

Why do you smash the glass bottle with your hand, the bottom part breaks?

You may have witnessed someone doing this at parties but why did that strange thing happen?

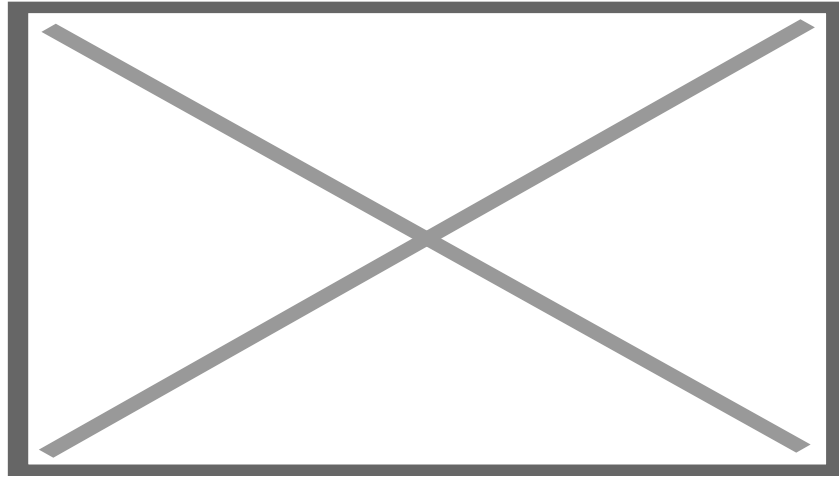
You may have witnessed someone slamming a glass bottle of water with their hands and surprisingly the bottom of the bottle broke. Why so?

In the video below, guy **Mark Rober** has come up with several hypotheses and experiments to find out why the bottle bottom is broken. All tests were recorded by super-fast speed cameras for evidence. This guy also offers some tips to help you do this easily.

The first is **pressure** when a person hits the bottle's mouth and causes the air to be compressed to break the bottom of the bottle. To test this hypothesis, Rober used a glass bottle with a lid to ensure that no pressure entered the bottle and then hammered to increase the force (and avoid hand pain) into the bottle mouth. As a result, the bottle bottom is still broken. This proves that air pressure when we hit the bottle mouth is not the cause of the bottom of the bottle.



The second hypothesis is that the **bottle with CO2 will be more fragile than the empty bottle** and the experimental results show that this is absolutely true. With water bottles with CO2, when you hit the bottle at a rapid rate, it creates a **vacuum in the bottom of the bottle**, but CO2 will form when the collision occurs and create a chain reaction that erupts into the mouth. bottle. With a CO2-free drink, there is still a vacuum area created, but this time no chain reaction occurred and the bottle bottom broke.



The third hypothesis is **that the feedback force of water hits the bottom** . The fourth hypothesis is due to external and internal pressure differences when the vacuum region is created. The results show that the feedback force of water hitting the bottom of the bottle is the reason why the bottom is broken.

The trick helps you beat the glass bottle mouth to make the bottle bottom break easily. Try it yourself and check it out.

1. Break hard and decisively into the mouth of the bottle, not beating your hand.
2. Use glass bottles containing water, or drinks without CO2.
3. Water with high air pressure will cause a bottle break.
4. Remember to watch out for your hands.

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