

## 1 Correct disposal of used glass / ceramics from laboratories

Wastes are never composed in an exactly reproducible way. Your chemical wastes are generated in your area of operation, which is why you should know and be able to judge their composition best. Although the information given here has been compiled to the best of our knowledge and belief, it is your responsibility to judge whether this information is useful and safe to apply in your specific case. **In case of conflict, existing risk assessments and operating instructions or instructions from your manager take precedence** over the information given here!

### 1.1 Contaminated Glass/Ceramic = Glass/Ceramic with residual adhesion

**Check** whether it is feasible and **reasonable to clean** contaminated glasses so that they can be disposed of as clean glasses.

- This should be possible with reasonable effort and above all **without danger**. (e.g. put the cullet in a cleaning bath and pour it through a sieve).
- The required use of resources should be **economically and ecologically justifiable**. (For example, it makes no sense to waste a lot of organic solvents for cleaning).

Otherwise, it does not matter for **contaminated jars** whether they are made of **bottle glass, laboratory glass** or **porcelain**: Everything can go **into a single container**. These are contaminated operating materials. Since **contaminated equipment** is often collected in bags, but broken glass is sharp-edged, it is again necessary to collect in a "puncture-proof" container. Since the contents cannot be put into the household waste bin, a bucket or bag is out of the question here, but only a sealable collection container that you can hand over to the waste disposal company. The best option is a **snap lid bucket (e.g. 30l)** made of plastic with the **required labelling " 170204x\_Glas-Keramik-Abfall-Restanhaft\_AF"**.

### 1.2 Clean laboratory glassware Ceramics, porcelain jars = residual waste

**Test tubes, round-bottomed flasks, beakers, pipettes** - especially all equipment made of **high-melting-point glass** is **not recyclable!** This is because their composition is not standardized and each manufacturer has its own recipe. All laboratory glassware therefore does not belong in the glass waste but in the **residual waste**.

#### Prerequisites:

Anything that is sharp-edged and pointed, or can break in such a way that there are sharp-edged and pointed fragments, must not simply be put into the household waste collection bins that are emptied by the house cleaning staff, because these staff can easily injure themselves on the broken pieces when decanting. You must therefore **collect the glass waste separately** and **empty it yourself into the residual waste bin**. Because more glass can break and splinters can fly around when emptying, it is absolutely necessary to **wear protective goggles when emptying!** Overfilling the bin is also very dangerous: if a nice tower of glass waste rises above the edge of the bin, any mechanical stress (e.g. lifting or carrying) can cause pieces of glass to break and fly off, not always but often enough for several meters. Use a plastic bucket with a lid or another sealable container. Collect as long as the lid can be put on or closed properly. If this is no longer possible, you have to go to the residual waste bin. **A small instruction leaflet attached directly to the collection container helps to ensure that everyone does this correctly.**

### 1.3 Clean Bottle Glass = Waste Glass as White Glass & Brown Glass

Empty chemical bottles can be disposed of in the waste collection **containers for used glass** provided by the municipal waste disposal companies.

Prerequisites:

- The bottles must be cleaned and must **no longer contain any hazardous chemicals**.
- Existing **label and GHS hazard pictograms must be removed** or at least **made unrecognizable**, e.g. by scratching. The best way to do this is to peel off the entire label. The easiest way to do this is to soak the label in water for a while and then use a glass scraper like the ones used to clean ceramic hobs. It is best to collect a few old bottles and then place them together, e.g. overnight in a large sink filled with water.

Please take the removal of the GHS pictograms seriously! If the pictograms are present, it can be assumed that there is a hazard. It is not the case that when you see the pictograms you should first decide whether or not to take the warning seriously by looking at them. Your responsibility for your waste does not end when your waste leaves your laboratory! So imagine the adrenaline shock a sorting worker suffers when your old benzene bottle, with all the colorful information on the label, happens to land intact on the sorting belt of the waste glass recycling company! If the label is removed, that is much better. It is even better if no bottle cap is screwed on at all, because a missing bottle cap signals: The bottle is empty.

