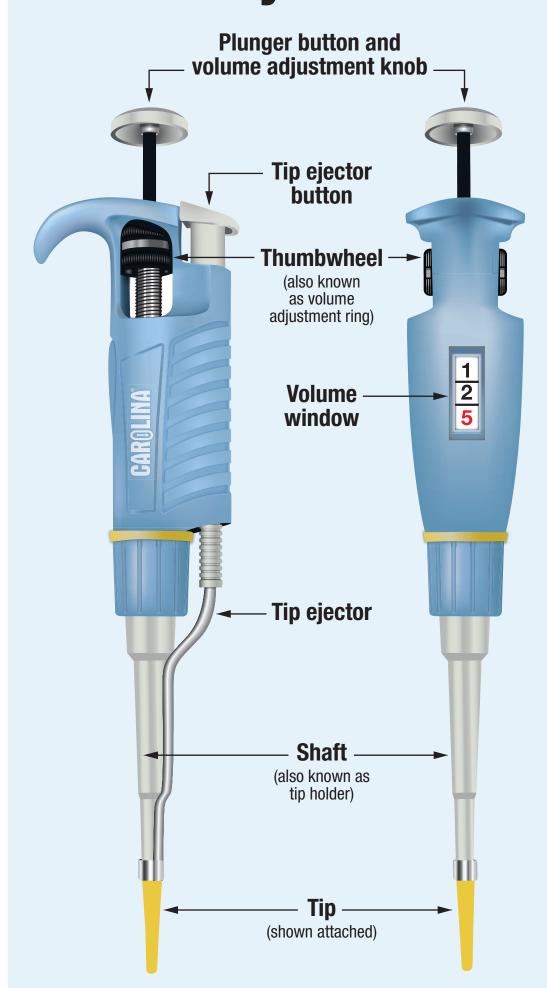
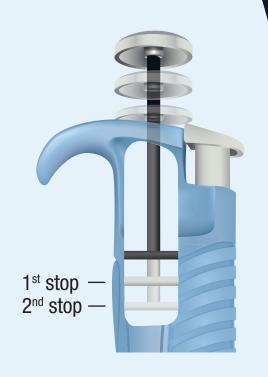
How to Micropipette

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Anatomy of a micropipette





Micropipettes transfer small volumes of liquids in microliters (µL), which are 1/1000th of a milliliter (mL)!

The name of a micropipette represents the maximum volume it can transfer. For example, a P20 can transfer up to 20 µL and a P1000 can transfer up to 1000 µL.

Micropipetting

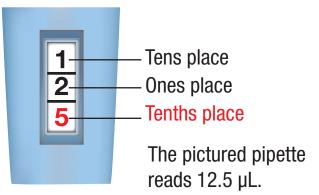
► How to set and read a micropipette

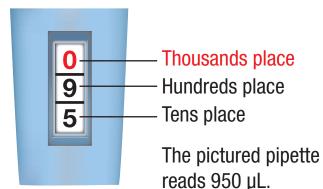
Turn the micropipette plunger button or thumbwheel to adjust the volume shown on the volume window.



► Read the volume window from top to bottom

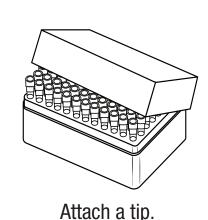
How to read a P20

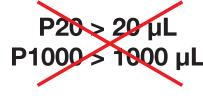


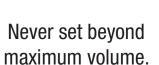


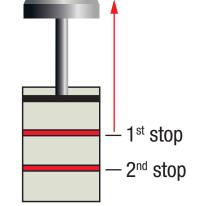
How to read a P1000

Ready to pipette?









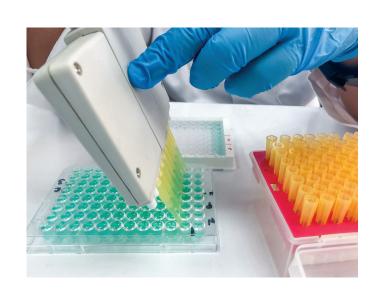
The plunger button has 2 stops. Know which stop to use and when.

Real World Connections



Molecular Biologist

What roles do molecules such as DNA, RNA, and proteins have within and between cells? Molecular biologists work on the forefront of scientific research to answer such questions and to develop new molecular techniques that often have applications in medicine and genetics. For example, human insulin needed by some individuals with diabetes is produced today by inserting the human insulin gene into either yeast or bacteria using techniques such as molecular cloning developed by molecular biologists.



Medical Technologist

Working as medical detectives behind the scenes, medical technologists collect and analyze samples of bodily fluids and tissues to aid in diagnosing disease.

One common test is an enzyme-linked immunoassay (ELISA) which can detect the presence of antibodies in blood.

The antibodies produced by the body's immune system are specific to the disease-causing pathogen they combat, making antibody detection by ELISA an accurate tool for diagnosing infections.



Forensic Scientist

A critical element of the criminal justice system, forensic scientists examine evidence from crime scenes to assist in investigations and legal proceedings. DNA evidence is often analyzed by using gel electrophoresis to create DNA fingerprints that can link biological evidence to the suspect of an investigation. Short, repeating, and non-coding DNA sequences such as RFLPs and STRs are commonly used to create such profiles.



Environmental Biotechnologist

Using the tools of biotechnology, environmental biotechnologists address environmental problems such as pollution, renewable energy, and species loss. The collection and detection of DNA shed by species in an environment (known as eDNA) has become a powerful tool for the biomonitoring of species and DNA metabarcoding of biological communities.

