

**Amount of substance, high purity chemicals, Slovakia (Slovak Republic), SMU (Slovensky Metrologicki Ustav)**

Note: In the case where an uncertainty range is given, the expanded uncertainty range is expressed as the uncertainty of the smallest value of the quantity to the uncertainty of the largest value of the quantity.

The expanded uncertainties correspond to  $k = 2$  (level of confidence 95%).

| NMI Service Identifier | Measurement Service Sub-Category | Matrix                           | Measurand                                  |                             | Dissemination Range of Measurement Capability |     |        | Range of Expanded Uncertainties as Disseminated |       |      |                                             | Range of Certified Values in Reference Materials |        |      | Range of Expanded Uncertainties for Certified Value |       |      |                                             | Mechanism(s) for Measurement Service Delivery | Comments                                                                                                                                               |
|------------------------|----------------------------------|----------------------------------|--------------------------------------------|-----------------------------|-----------------------------------------------|-----|--------|-------------------------------------------------|-------|------|---------------------------------------------|--------------------------------------------------|--------|------|-----------------------------------------------------|-------|------|---------------------------------------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        |                                  |                                  | Analyte or Component                       | Quantity                    | From                                          | To  | Unit   | From                                            | To    | Unit | Is the expanded uncertainty a relative one? | From                                             | To     | Unit | From                                                | To    | Unit | Is the expanded uncertainty a relative one? |                                               |                                                                                                                                                        |
| I-08                   | Inorganic compounds              | high purity chlorides            | chloride                                   | Amount-of-substance content | 6                                             | 20  | mol/kg | 0.012                                           | 0.012 | %    | Yes                                         |                                                  |        |      |                                                     |       |      |                                             | Calibration                                   |                                                                                                                                                        |
| I-09                   | Inorganic compounds              | high purity acids                | acid                                       | Amount-of-substance content | 5                                             | 15  | mol/kg | 0.006                                           | 0.004 | %    | Yes                                         |                                                  |        |      |                                                     |       |      |                                             | Calibration                                   |                                                                                                                                                        |
| I-01                   | Inorganic compounds              | high purity potassium dichromate | oxidants expressed as potassium dichromate | Mass fraction               | 99.9                                          | 100 | %      | 0.005                                           | 0.005 | %    | Yes                                         | 99.983                                           | 99.983 | %    | 0.007                                               | 0.007 | %    | Yes                                         | CRM (A04)                                     | The mass fraction given was calculated expressing the oxidimetric assay (includes trace impurities) as potassium dichromate; Approved on 01 March 2005 |

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|------------------------|----------------------------------|------------------------------------------|----------------------------------------------------------|---------------|-----------------------------------------------|-----|------|-------------------------------------------------|-------|------|---------------------------------------------|--------------------------------------------------|--------|------|-----------------------------------------------------|-------|------|---------------------------------------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        |                                  |                                          | Analyte or Component                                     | Quantity      | From                                          | To  | Unit | From                                            | To    | Unit | Is the expanded uncertainty a relative one? | From                                             | To     | Unit | From                                                | To    | Unit | Is the expanded uncertainty a relative one? |                                               |                                                                                                                                                                 |
| I-02                   | Inorganic compounds              | high purity potassium hydrogen phthalate | total acid expressed as potassium hydrogen phthalate     | Mass fraction | 99.9                                          | 100 | %    | 0.005                                           | 0.005 | %    | Yes                                         | 99.997                                           | 99.997 | %    | 0.006                                               | 0.006 | %    | Yes                                         | CRM (A02)                                     | The mass fraction given was calculated expressing the assay of acid (includes trace acid impurities) as potassium hydrogen phthalate. Approved on 01 March 2005 |
| I-03                   | Inorganic compounds              | high purity potassium chloride           | total halides (except F) expressed as potassium chloride | Mass fraction | 99.9                                          | 100 | %    | 0.012                                           | 0.012 | %    | Yes                                         | 99.993                                           | 99.993 | %    | 0.012                                               | 0.012 | %    | Yes                                         | CRM (A05)                                     | The mass fraction given was calculated expressing the argentometric assay (includes bromides and iodides) as KCl. Approved on 01 March 2005                     |

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|------------------------|----------------------------------|--------------------------------|--------------------------------------------|---------------|-----------------------------------------------|-----|------|-------------------------------------------------|-------|------|---------------------------------------------|--------------------------------------------------|--------|------|-----------------------------------------------------|-------|------|---------------------------------------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        |                                  |                                | Analyte or Component                       | Quantity      | From                                          | To  | Unit | From                                            | To    | Unit | Is the expanded uncertainty a relative one? | From                                             | To     | Unit | From                                                | To    | Unit | Is the expanded uncertainty a relative one? |                                               |                                                                                                                                                        |
| I-04                   | Inorganic compounds              | high purity arsenic(III) oxide | reductants expressed as arsenic(III) oxide | Mass fraction | 99.9                                          | 100 | %    | 0.004                                           | 0.004 | %    | Yes                                         | 99.975                                           | 99.975 | %    | 0.008                                               | 0.008 | %    | Yes                                         | CRM (A03)                                     | The mass fraction given was calculated expressing the assay by iodometry (includes trace impurities) as arsenic (III) oxide. Approved on 01 March 2005 |
| I-05                   | Inorganic compounds              | high purity amidosulfuric acid | total acid expressed as amidosulfuric acid | Mass fraction | 99.9                                          | 100 | %    | 0.004                                           | 0.004 | %    | Yes                                         | 99.996                                           | 99.996 | %    | 0.004                                               | 0.004 | %    | Yes                                         | CRM (A01)                                     | The mass fraction given was calculated expressing the assay of acid (includes trace acid impurities) as amidosulfuric acid. Approved on 01 March 2005  |