



# Sample cleaning

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**Summary:**  
*This document describes various sample cleaning methods.*

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## 1 Associated Documents & References

MSDS of chemicals involved.  
Piranha Procedure (**special training required to handle Piranha as this is extremely dangerous mixture**).

Rules and procedures of cleanroom

## 2 Equipment Used

Center wet bench, pyrex dishes, tweezers, face shield, thick gloves, chemical apron

## 3 Verifications Prior to Processing

Wet bench surface is clean (use acetone on wipe and nitrogen gas gun to clean surfaces)



All labware and tweezers are clean.

## 4 Recipe description

### Basic method

Blow sample with nitrogen gas gun to remove large particles.

Place sample in beaker that contains acetone (removes organics).

Put into ultrasonic bath (floating with acetone level under water) for 10 minutes.

Ensure the water level in the cleaner is about 1 inch for the top to avoid damage to the ultrasonic transducer.

Spray sample with methanol from a squeeze bottle to remove acetone residue. Catch the waste in a dish or beaker.

Hold sample with tweezers and rinse sample with isopropyl alcohol (IPA) from a squeeze bottle.

Blow dry sample with nitrogen gas gun (hold the sample tight with tweezers).

Bake on hotplate 120 C for 5 minutes to complete drying.

Allow sample to cool to room temperature.

Avoid breathing on sample or holding it close to yourself. Place in covered container.

Use Nikon microscope to inspect surface for particles.

Pour acetone/IPA/methanol waste into large bulk waste container.

### Cleaning of glass slides with Piranha

Blow sample with nitrogen gas gun to remove large particles.

Use Piranha procedure to make a solution of hot Piranha. **Special training is required.** Piranha procedure has to be strictly followed as Piranha is extremely dangerous. Mix up the minimum required amount.

Wear protective equipment as instructed in the procedure.

Carefully immerse slides into Piranha solution and leave for 10 minutes.

Carefully take glass slide out and rinse with copious amount of DI water.

Blow dry sample with nitrogen gas gun (hold the sample tight).

## 5 Technical Data

Refer to [http://en.wikipedia.org/wiki/Piranha\\_solution](http://en.wikipedia.org/wiki/Piranha_solution) for background information on Piranha

## 6 Measurements & Statistical Process Control

## 7 Record of Revisions

Rev. 0

First Edition