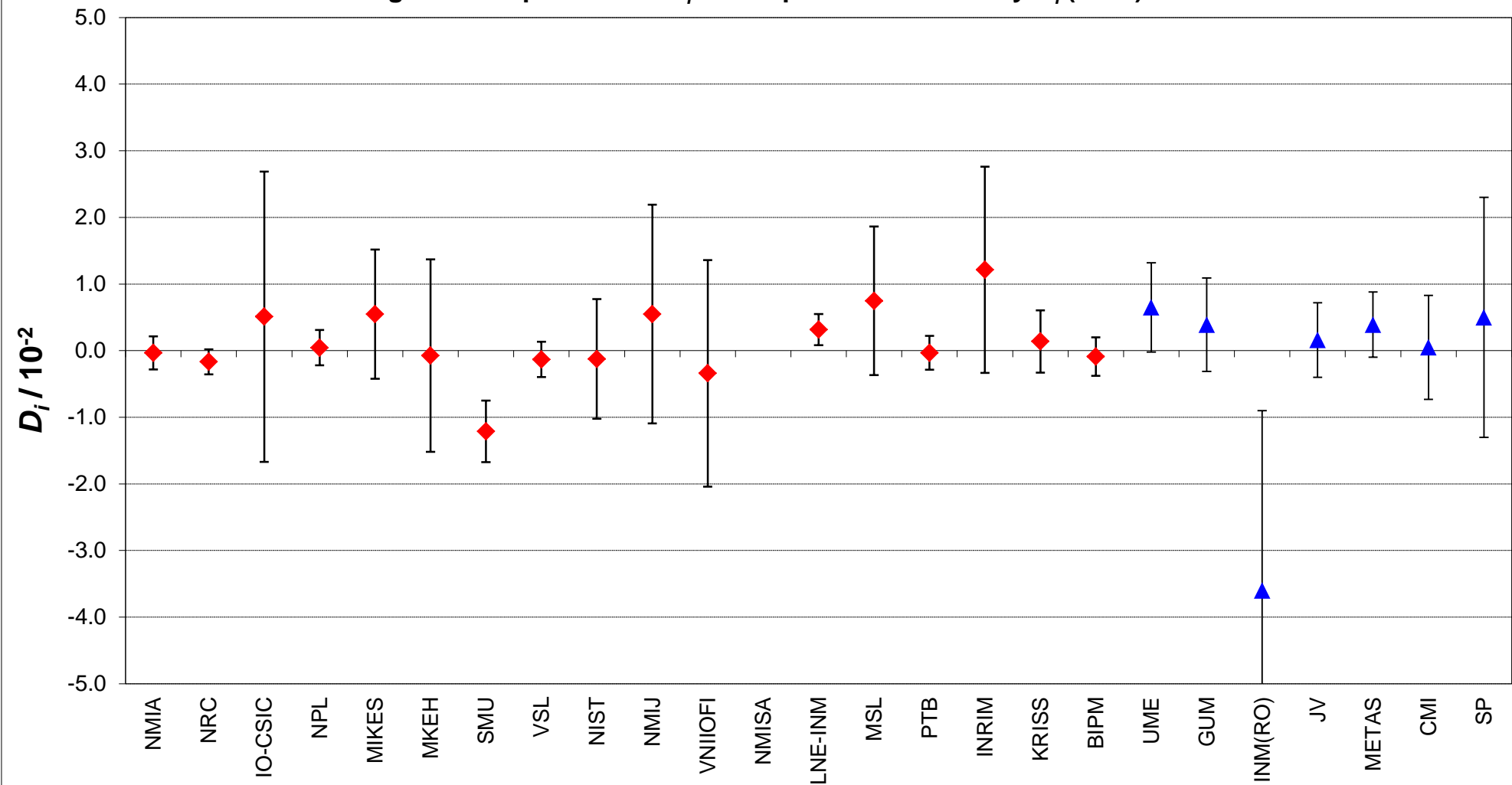**CCPR-K2.b and EURAMET.PR-K2.b   Spectral responsivity   Wavelength 320 nm**
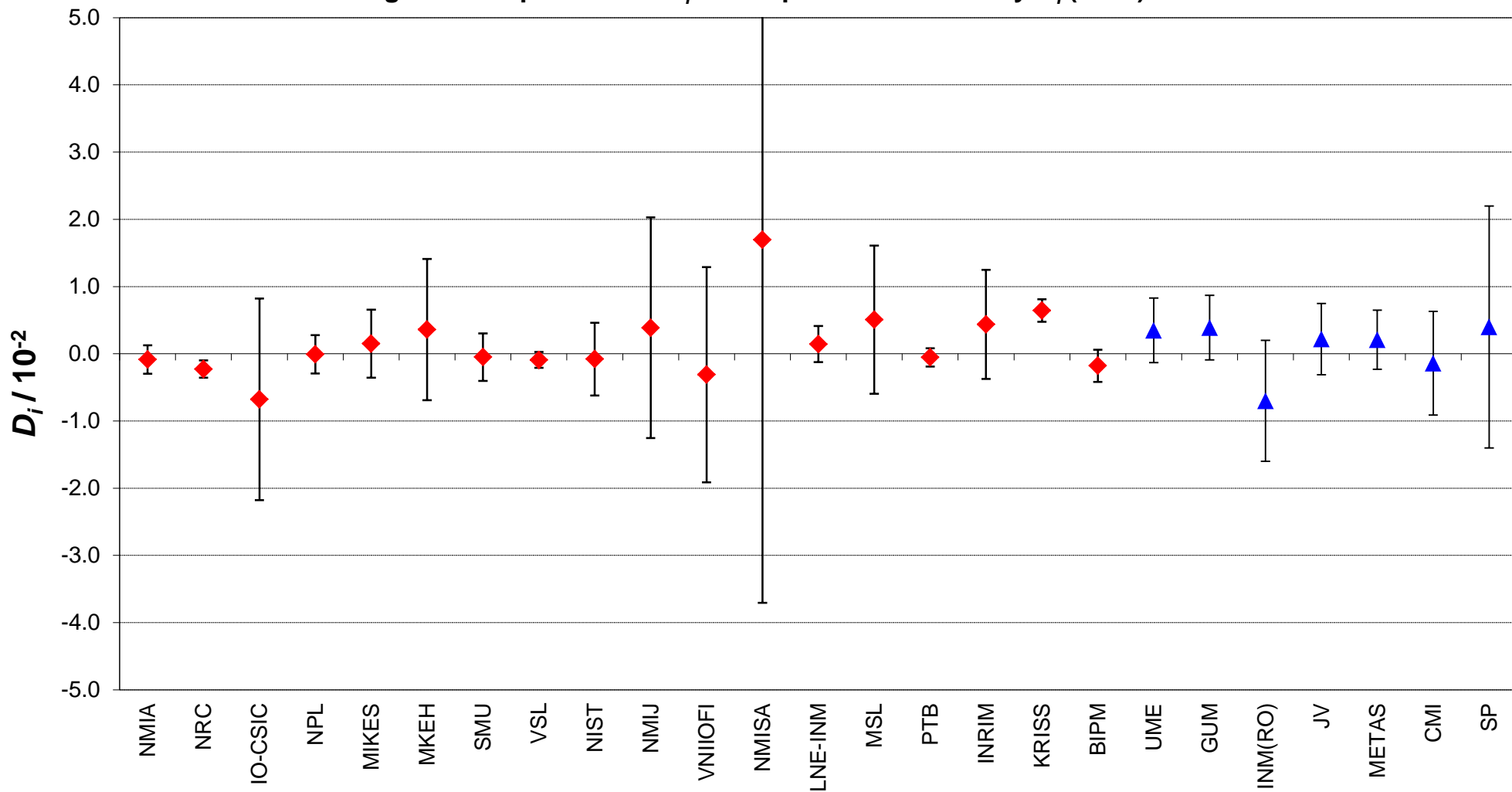
Degrees of equivalence: $D_i$ and expanded uncertainty $U_i$ ($k = 2$)

$D_i$ / $10^{-2}$

Categories (x-axis): NMIA, NRC, IO-CSIC, NPL, MIKES, MKEH, SMU, VSL, NIST, NMIJ, VNIIOFI, NMISA, LNE-INM, MSL, PTB, INRIM, KRISS, BIPM, UME, GUM, INM(RO), JV, METAS, CMI, SP

**Red diamonds**: participants in CCPR-K2.b     **Blue triangles**: participants in EURAMET.PR-K2.b only

CCPR-K2.b and EURAMET.PR-K2.b   Spectral responsivity   Wavelength 340 nm

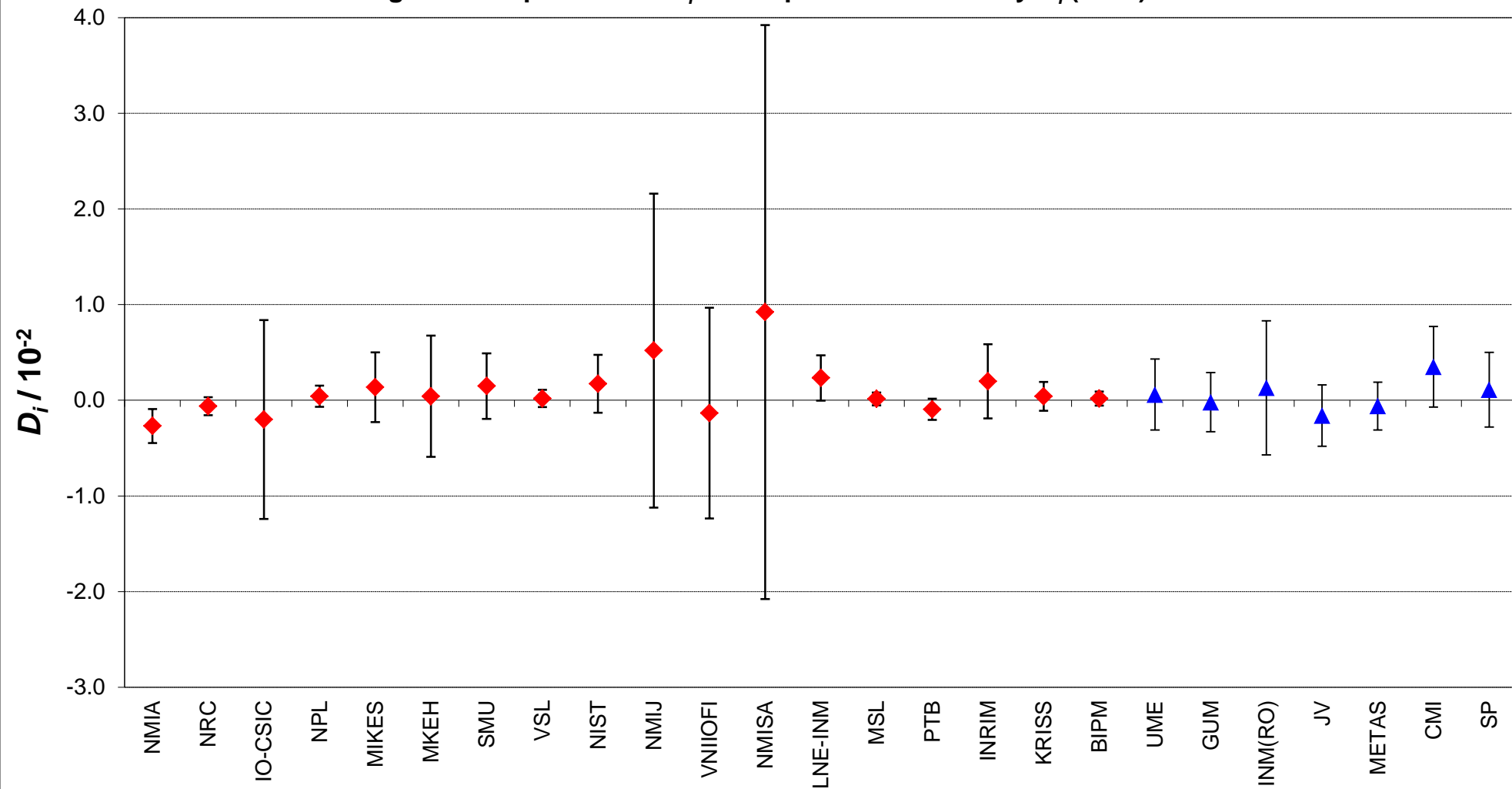Degrees of equivalence: $D_i$ and expanded uncertainty $U_i$ ($k = 2$)

Red diamonds: participants in CCPR-K2.b          Blue triangles: participants in EURAMET.PR-K2.b only

CCPR-K2.b and EURAMET.PR-K2.b   Spectral responsivity   Wavelength 360 nm
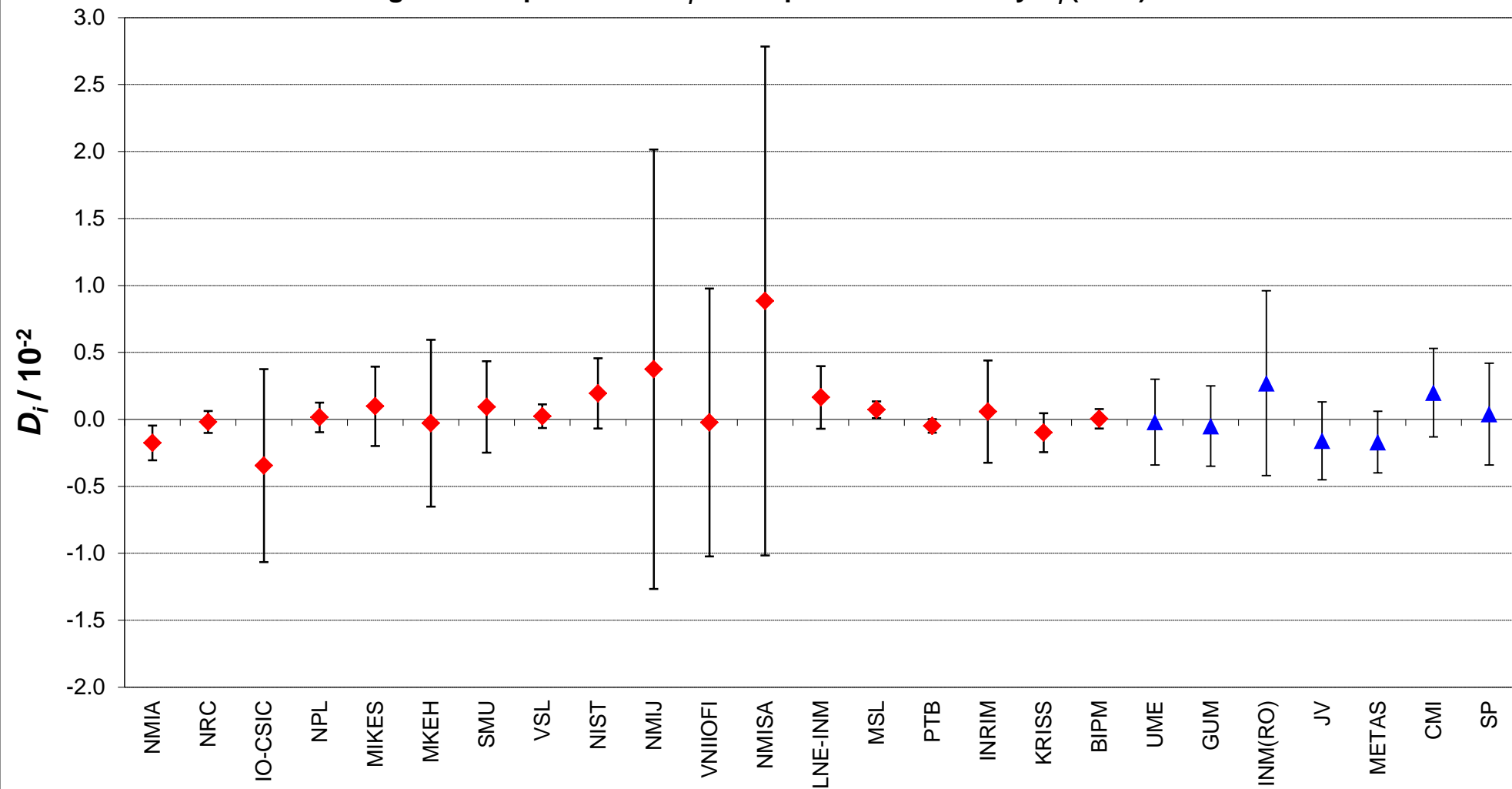
Degrees of equivalence: $D_i$ and expanded uncertainty $U_i$ ($k = 2$)

$U_{IO\text{-}CSIC}$ = 10.62 %

Red diamonds: participants in CCPR-K2.b        Blue triangles: participants in EURAMET.PR-K2.b only

CCPR-K2.b and EURAMET.PR-K2.b   Spectral responsivity   Wavelength 380 nm

Degrees of equivalence: $D_i$ and expanded uncertainty $U_i$ ($k = 2$)

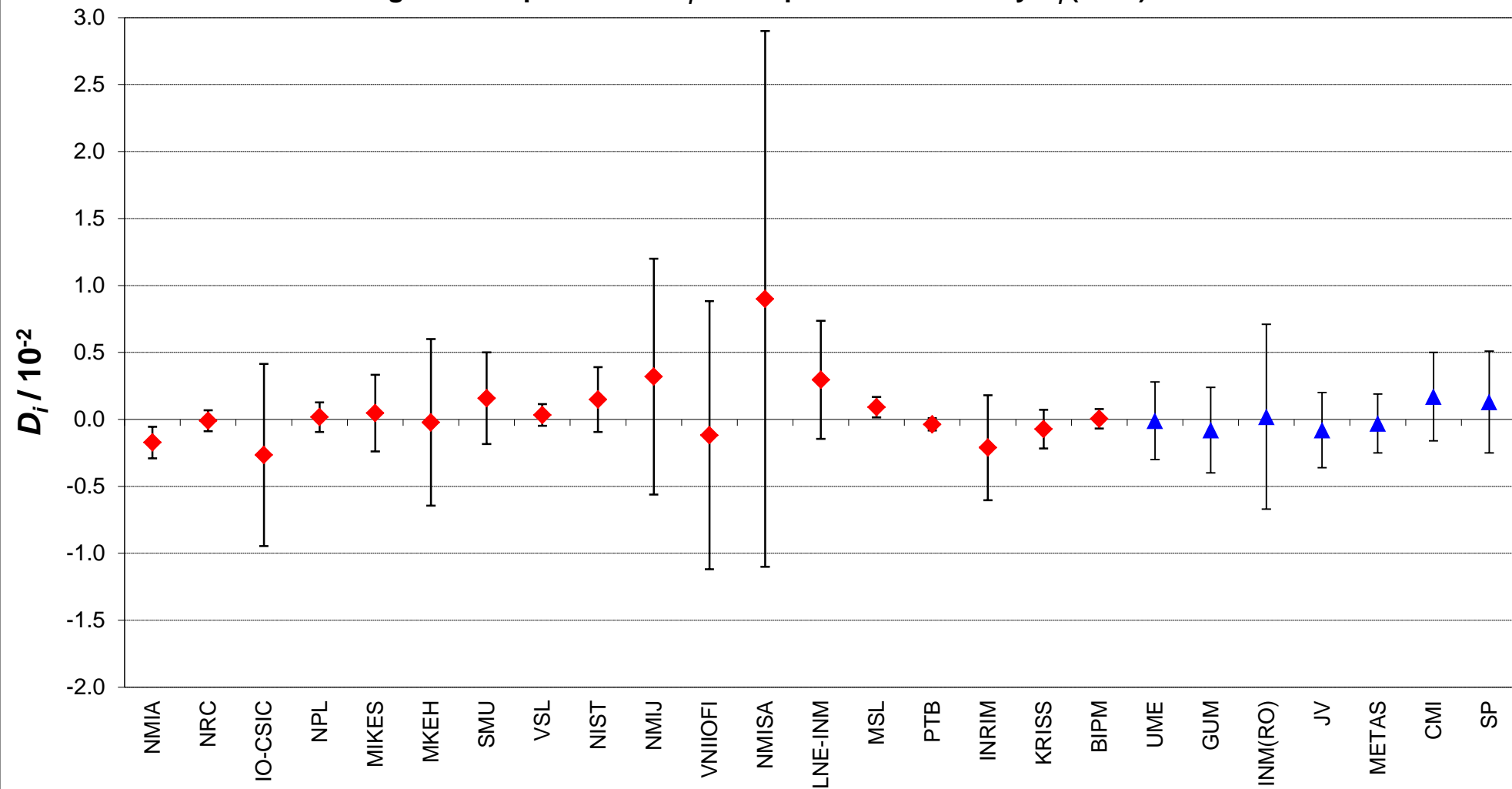Red diamonds: participants in CCPR-K2.b          Blue triangles: participants in EURAMET.PR-K2.b only

CCPR-K2.b and EURAMET.PR-K2.b   Spectral responsivity   Wavelength 400 nm

Degrees of equivalence: $D_i$ and expanded uncertainty $U_i$ ($k = 2$)

Y-axis: $D_i$ / $10^{-2}$

X-axis categories: NMIA, NRC, IO-CSIC, NPL, MIKES, MKEH, SMU, VSL, NIST, NMIJ, VNIIOFI, NMISA, LNE-INM, MSL, PTB, INRIM, KRISS, BIPM, UME, GUM, INM(RO), JV, METAS, CMI, SP

**Red diamonds**: participants in CCPR-K2.b          **Blue triangles**: participants in EURAMET.PR-K2.b only

CCPR-K2.b and EURAMET.PR-K2.b   Spectral responsivity   Wavelength 450 nm
Degrees of equivalence: $D_i$ and expanded uncertainty $U_i$ ($k = 2$)

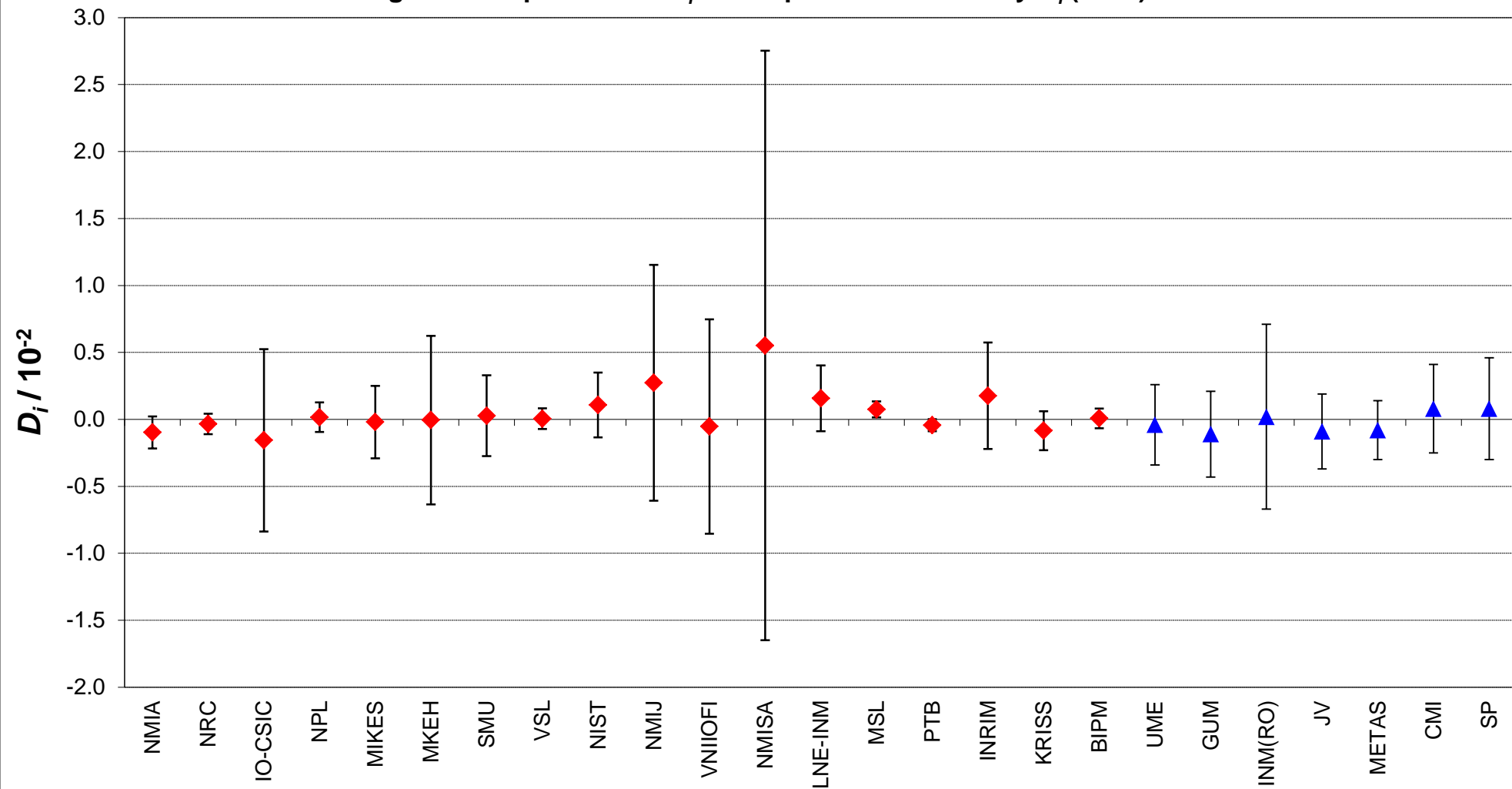Red diamonds: participants in CCPR-K2.b          Blue triangles: participants in EURAMET.PR-K2.b only
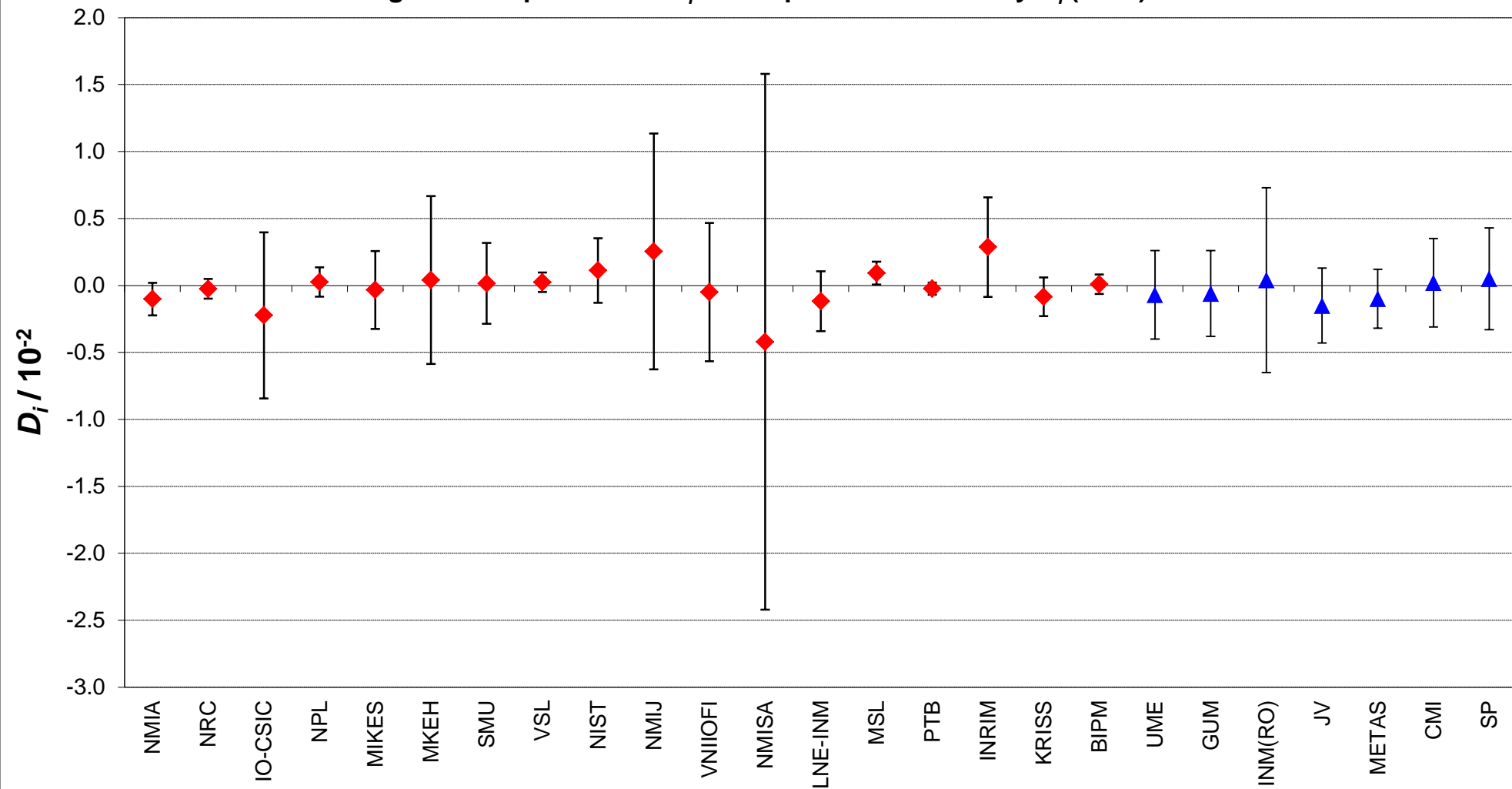
CCPR-K2.b and EURAMET.PR-K2.b   Spectral responsivity   Wavelength 500 nm

Degrees of equivalence: $D_i$ and expanded uncertainty $U_i$ ($k = 2$)

**Red diamonds**: participants in CCPR-K2.b          **Blue triangles**: participants in EURAMET.PR-K2.b only
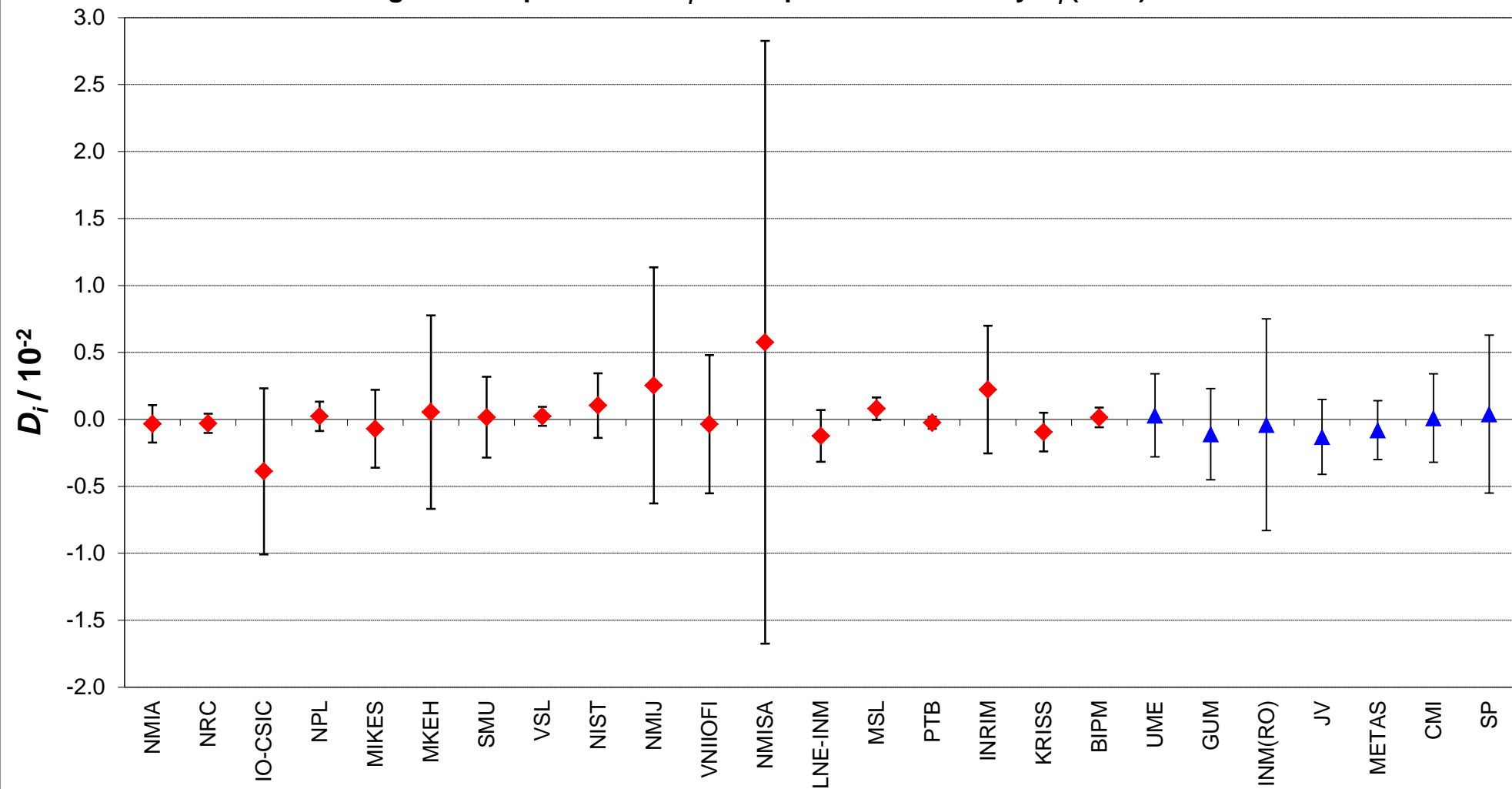
CCPR-K2.b and EURAMET.PR-K2.b   Spectral responsivity   Wavelength 550 nm

Degrees of equivalence: $D_i$ and expanded uncertainty $U_i$ ($k = 2$)

**Red diamonds**: participants in CCPR-K2.b          **Blue triangles**: participants in EURAMET.PR-K2.b only

**CCPR-K2.b and EURAMET.PR-K2.b   Spectral responsivity   Wavelength 600 nm**

Degrees of equivalence: $D_i$ and expanded uncertainty $U_i$ ($k = 2$)

y-axis: $D_i / 10^{-2}$

x-axis labels: NMIA, NRC, IO-CSIC, NPL, MIKES, MKEH, SMU, VSL, NIST, NMIJ, VNIIOFI, NMISA, LNE-INM, MSL, PTB, INRIM, KRISS, BIPM, UME, GUM, INM(RO), JV, METAS, CMI, SP

**Red diamonds**: participants in CCPR-K2.b        **Blue triangles**: participants in EURAMET.PR-K2.b only
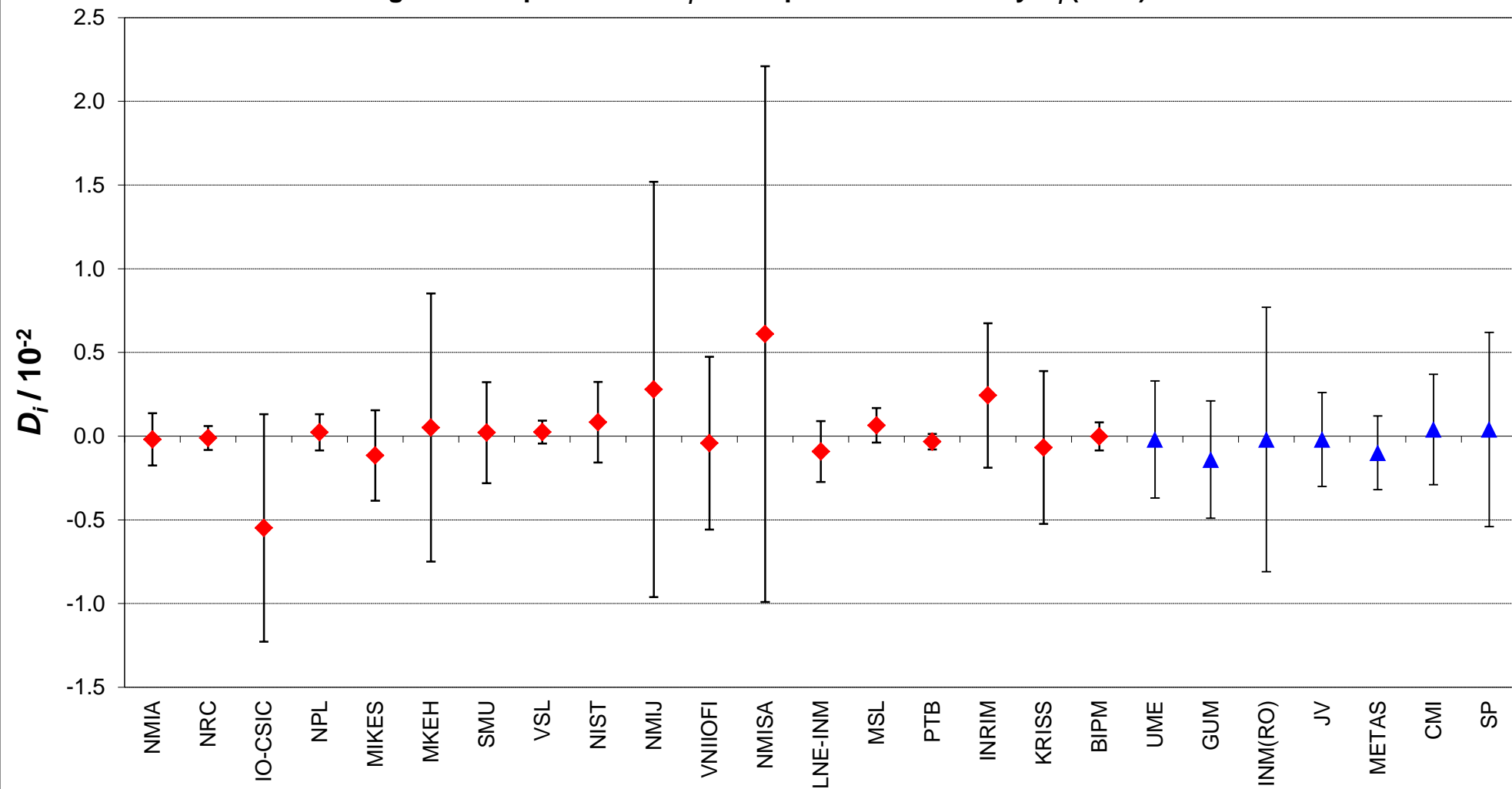
CCPR-K2.b and EURAMET.PR-K2.b   Spectral responsivity   Wavelength 650 nm

Degrees of equivalence: $D_i$ and expanded uncertainty $U_i$ ($k = 2$)

**Red diamonds**: participants in CCPR-K2.b          **Blue triangles**: participants in EURAMET.PR-K2.b only

CCPR-K2.b and EURAMET.PR-K2.b  Spectral responsivity  Wavelength 700 nm

Degrees of equivalence: $D_i$ and expanded uncertainty $U_i$ ($k = 2$)

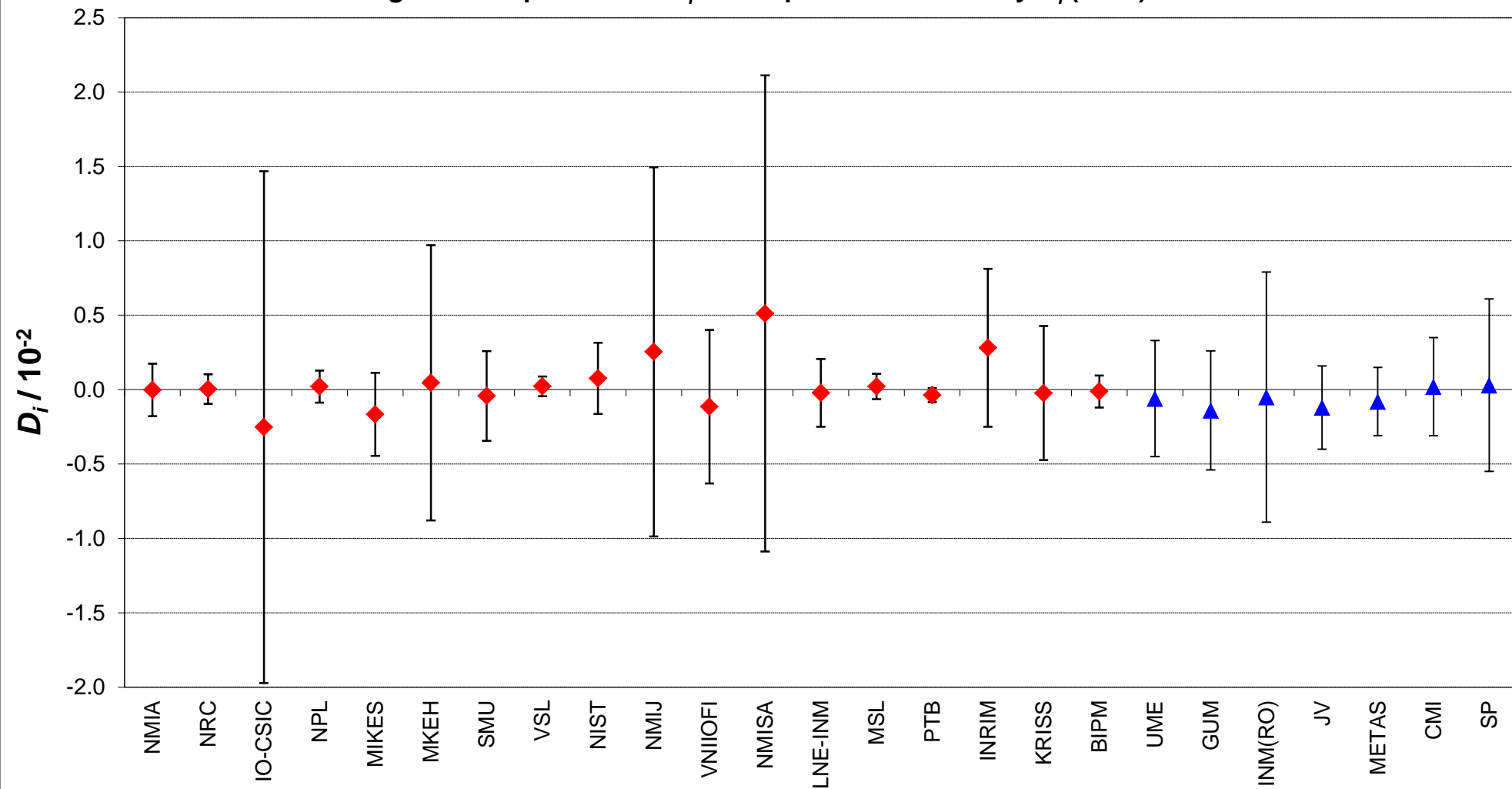Red diamonds: participants in CCPR-K2.b        Blue triangles: participants in EURAMET.PR-K2.b only

**CCPR-K2.b and EURAMET.PR-K2.b   Spectral responsivity   Wavelength 750 nm**

Degrees of equivalence: $D_i$ and expanded uncertainty $U_i$ ($k = 2$)

y-axis: $D_i / 10^{-2}$

x-axis labels: NMIA, NRC, IO-CSIC, NPL, MIKES, MKEH, SMU, VSL, NIST, NMIJ, VNIIOFI, NMISA, LNE-INM, MSL, PTB, INRIM, KRISS, BIPM, UME, GUM, INM(RO), JV, METAS, CMI, SP

**Red diamonds**: participants in CCPR-K2.b          **Blue triangles**: participants in EURAMET.PR-K2.b only

CCPR-K2.b and EURAMET.PR-K2.b   Spectral responsivity   Wavelength 800 nm

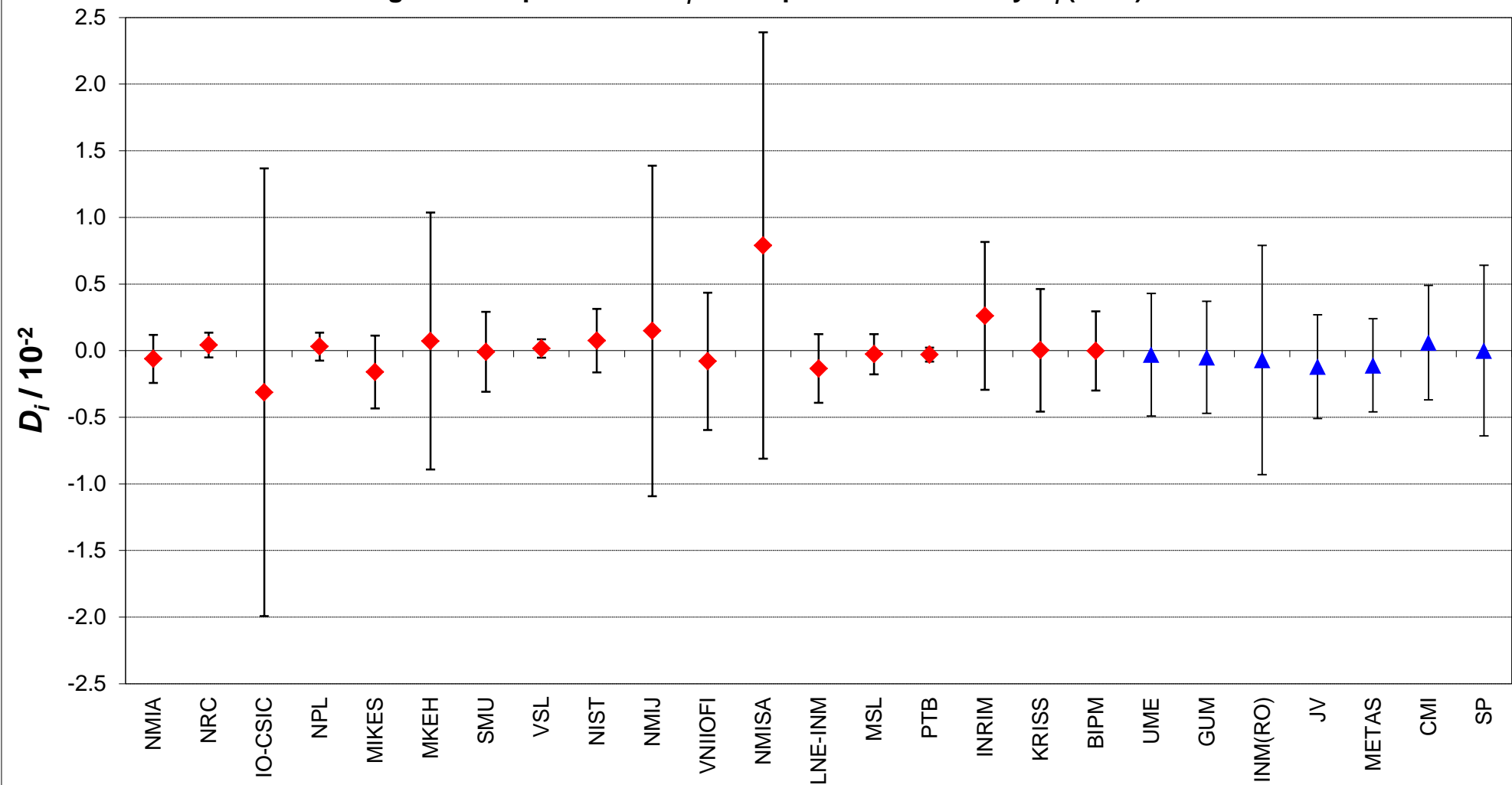Degrees of equivalence: $D_i$ and expanded uncertainty $U_i$ ($k = 2$)

Red diamonds: participants in CCPR-K2.b          Blue triangles: participants in EURAMET.PR-K2.b only

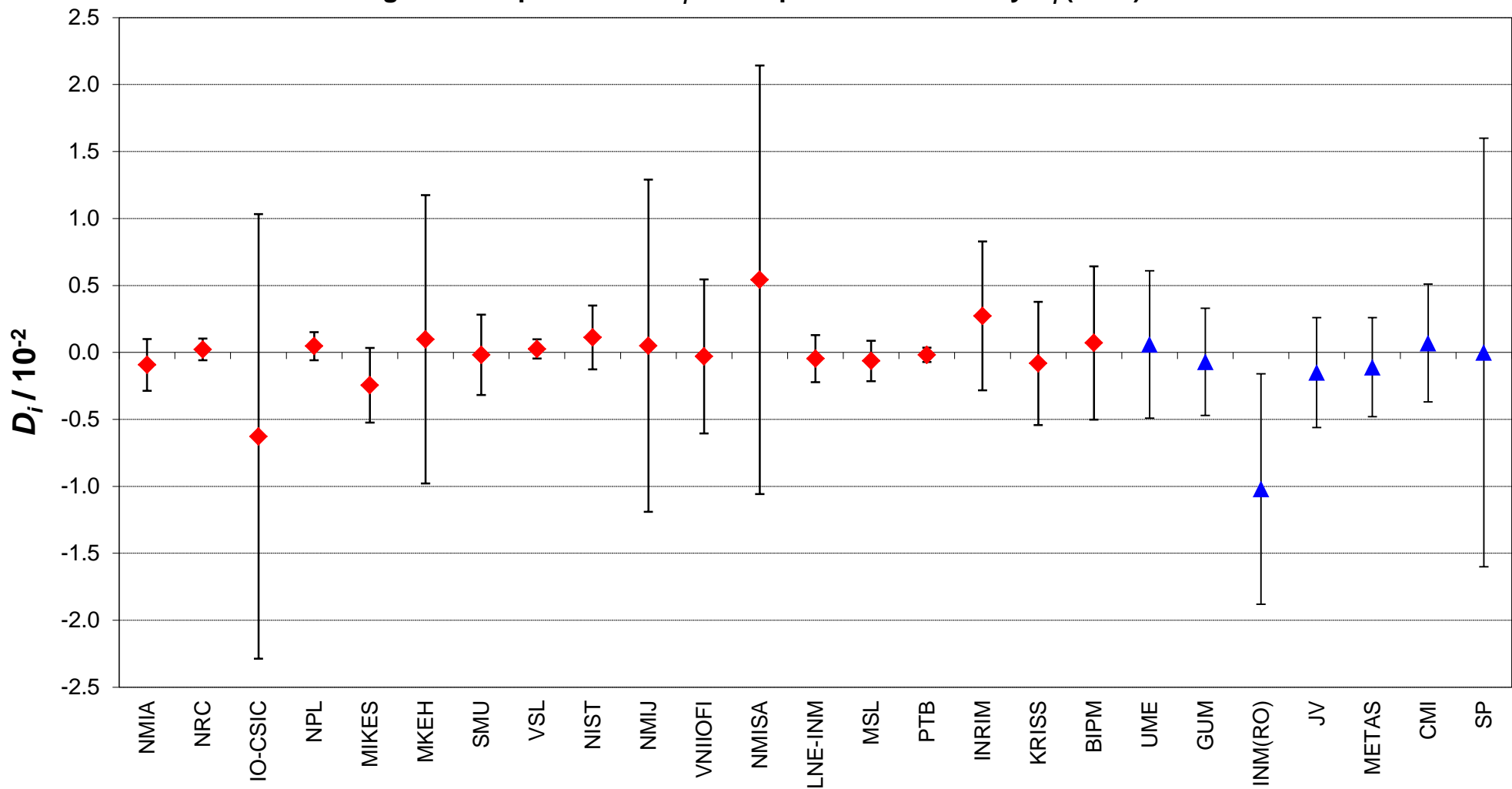**CCPR-K2.b and EURAMET.PR-K2.b Spectral responsivity Wavelength 850 nm**

Degrees of equivalence: $D_i$ and expanded uncertainty $U_i$ ($k = 2$)

**Red diamonds**: participants in CCPR-K2.b    **Blue triangles**: participants in EURAMET.PR-K2.b only
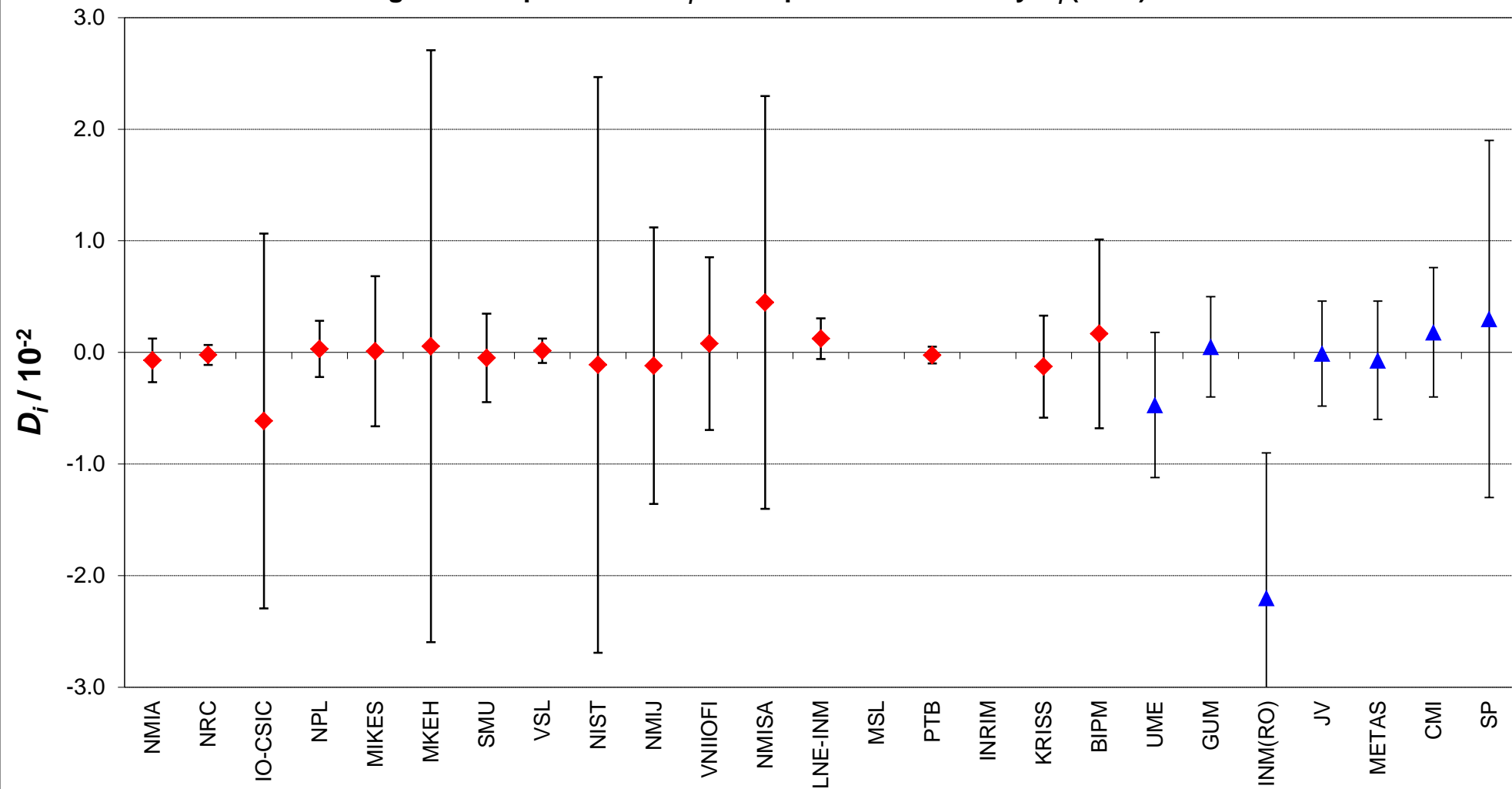
CCPR-K2.b and EURAMET.PR-K2.b   Spectral responsivity   Wavelength 900 nm

Degrees of equivalence: $D_i$ and expanded uncertainty $U_i$ ($k = 2$)

**Red diamonds**: participants in CCPR-K2.b          **Blue triangles**: participants in EURAMET.PR-K2.b only
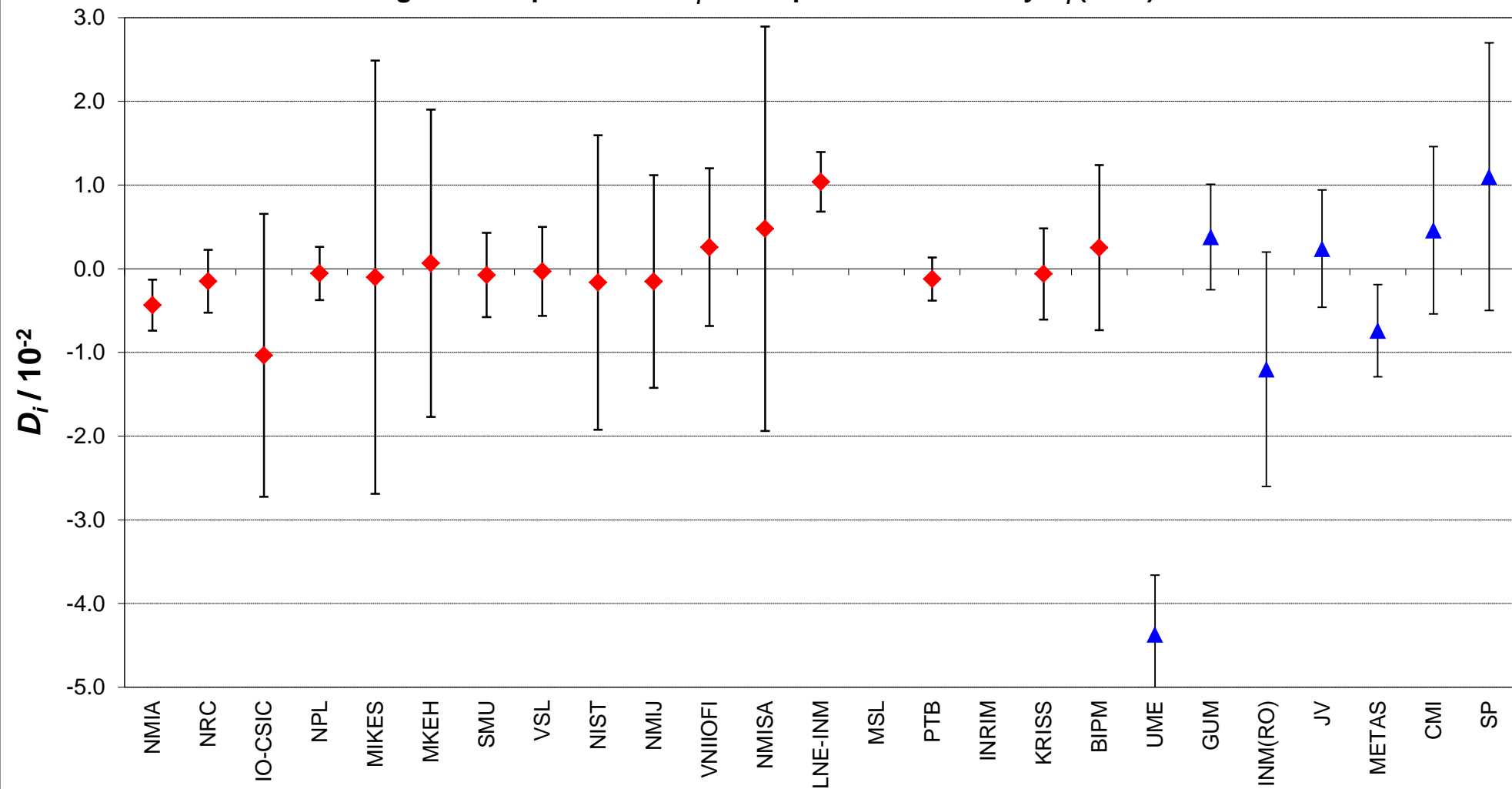
**CCPR-K2.b and EURAMET.PR-K2.b   Spectral responsivity   Wavelength 950 nm**

Degrees of equivalence: $D_i$ and expanded uncertainty $U_i$ ($k = 2$)

$D_i / 10^{-2}$

NMIA, NRC, IO-CSIC, NPL, MIKES, MKEH, SMU, VSL, NIST, NMIJ, VNIIOFI, NMISA, LNE-INM, MSL, PTB, INRIM, KRISS, BIPM, UME, GUM, INM(RO), JV, METAS, CMI, SP

**Red diamonds**: participants in CCPR-K2.b          **Blue triangles**: participants in EURAMET.PR-K2.b only

**CCPR-K2.b and EURAMET.PR-K2.b   Spectral responsivity   Wavelength 1000 nm**

Degrees of equivalence: $D_i$ and expanded uncertainty $U_i$ ($k = 2$)

y-axis: $D_i / 10^{-2}$

x-axis labels: NMIA, NRC, IO-CSIC, NPL, MIKES, MKEH, SMU, VSL, NIST, NMIJ, VNIIOFI, NMISA, LNE-INM, MSL, PTB, INRIM, KRISS, BIPM, UME, GUM, INM(RO), JV, METAS, CMI, SP

**Red diamonds**: participants in CCPR-K2.b          **Blue triangles**: participants in EURAMET.PR-K2.b only