

10 Great Tips for Packing Your Sample Cooler

Here are 10 cooler packing tips to help you protect your samples from damage and maintain sample temperatures within the regulatory required range of 2° to 6° Celsius.

1. **Natural ice is the best choice** for keeping samples cold. "Blue ice" packs are not reliable for maintaining cool temperatures long enough in larger coolers.
2. **Use at least 20 pounds of ice** for an average size 48-quart cooler. Ice should take up at least one-third of the space in your cooler. When in doubt, use more ice. It's cheaper than resampling.
3. **NEVER use dry ice** when packing your cooler! Not only is it a safety hazard, it will freeze your samples solid, compromising sample integrity and possibly shattering your containers.
4. **Seal each container in water-tight plastic bags** (preferably **bubble bags**) to prevent water from getting onto the sample and degrading the label.
5. **USE BUBBLE BAGS!** They are the ideal packing material for glass containers, and the trapped air provides additional insulation to help keep samples cold. Bubble wrap is not adequate as it will not keep your containers dry. Also standard parcel service bubble bags have smaller bubbles that may not offer adequate protection. **QEC's bubble bags have larger bubbles for maximum cushioning.**
6. **Isolate each sample container** with **non-absorbent packing material**. Glass containers in direct contact with one another are almost certain to break. Do not stack glass containers or lay them on their sides. If necessary, use more coolers.
7. **Avoid packing materials that degrade** or lose their cushioning properties in water, such as paper, cardboard, peanuts, or vermiculite. Ideal packing material is polyurethane foam, such as **QEC's customizable foam cooler inserts.**
8. **Pre-chill the sample**, if above ambient temperature when collected, in an ice bath for a few minutes before packing. This saves your cooler ice from having to both lower the sample temperature as well as keep it cold.
9. **Use a cooler that conforms** to US Department of Transportation drop test specifications.
10. **Always use an indelible ink pen** or marker when marking your samples. Water-soluble ink may blur in transit and become impossible to read.