 X-ray Diffraction Laboratory: Department of Chemistry Texas A & M University	Doc. No:	SOPSAMPOW
	Rev No: Issue date:	1.001 12/29/2008
	Page:	1 of 3
Standard Operating Procedure Title: Mounting Samples for Powder Diffraction		

SOP: SOPSAMPOW

Last date revised: 1/1/2009

Date approved: 1/1/2009

Mounting Samples for Powder Diffraction

PURPOSE:

This Standard Operating Procedure (SOP) states the responsibilities and describes the methods, procedures, and documentation used to mount powder samples that are examined in the X-ray Diffraction Laboratory.

POLICY:

All samples must be processed in such a manner to ensure the safe handling and storage of potentially hazardous chemicals. All samples must be properly labeled and the proper chain of custody must be maintained. All samples must be accompanied by proper documentation and when necessary the MSDS of each sample must be supplied.


RESPONSIBILITY:

The X-ray Laboratory users and personell will be responsible for safety and storage issues. The sample custodian is responsible for tracking, storage, return and disposal of all samples delivered to the laboratory for analysis.

MATERIALS:

- Computer Database
- Label maker
- Manila Envelopes
- Plastic Freezer bags
- Permanent marker
- Quartz Discs
- Zero Background Disc
- Plastic Discs

Approve: JHR 1/8/2009

 X-ray Diffraction Laboratory: Department of Chemistry Texas A & M University	Doc. No:	SOPSAMPOW
	Rev No: Issue date:	1.001 12/29/2008
	Page:	2 of 3
Standard Operating Procedure Title: Mounting Samples for Powder Diffraction		

PROCEDURE:


1. Samples are delivered to the laboratory in person or by post and are accepted by the sample custodian and are tracked and stored as described by SOPTRAC.
2. The sample to be examined has been processed to ensure adequate particle size.
3. A small quantity (~100mg) of sample is placed in the well of a quartz disc.
4. The sample is gently pressed flat with a clean microscope slide so that the sample surface is parallel to the quartz disc face.
5. If the sample quantity is less than 100mg a zero-back-ground holder is employed.
6. Coat the surface with a thin layer of Vaseline and carefully clean off the excess.
7. Gently sprinkle the sample on the surface of the Vaseline ensuring a monolayer of material.

Documentation

- Records that are readily regenerated from mounting the samples may be placed in labeled folders and stored in a locked file cabinet.
- Records are maintained on a secure password protected database.

Document control

Approve: JHR 1/8/2009

	X-ray Diffraction Laboratory: Department of Chemistry Texas A & M University	Doc. No:	SOPSAMPOW
<p style="text-align: center;">Standard Operating Procedure</p>		Rev No: Issue date:	1.001 12/29/2008
		Title: Mounting Samples for Powder Diffraction	Page:

- The goal of the laboratory document control program is to assure that all documents for a specified project will be accounted for when the project is completed.
- Accountable documents used shall include, but not be limited to, logbooks, chain-of-custody records, sample work sheets, bench sheets, and other documents relating to the sample or sample analyses.

Approve: JHR 1/8/2009