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Plastination

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Plastination is a technique used in anatomy to preserve body parts or actual bodies. In the German encyclopedia the word plastination is derived from the Greek word *plassein* which means to shape or form. It makes it possible to preserve individual tissues and organs that have been removed from the body of the deceased as well as the entire body itself.

The term is a creation of Gunther von Hagens. He chose this term because “Plastification” already had a meaning in the field of polymer chemistry and is also the term that he used in his original patent in 1977/78. He wanted to preserve the bodies permanently by synthetic resin impregnation. With success on his patents, von Hagens went on to open The Institute of Plastination in Germany 1993. The Institute along with von Hagens made their first showing of plastinated bodies in Japan 1995. The show drew up more than three million visitors. There are three institute centers of plastination in Germany, China, and Kyrgyzstan.

The process begins when the water and fat in the body part or the body is replaced by some kind of polymers. These polymers keep the body from decaying or smelling. The plastination process deprives the bacteria that decays and feeds on the body of what it needs to survive.

However, polymers cannot fully remove all the bodily fluids, so von Hagens



found a way around it. The polymer that is used for the first step of plastination is called acetone, which is a fluid that easily evaporates. In the second step the acetone is replaced with a polymer solution. This polymer solution affects the solution in some way. The body is placed in a vacuum chamber and the pressure is reduced to the point where the solvent boils. The acetone is suctioned out of the tissue at the moment it vaporizes, and the resulting vacuum in the specimen causes the polymer solution to permeate the tissue. This process continues until all the tissue has been completely saturated. This step can take weeks for whole bodies to be saturated.

Citation:

- http://www.bodyworlds.com/en/plastination/plastination_process.html
- <http://en.wikipedia.org/wiki/Plastination>