

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: SGE has selected the best needle inner diameter to minimize dead volume without compromising the ability of the syringe to draw normal viscosity samples. 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. SGE 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:

- Rinse syringe thoroughly with suitable solvent
- Rinse with distilled water
- Flush with acetone
- Remove plunger and wipe with lint-free tissue
- Refit plunger and flush with acetone
- Allow syringe to dry

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

SGE Needle Cleaning Kit (Part No. 031782):



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

AUSTRALIA & PACIFIC REGION

SGE Analytical Science Pty Ltd
Toll Free: 1800 800 167
Tel: +61 (0) 3 9837 4200
Fax: +61 (0) 3 9874 5672
Email: support@sge.com

CHINA

SGE Shanghai Representative Office
Tel: +86 21 6407 9382
Fax: +86 21 6407 9386
Email: china@sge.com

MIDDLE EAST

SGE Gulf
Tel: +971 6 557 3341
Fax: +971 6 557 3541
Email: gulfsupport@sge.com

EUROPE

SGE Europe Ltd
European Head Office
Toll Free: 00800 2790 8999
Toll Free Fax: 00800 2626 2609
Tel: +44 1908 568 844
Fax: +44 1908 566 790
Tel France: +33 1 69 29 80 90
Fax France: +33 1 69 29 09 25
Tel Germany: +49 (0) 6155 / 60746 0
Fax Germany: +49 (0) 6155 / 60746 50
Email: europe@sge.com

INDIA

SGE Laboratory Accessories Pvt Ltd
Tel: +91 22 24715896
Fax: +91 22 24716592
Email: sgeindia@vsnl.com

UNITED STATES OF AMERICA

SGE Incorporated
Toll Free: (800) 945 6154
Tel: +1 512 837 7190
Fax: +1 512 836 9159
Email: usa@sge.com

JAPAN

SGE Japan Inc
Tel: +81 45 222 2885
Fax: +81 45 222 2887
Email: japan@sge.com