**APPENDIX XYZ/CQA/SOP-053/FR-01**

 LOG BOOK OF ICP-MS

**Instrument Id. No.: …………………………………….**

**Location: ……………………………………..**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sr. No.** | **Date** | **Product Name** | **Batch No/ A. R. No.** | **Done by** | **Checked By** | **Remarks** |
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**APPENDIX II XYZ/CQA/SOP-053/FR-02**

 **CALIBRATION DATA SHEET INSCAL \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**1.0 Instrument Id.: ……………………………………..**

**2.0 Location: ……………………………………..**

**3.0 Frequency of calibration: QUARTERLY**

**4.0 Date of Calibration: …………………............................**

**5.0 Next due date of Calibration: ……………………………………..**

**6.0 Linearity of Different Concentrations**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| S.No. | Heavy Metal | Concentration | Concentration Mean Observed | Intensity Observed | Linearity | Acceptance Criteria |
| 1 | Arsenic (As) | 2 ppb |  |  |  | 0.99 |
| 5 ppb |  |  |
| 10 ppb |  |  |
| 20 ppb |  |  |
| 2 | Lead (Pb) | 2 ppb |  |  |  | 0.99 |
| 5 ppb |  |  |
| 10 ppb |  |  |
| 20 ppb |  |  |
| 3 | Mercury (Hg) | 2 ppb |  |  |  | 0.99 |
| 5 ppb |  |  |
| 10 ppb |  |  |
| 20 ppb |  |  |
| 4 | Cadmium(Cd) | 2 ppb |  |  |  | 0.99 |
| 5 ppb |  |  |
| 10 ppb |  |  |
| 20 ppb |  |  |

**7.0 Performance Check**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No.** | **Analyte** | **Measured Intensity Mean** | **Limit of Intensity****(cps/10 ppb)** |
| 1 | Magnesium (Mg) |  | > 40,000 cps/10 ppb |
| 2 | Indium (In) |  | >250,000 cps/10 ppb |
| 3 | Uranium (U) |  | >200,000 cps/10 ppb |

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No.** | **Analyte** | **Measured Intensity Mean** | **Limit of Intensity****(cps/10 ppb)** |
| 4 | Cerium Oxide (CeO)/Cerium (Ce) |  | <3% |
| 5 | Barium Ion (Ba++)/ Barium (Ba) |  | <3% |
| 6 | Background 220 |  | <2 cps |

Remarks: Complies/Does not Complies

Done By: Checked By: Approved By:

Date: Date: Date:

 **APPENDIX III XYZ/CQA/SOP-053/FR-03**

**SUMMARY SHEET INSCAL\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Location: ……………………………………..**

**Instrument Id.: ……………………………………..**

**LINEARITY AT DIFFERENCE CONCENTRATIONS:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Concentration** | **Observations** | **Acceptance Criteria** | **Status** |
| 2 ppb |  | 0.99 | Meet / Does not meet |
| 5 ppb |  | 0.99 | Meet / Does not meet |
| 10 ppb |  | 0.99 | Meet / Does not meet |
| 20 ppb |  | 0.99 | Meet / Does not meet |

**STANDARDIZATION:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Analyte** | **Measured Intensity Mean** | **Limit of Intensity****(cps/10 ppb)** | **Status** |
| Magnesium (Mg) |  | > 40,000 cps/10 ppb | Meet / Does not meet |
| Indium (In) |  | >250,000 cps/10 ppb | Meet / Does not meet |
| Uranium (U) |  | >200,000 cps/10 ppb | Meet / Does not meet |

|  |  |  |  |
| --- | --- | --- | --- |
| **Analyte** | **Measured Intensity Mean** | **Limit of Intensity****(cps/10 ppb)** | **Status** |
| Cerium Oxide (CeO)/Cerium (Ce) |  | <3% | Meet / Does not meet |
| Barium Ion (Ba++)/ Barium (Ba) |  | <3% | Meet / Does not meet |
| Background 220 |  | <2 cps | Meet / Does not meet |

Remarks: All the parameters for the calibration as per predefined acceptance criteria are under limit hence the instrument is suitable for routine analysis

Done By: Checked By: Approved By:

Date: Date: Date: