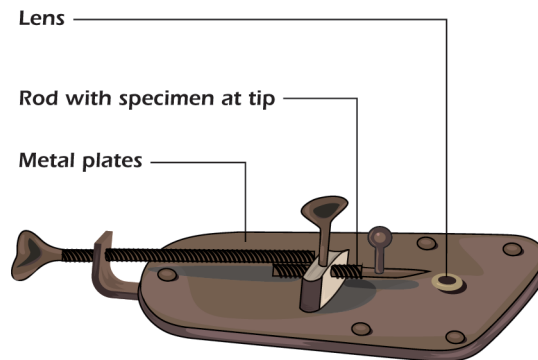


Chapter 1

Web Text Box 1

van Leeuwenhoek's Microscopes



van Leeuwenhoek's microscopes

No one is sure who made the first microscope but the first person to use a microscope to systematically explore the microscopic living world was a Dutch merchant, Antonie van Leeuwenhoek (1632-1723). van Leeuwenhoek built at least 250 microscopes, less than ten of which survive to the present day. In 2009 one of these sold for more than \$450,000 at auction in London. van Leeuwenhoek's microscopes were essentially magnifying lenses, far simpler than the compound light microscopes we are familiar with today (book page 2). Two metal plates, usually brass but occasionally silver, about two inches in length and one inch wide, were welded together and a hole cut in which was mounted to a small glass lens. The specimen was mounted on the tip of a metal rod that was maneuvered in front of the lens by two screws. The lenses, which were ground by van Leeuwenhoek himself, were of very high quality. Others struggled to replicate his craftsmanship and van Leeuwenhoek chose not share his methods with his rivals. What we do know is that his lenses had a high curvature and, hence, a very short focal length. For this reason the microscope had to be held extremely close to the eye. Nevertheless, magnifications of up to 250 times were achieved, allowing van

Leeuwenhoek to discover a wealth of novel life forms including bacteria, protozoa, red blood cells and spermatozoa. Over a period of more than 50 years he communicated his findings in a series of letters to the Royal Society in London. van Leeuwenhoek's outstanding scholarship was recognized with the award of a Fellowship of the Royal Society in 1680.

For more information see:

http://en.wikipedia.org/wiki/Antonie_van_Leeuwenhoek

<http://micro.magnet.fsu.edu/primer/museum/leeuwenhoek.html>