|  |  |  |
| --- | --- | --- |
|  | **Powder XRD Sample Submission Form (non-Purdue samples)** |  |
| Please carefully fill out one form for each sample. Bring or mail your labeled (paper tag) sample to Matthias ZellerPurdue University, Department of Chemistry101 Wetherill Hall (WTHR), 560 Oval Drive, West Lafayette, IN 47907-2084Please e-mail a copy of this submission form to [zeller4@purdue.edu](file:///C%3A%5CMatthias%5CPurdue%5Czeller4%40purdue.edu). |
| Sample Code:  | date: |
| Submitting Person: | e-mail: |
|  | phone: |
| Research Advisor: | e-mail: |

|  |
| --- |
| Full mailing address: |
|  |
|  |
|  |
|  |
|  |

|  |  |
| --- | --- |
| **Chemdraw Sketch of Proposed Structure** (for molecular compounds): | **Other Notes:** |

Continued on next page

**Type of measurement** (the scan rate will be set based on sample amount and type by the crystallographer). Please check all that applies:

|  |  |  |
| --- | --- | --- |
| **Type of material:**  | **Instrument geometry:** | **Measurement range:** |
| Powder 1), 5) |  | Reflective, rotating 3), 5) |  | Inorganic (10-90°) |  |
| Solid material 2), 5) |  | Reflective, non-rotating 3), 5) |  | Organic (5-60°) |  |
| Thin films |  | Capillary 4) |  | Custom:  |  |

1) Sample needs to be finely ground. Ca. 200 mg of sample is needed for standard sample cups. Smaller sample sizes can be run with zero background Si sample cups (but at the expense of data quality)

2) Samples need to be cut into a flat shape and should be < 3.0 cm square (4 cm circular) and < 1.5 mm thick

3) Bragg Brentano geometry with focusing optics, reflective mode with sample cups

4) Debye-Scherrer geometry with parallel beam, rotating capillary

5) Sensitive materials can be run in sealed domed sample holders. Please check out a domed sample holder at the XRD lab for sample preparation in a glovebox

**Type of analysis** (extra charge, $110 /hr, applies). Add additional types of analyses in open boxes:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Background correction |  | Indexing |  | Overlay of multiple patterns |  |
| Peak list |  | Rietveld analysis 1) |  | List sample codes for overlays here:  |
| Phase identification |  |  |  |
|  |  |  |  |
|  |  |  |  |

1) For known phases only. Rietveld fit (for phase pure materials) or quantification (for mixtures)

**Additional Instructions**:

|  |
| --- |
|  |