

**'Base Piranha' H<sub>2</sub>O/ 30% NH<sub>4</sub>OH/ 30% H<sub>2</sub>O<sub>2</sub> 5:1:1 mixture**

**Chemical principles:**

- \* H<sub>2</sub>O<sub>2</sub> at high pH is a powerful oxidant, decomposing to H<sub>2</sub>O + O<sub>2</sub>, which will remove organic residues**
- \* NH<sub>4</sub>OH is a strong complexant for many metals**

**Safety precautions: In addition to the cleanroom garments & the latex cleanroom gloves you should also wear safetyglasses, keep away from any solvents!**

**Typical cleaning recipe:**

**H<sub>2</sub>O should be type 1; 18.6 kOhm resistivity.**

- Sonicate samples in H<sub>2</sub>O (use a teflon basket)**
- fill a beaker with 5 parts H<sub>2</sub>O & 1 part NH<sub>4</sub>OH (30% in H<sub>2</sub>O; use a magnetic stirrer)**
- Heat to 75 °C & add 1 part H<sub>2</sub>O<sub>2</sub> (30% in H<sub>2</sub>O, "non stabilized")**
- Reheat to 75 °C (If there is no/little bubble activity, the H<sub>2</sub>O<sub>2</sub> is most likely degraded (<30%)=>add some more)**
- Add sample basket and leave for 10-15 min**
- Rinse sample basket in a large volume of H<sub>2</sub>O**
- Rinse sample basket in 2-propanol (low beaker)**
- Take out samples 1 by 1 and blow dry with N<sub>2</sub> gun**