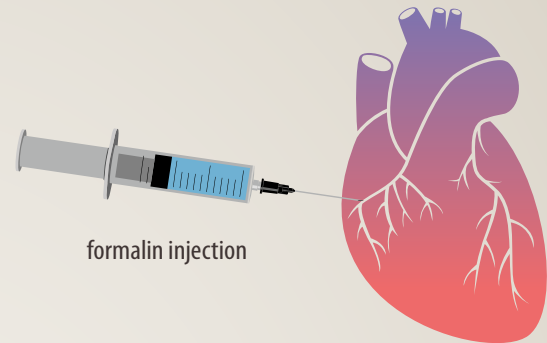


The Plastination Process

Plastination keeps anatomical tissues from decaying and allows them to be handled by students without exposure to toxic chemicals and pathogens. The process, developed in 1977, preserves most of their properties by replacing water and fat with silicone polymers.

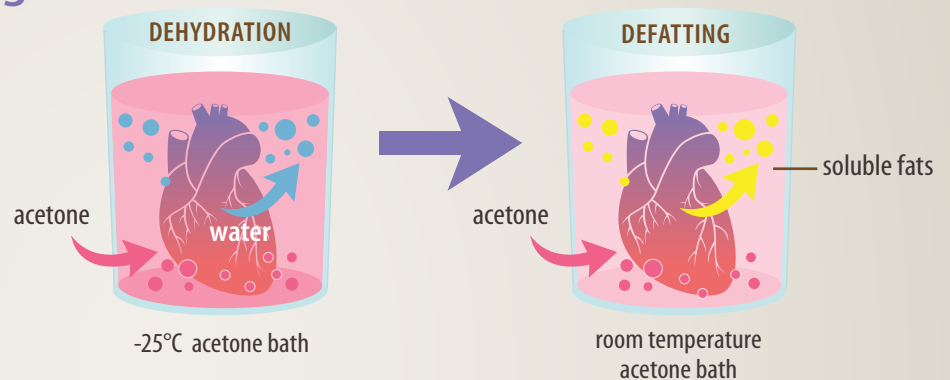
1 Fixation

The first step of the process involves halting decay by infusing formalin into the organ tissue. Formalin replaces the water preventing growth of bacteria. Without bacteria, tissue decay is stopped. If desired, the arteries and veins can be infused with latex at this point to emphasize specific anatomy.



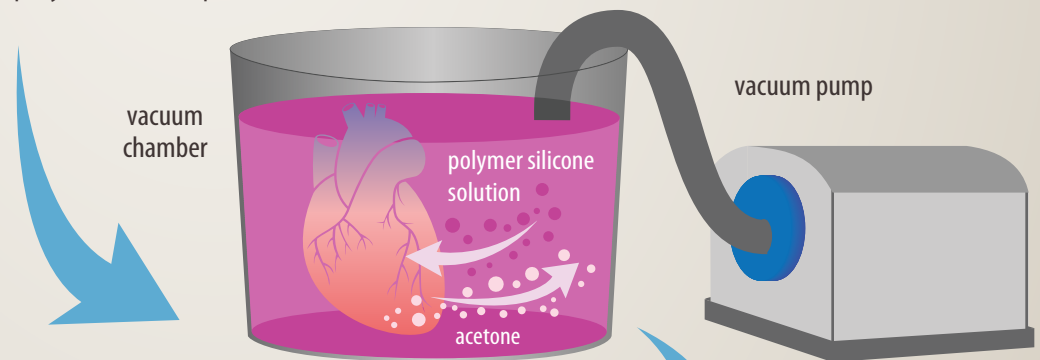
2 Dehydration and Defatting

In this step, the water within the specimen is replaced by acetone through diffusion. Dehydration takes place at -25°C . Specimens are repeatedly bathed in the solution until 98% of the tissue is replaced by acetone. Then the defatting process takes place at room temperature.



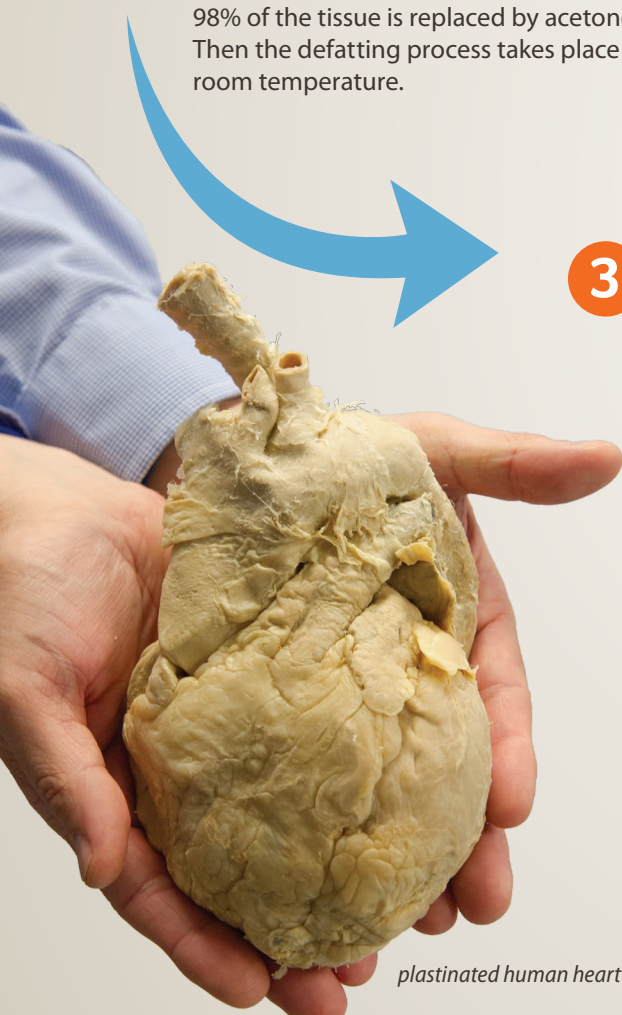
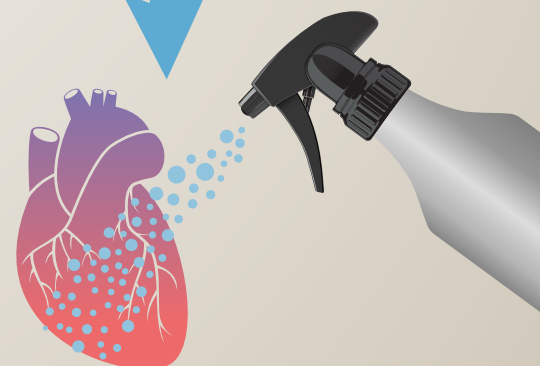
3 Plastic Permeation

The specimen is immersed in a polymer silicone solution and placed in a vacuum chamber. The vacuum removes the acetone from the specimen and helps the polymer silicone penetrate the cells.



4 Hardening

A curing agent is applied to the specimen. The curing agent catalyzes reactions between the polymer and its cross-linker, which allows the specimen to harden.



▶ **SEE MORE:** Learn about plastination of other body parts [here](#).