

The Faucet Bubble

Glass Blowing with Water



Shown above is water flowing gently from a standard bathroom faucet. The flow is just sufficient to be reasonably laminar. It is important that the flow have this closed structure, because the purpose of this experiment is to blow a bubble inside the water near the faucet. If the flow is not laminar, there is no inside to blow up.

We wish to blow a large bubble in the water that is the shape of a standard wine glass (white, red or champagne flute).



Wine glass images from Riedel, the Wine Glass Company.
<http://www.riedel.com/>

One only requires a small tube (about 6-8 inches in length) whose diameter is much smaller than the water. The first attempt at doing this used the plastic insulation around a solid copper wire (about 14 gauge). One end of the tube is placed inside the wide portion of the flow right next to the faucet. Blow gently in the other end and bubbles like the ones shown on the next pages will result.

Note: The first time the bubble was observed, it formed by itself. The faucet where it was observed is left on 24 hours per day during the coldest part of the Troy, NY winter because the water pipes that feed the house were not buried deeply enough.





