



Faculty/Division: <i>DVC Research</i>			School/ Divisional Unit : <i>ICP-Elemental Analysis SSEAU, UNSW Analytical Centre</i>	
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The [Writing Safe Work Procedures Guideline \(OHS027\)](#) should be consulted to assist in the completion of this form.

#### Safe Work Procedure Title and basic description

**Title: Retsch Mixer Mill MM301 ( Grinder)**

**Description:** The MM301 is suitable for the grinding and homogenization of soft, fibrous, hard and brittle materials both dry and wet.

**Associated risk assessment title and location:** RA- sample preparation. Room B35(basement), Chemical science building F10.

#### Describe the activity or process

The milling process in the MM301 laboratory mill is performed by the beating effect of the grinding balls on the process material and the friction between the grinding balls and the walls of the grinding jars.

##### PROCEDURE

1. Turn on mains switch (Located at the rear).---- The LED above STOP flashes briefly. Time and frequency display shows the last set. You can use that or change as your requirements (Consult manual or ask ICP-staff for help).
2. Place your grinding jars filled with the process materials and the grinding ball into the grinding jar fastening centering point of the clamping device and clamp it tight. Load both milling positions with grinding jars of as similar a mass as possible.
3. Close the Plexiglas cover. Set grinding parameters.
4. Start the MM301.
5. After stop the mill open grinding jar in the fume hood.

**Do not open the Plexiglas cover during the grinding process.**

**In the laboratory (B35) Extensive operating Manual/instructions are available.**

#### List all resources required including plant, chemicals, personal protective clothing and equipment, etc

**For Instruments:** Clearance of at least 30cm around the mixer mill MM301. Fume hood

**For Operator:** Lab coat, covered shoes, safety goggles, Gloves & dust mask.

**List potential hazards and risk controls including specific precautions required**

1. **During the operation the mixer mill must not be moved.**
2. Mechanical failure of rotating parts (often violent).
3. Contact with rotating parts.
4. Sample leaks causing dust hazard----- Using **musk** recommended.
5. Sample imbalance causing machine movement / walking (or stress failure of component parts).

**List emergency shutdown instructions**

1. grinder will stop automatically when run times complete.
2. Turn off power pressing power button rear of instrument.
3. **In an emergency**, turn off pressing soft stop button on control panel of instrument.  
Turn off power pressing power button on rear of instrument.

**List clean up and waste disposal requirements**

**Waste Bin:** Dispose all your contaminated tissue/wiper thoughtfully according to your sample nature.

**List legislation, standards and codes of practice used in the development of the SWP**

This SWP is developed on the basis of **Retsch Mixer Mill MM301** Hardware and software guide.

**Supervisory approval, training, and review**

**Supervisors:** Rabeya Akter & Dorothy Yu

Signature:

**Plant custodian:** Rabeya Akter & Dorothy Yu

Signature

**List competency required – qualifications, certificates, licencing, training - eg course or instruction:**

Training Provided by ICP-staff and proved to be competent

SWP review date: 11/09/07

Responsibility for SWP review: Rabeya Akter