

Syringe care

Syringe selection according to sample size

Consider the sample size and application when choosing a syringe. For accuracy, the smallest injectable volume from any syringe should be no less than 10% of its total capacity.

Needle selection and care

Outer diameter

Choose the widest available needle outer diameter to reduce the possibility of bending.

Inner diameter

Medium to high viscosity samples should be diluted prior to use, or a larger inner diameter needle selected.

Check the needle for burrs prior to use. Use a fine emery board or carborundum to remove burrs.

Unblocking needles

1. To unblock the needle, remove the plunger and fill the syringe with solvent using another syringe.
2. Insert plunger and gently push solvent through the needle. Never force the plunger as excess pressure may crack the syringe barrel.

Plunger care

Metal plungers of standard syringes

- Never force the plunger.
- Do not pump the plunger when the needle is blocked as the high pressure generated could crack the syringe barrel.
- Replacement plungers for standard syringes are not available. Plungers are individually fitted to the barrels to achieve a perfect seal. This means plungers are not interchangeable.
- Avoid unnecessary movement of plungers when the syringe is dry.

Metal plungers of NanoVolume (plunger-in-needle syringes)

- Always loosen cover nut before removing or inserting plunger.
- Wipe plunger with a lint-free tissue before replacing into the syringe.
- Replacement plunger and needle kits are available. The plungers and needles are matched sets and must be replaced as a set.

PTFE tipped plungers of gas tight syringes

- Avoid unnecessary movement of plungers when syringes are dry.
- Replacement plungers are available for gas tight syringes.

Temperature specifications

Heating will remove semi-volatile material from the syringe. Before heating or autoclaving syringes, it is advised to remove the plunger.

- Fixed needle and fixed luer syringes can be heated to 70°C.
- Removable needle and removable luer syringes can be heated to 120 °C.
- NanoVolume (plunger-in-needle) Syringes can be heated to 70 °C.

Rapid changes in temperature can lead to splitting of the glass barrel. Ensure heating and cooling of a syringe is a gradual process.

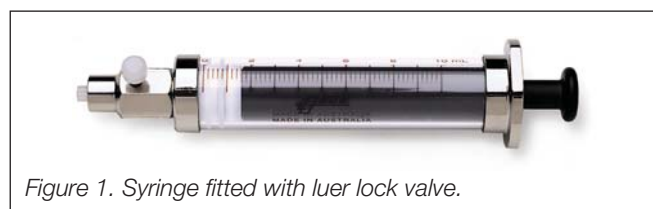


Figure 1. Syringe fitted with luer lock valve.

Syringe use

Always inspect the syringe before use. Check the barrel for cracks and the needle tip for burrs.

- To eliminate carryover between samples, flush the syringe with solvent 5-20 times, remembering to discard the first 2-3 washes.

- To eliminate air bubbles from the barrel, repeatedly draw and expel sample while keeping the needle tip immersed in the solution. Bubbles can also be removed by turning the barrel upright while expelling the sample.
- To make an injection, over fill the syringe then press the plunger until the correct volume is reached and check parallax. Draw the plunger back slightly then wipe the needle tip with a lint free tissue. Make injection. For improved precision, syringes may be purchased fitted with a repeating adaptor (part number 031930), which allows the volume to be preset on the syringe.
- Before storage always rinse the syringe in solvent and air dry.

Syringe cleaning

- Syringe cleaning agents will usually depend on the contaminating material, however methanol, methylene chloride, acetonitrile and acetone are commonly used.



- *Do not immerse the entire syringe* in solvent as this may damage the adhesive used to bond components of the syringe.
- Clean externally by wiping with a tissue.

Syringe cleaning steps

1. Rinse syringe thoroughly with suitable solvent.
2. Rinse with distilled water.
3. Flush with acetone.
4. Remove plunger and wipe with lint-free tissue.
5. Refit plunger and flush with acetone.
6. Allow syringe to dry.

Cleaning steps for NanoVolume syringes can be found in the manual supplied with the syringe.

Needle cleaning kit (part number 031782)



The kit contains a range of stylet wires for needle cleaning, tweezers and a surfactant material for barrel cleaning.

Information and support

Visit www.trajanscimed.com or contact techsupport@trajanscimed.com

Specifications are subject to change without notice.