**“Am I about to break something?” (Avoid common lab mishaps)**

**Chemical Compatibility**  
Avoid costly or dangerous situations with plasticware and filters for harsh samples (organic solvents, strong acid or base, strong oxidizing or reducing agents).  Check a “chemical compatibility” or “chemical resistance” chart to make sure your sample is compatible with the device.

* For your specific item, check for chemical compatibility information directly from the manufacturer. Some examples:  
  [Eppendorf polypropylene tubes](https://online-shop.eppendorf.us/US-en/eshopdownload/downloadbykey/114794_Userguide_186)  
  [Amicon centrifugal ultrafiltration devices: see User Guide](https://www.emdmillipore.com/US/en/product/Amicon-Ultra-4-Centrifugal-Filter-Units,MM_NF-C7719#documentation)  
  [Whatman PES syringe filters](https://www.gelifesciences.com/gehcls_images/GELS/Related%20Content/Files/1360764947442/litdoc29026002_20161015091045.pdf)  
  [Corning Plasticware](http://csmedia2.corning.com/LifeSciences/media/pdf/CLS_AN_107_ChemCompPlastic.pdf)  
  [Pike ATR-FTIR crystals (click the Crystal Properties button)](http://www.piketech.com/home.php)
* If a specific chart for your item isn’t available, identify all materials of the device that are in contact with the sample and check a general chemical compatibility table, e.g.:  
  [Cole-Parmer](https://www.coleparmer.com/Chemical-Resistance), [ThermoFisher](https://tools.thermofisher.com/content/sfs/brochures/D20480.pdf), [SpectrumLabs](http://spectrumlabs.com/dialysis/Compatibility.html)

**Centrifuging**

Centrifuges are dangerous if not operated correctly!

* Avoid breaking centrifuge tubes:
  + Check the maximum rcf rating for your specific centrifuge tube and do not exceed, e.g. [Corning 15 mL PP tubes have max rcf of 12,000g](https://catalog2.corning.com/LifeSciences/en-US/Shopping/ProductDetails.aspx?productid=430052(Lifesciences))
  + To convert rotor speed (rpm) to relative centrifugal force (rcf), check if the instrument display automatically converts.  If not, look up your specific rotor, e.g. [Eppendorf MiniSpin Plus Operating Manual](https://online-shop.eppendorf.ca/CA-en/eshopdownload/downloadbykey/053857_Operating-Manual_186) or [online calculator](https://www.eppendorf.com/US-en/centrifuge-speed-calculator/).
* Weigh the centrifuge tubes after filling with sample, and ensure masses are balanced evenly across the rotor. Use a tube filled with water to balance, if you aren’t able to balance samples.