

First, the antarctic ice is harvested by drilling a hole in the ice sheet, and the ice core is then separated into shorter segments. After the ice core segments are stored and transported to the lab bench, melt the core segments with a hot wire wrapped around the core inside a gas chamber. The escaping gas is suctioned into a canister. Second, mass spectrometry is performed on the gas inside the canister corresponding to the ice segment. Finally, the ratio of oxygen isotopes in the gas is calculated, which is correlated with the average atmospheric temperature when the isotopes were trapped in the ice. The depth of the air bubbles represents how old the air trapped inside is, so the average air temperature can be graphed versus time over the centuries.