

LABORATORY SAFETY ALERT

July 2017

For permanent posting

Plastic Chemicals Containers from Sigma Aldrich can fail after an extended time in storage. Containers as young as 5 years have failed by cracking or becoming brittle

FAQ

(1) Can chemicals in (apparently) undamaged containers continue to be used?

Absolutely. There is no reason to stop using anything undamaged. **See suggestions below.**

A wrap of packing tape around a container might prolong the time until failure by a lot.

Move the containers out of direct light. UV light destroys the plastic over time.

You can put bottles in plastic bags, as this will catch the contents if the container fails.

(2) Can chemicals in (apparently) undamaged containers be repackaged into appropriate new bulk containers (e.g., plastic, glass), if appropriately labelled?

You could but I would not bother. If the container does not show signs of failure, monitor it over time.

A wrap of clear packing tape will provide some strength. If the container looks yellow or is starting to fail, treat it as failed as it will eventually become an issue.

(3) Can chemicals in damaged containers be salvaged under appropriate EHS or other supervision/precautions?

If the contents have spilled out it should be considered contaminated. Keeping the material might not be a wise idea from a research standpoint.

If you can, slide the container into a plastic bag to contain it while waiting to move it to a new bottle or sending it for disposal. Treat the container as spill or dropped container.

If you have a damaged container, are comfortable transferring the content to a new container, and want to keep it, you may do so but make sure to make an appropriate label, use PPE, and do it in the fumehood.

If you are not comfortable, EHS will take the container for disposal. We will help transfer the contents if time permits but I would expect to wait a while. The time and effort to transfer most chemicals in plastic is most likely not worth it.

Suggestions:

0) BEST PRACTICE-DO NOT KEEP PLASTIC CONTAINERS FOR 10+ YEARS

- 1) Put a wrap of packing tape around the bottles. If they start to crack, they are still contained.
- 2) Keep the bottles out from under sunlight and fluorescent lights. The polymer degrades from UV light.
- 3) Put suspect bottles in plastic bags. If they fail, they are contained.
- 4) Don't lift by the cap. This could cause a failure with heavier containers.
- 5) Lift a damaged container by sliding a plate under the container to support it.
- 5) Inspect the containers yearly and use up or dispose materials in containers that are aging.
- 7) Make sure any new label contains all the required information for hazard communication

a) <https://www.osha.gov/Publications/OSHA3636.pdf>