

Crush the Can



Purpose: To demonstrate the collapse of a can due to atmospheric pressure when the steam inside it suddenly condenses

Location: room 136, shelf O4
(tongs & hot plate, shelves I 4 & I 5)

Pour about 50 ml of water into an empty aluminum beverage can and bring it to a boil on a hot plate. If it's not obvious from steam coming out the top, listen for the sound of boiling. (This may take many minutes.) When you are sure it has been boiling for a few minutes, quickly remove the can from the hot plate with beaker tongs, invert it and submerge the open end into cool water in the small bowl. Rapid cooling of the steam in the can causes it to condense, creating a partial vacuum, and the can will collapse.