**A.S.E.P. RISK ASSESSMENT SHEET**

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| **A.S.E.P. STANDARD PROCEDURE** | **PXRD Panalytical X’PERT Pro Data collection** |
| ASEP RISK Reference | 11-ASEP-26 |

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| Frequency of the Procedure | Max 10 times a day |
| Exposure Duration | 20 mins per experiment |
| Operators | Trained personnel only |

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| Description of Procedure  Sample loading and data collection of powder X-ray diffraction data ( PXRD) including XRK900 High temperature cell. |

**RISK ASSESSMENT – UNCONTROLLED (GROSS RISK)**

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| **No** | **Identified Possible Hazard** | **Possibility of the event happening** | **Hazard**  **Severity** | **Risk Certification** |
| 1 | Use of high temperature Cell (850 C) | 3 | 2 | 6 |
| 2 | Inhalation of particulate materials | 2 | 2 | 4 |
| 3 | Ionising Radiation | 3 | 3 | 9 |
| 4 | Gas venting | 3 | 2 | 6 |

**Possibility of Event Happening** 1 = Unlikely 2 = Possible 3 = Likely 4 = Very likely

**Hazard Severity of Event** 1 = Very minor 2 = Minor 3 = Major

**Risk Certification**

Low (1-2) = Carry out procedure with caution using the appropriate safety measures.

Medium (3-4) = Consult with supervisor before starting procedure. Proceed with extreme caution

using the appropriate safety measures.

High (6-12) = Consult with supervisor before starting procedure. **DO NOT** proceed unless authorised by your

supervisor and then proceed with extreme caution using the appropriate safety measures.

**RISK ASSESSMENT – CONTROLLED (NET/RESIDUAL RISK)**

**Radiation risk within the Powder XRD are controlled by the use of the interlock and instrument control measures.**

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| **No** | **CONTROL MEASURES**  **TO BE USED** | **Possibility of the event happening** | **Hazard**  **Severity** | **Risk**  **Certification** |
| 1 | Attend safety training course  Use appropriate PPE . | 1 | 2 | 2 |
| 2 | Use of PPE as defined in MSDS for all samples to be  Analyzed | 1 | 2 | 2 |
| 3 | Undertake training with RPS  Ensure all interlocks are engaged  Radiation checks | 1 | 3 | 3 |
| 4 | Check gas supply head and cylinder are in date.  Attend Safety training course. | 1 | 2 | 2 |

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| **Comments on Residual Risk**  PXRD Panalytical X’PERT Pro instrument only to be used by trained personnel. PPE must be worn at all times. COSHH for all materials used in sample being analysed must be displayed. |

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| Risk Assessor | T Sewell | Date of Risk Assessment | 8-4-15 |
| ASEP |  | Date of next Review |  |