

# a frequently asked question



## How strong are the handles of a Nalgene polypropylene carboy?

Each handle can hold at least double the weight of a carboy filled with water to nominal capacity.

Thermo Scientific™ Nalgene™ polypropylene carboys are excellent vessels for storing large quantities of liquids. Nalgene carboys are molded with carrying handles integrated into the carboy shape to facilitate the ease of use. While large carboys are necessary for specific situations, they can also be quite heavy, once full - 50 liters of water weigh 50 kg or 110 lbs - hence the need to demonstrate the handles can support a full container.

#### Test procedure

To test the strength of the carboy handles, carboys were suspended through a single handle on the carboy body. 10 liter, 20 liter, and 50 liter carboys were tested by filling the container with steel ballast pellets to a weight in excess of double the weight of carboys filled to nominal capacity with water. For example, 50 liter carboys were filled with 240 lbs of steel ballast. Carboys were left suspended overnight to maximize the stress.

### Handle strength

All carboys were capable of handling this 2X weight on a single handle. 10 and 20 liter carboys showed no evidence of strain on the handle. The 50 liter carboy showed some limited distention of the carboy handle; however, this had minimal effect and no breakage of the handle occurred.

#### **Summary**

Nalgene polypropylene carboys are safe to lift by the handles when full, as they are capable of supporting at least double their intended weight on a single handle.



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