

# PPXRD Round Robin



## International Centre for Diffraction Data

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# This document was presented at PPXRD - Pharmaceutical Powder X-ray Diffraction Symposium

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PPXRD Website – [www.icdd.com/ppxrd](http://www.icdd.com/ppxrd)

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# PPXRD-8 Round Robin - History



- **Who**  
Interested in pharmaceutical materials
- **What**  
API + Excipient + XRPD Standard
- **Where**  
Powder Diffraction Laboratories (Synchrotron)
- **When**  
Deadline – before PPXRD-8
- **Why**  
Sample/instruments/analysis variables

# Who



- PPXRD7: take home specimen attendees
- Post PPXRD7: mailed specimen attendees of past PPXRD organizing committee member  
synchrotron facility  
ICDD

# What



# PPXRD-8 Round Robin (MSDS)



## Silicon

### STABILITY

stable at normal temperatures and pressures

### CONDITIONS TO AVOID

generating dust, heat, sparks, open flames

### MATERIALS TO AVOID

halogens, metal carbide, metals, oxidizing materials, metal salts, acids

### HAZARDOUS DECOMPOSITION PRODUCTS

toxic oxides of silicon

### HAZARDOUS POLYMERIZATION

will not occur

## Acetaminophen

### STABILITY

stable

### MATERIALS TO AVOID

oxidizing agents.

### HAZARDOUS DECOMPOSITION PRODUCTS

carbon monoxide, carbon dioxide, nitrogen oxides.

### HAZARDOUS POLYMERIZATION

will not occur

## Mannitol

### STABILITY

stable when keep container tightly closed in a dry and well-ventilated place

### MATERIALS TO AVOID

strong oxidizing agents

### HAZARDOUS DECOMPOSITION PRODUCTS

formed under fire conditions  
carbon oxides

# PPXRD-8 Round Robin



## Quantitative Results Specimen Preparation

### Result

Acetaminophen/Mannitol/Silicon

Ratio =                    /                    /

### Specimen Support

Specimen type and size of support  
(Cavity, Zero Background...) =

# PPXRD-8 Round Robin Instrument



## **Diffraction system**

**Goniometer, Spinner, Radiation type wavelength**

## **Incident beam**

**Radius (mm) =**

**Voltage (kV) =**

**Current (mA) =**

**Soller slit size =**

**Divergence slit**

**Variable (Y/N) =**

**or Fixed (size) =**

## **Diffraction beam**

**Radius (mm) =**

**Soller slit size =**

**Anti-scattering slit size =**

**Filter material thickness =**

**Detector name/type =**



# PPXRD-8 Round Robin



## Data Collection Analysis

**Data Collection Software =**

**Data Analysis Software =**

**Scan**

**Scan range ( $^{\circ}$ ) =**

**Step size ( $^{\circ}$ ) =**

**Count Time =**

**Additional Information**

# Where



- Laboratory Diffractometer, Synchrotron

**Columbia**

**Mexico**

**France**

**Germany**

**Czech republic**

**Israel**

**Canada**

**USA**

# When



(A Few Surprises)

# BEGINNING

# Why

