

CHOOSING THE RIGHT HAMILTON SYRINGE FOR YOUR APPLICATION

IS YOUR SAMPLE A GAS OR A LIQUID? ------

For a gas sample, use a GASTIGHT® syringe.

GASTIGHT 1000, 10 µL to 100 mL 1700 and 1800 **Series**

This type of syringe*, for use with liquids and gases, features a precision-machined TEFLON® PTFE plunger tip.

1000/1700 Series

- 1700 Series 10 μL to 500 μL
- 1000 Series 1 mL to 100 mL
- Also available: ground glass tip (luer tip, LT) or TEFLON[®] luer lock (TLL) terminations



- 10 µL to 250 µL
- · Reinforced plunger prevents plunger blow-out and plunger bending
- Replaceable syringe barrels and plungers



For a liquid sample, choose between a MICROLITER™, **MODIFIED MICROLITER™**, or a **GASTIGHT** syringe.

MICROLITER 600, 700, 800 and 900 Series

 $2.5 \mu L$ to $500 \mu L$

This type of syringe*, for use with liquids, incorporates a stain-

less steel plunger that is individually

fitted to its matching syringe barrel. The plunger is not inter-

changeable or replaceable.

600 Series

- 2.5 µL and 5 µL
- · Reinforced plungers prevent plunger bending
- · Rugged, durable and long lasting



- 5 μL to 500 μL
- · Economical; great for chromotography
- · Also available: ground glass tip (luer tip, LT) termination



- 5 µL to 250 µL
- · Reinforced plungers
- Plunger stop prevents plunger blow-out

900 Series

- 5 μL and 10 μL
- · Reinforced plungers
- Perfect for students: rugged and durable



 $0.5 \mu L$ to $5 \mu L$

- · Positive displacement syringe has a tungsten plunger wire that travels inside the needle
- · The needle essentially acts as the glass syringe barrel; no dead volume
- Replaceable plunger wire and needle

^{*}All syringes are offered with cemented needles or removable needles unless otherwise noted.



For a liquid sample:

Syringe size	600 Series	700 Series	800 Series	900 Series	7000 Series			1800 Series
0.5 μL - 5 μ <mark>L</mark>		-			√			
2.5 μL - 5 μ <mark>L</mark>	√	1						
5 μL - 10 μL				√				
5 μL - 250 μL		√	√					
10 μL - 250 μL		<u>u</u>					√	√
10 μL - 500 μL		√					√	
1 mL - 100 mL						√		
		2						

For a gas sample:

Syringe size	1000 Series	1700 Series	1800 Series
10 μL - 250 μL		√	√
10 μL - 500 μL		1	
1 mL - 100 mL	√		
		OF NEW	1000



WHICH TERMINATION WORKS BEST FOR YOUR APPLICATION? -

- Cemented- not recommended for use with halogenated solvents, such as MeCl2; not autoclavable
- Removable- advantageous for laboratories with multiple users; economical since you can replace the needle without having to purchase a new syringe
- Luer Tip Cemented- ground glass tip with a cemented needle; not recommended for use with halogenated solvents, such as MeCl2; not autoclavable
- Luer Tip- ground glass tip can be used with most hypodermic needles; Kel-F® hub needles, TEFLON® tubing assemblies and connectors can also be used; offers flexibility
- TEFLON® Luer Lock- can be used with luer (Metal or Kel-F) hub needles, TEFLON® tubing assemblies and connectors can be used; offers flexibility
- Knurled Hub- replaceable needles; used only with the 7000 Series syringes

WHICH NEEDLE POINT STYLE WORKS BEST? -



Point Style AS: special conical style needle point designed to withstand the demands of multiple injections; exclusively used on autosampler syringes

Point Style 2: beveled non-coring needle point recommended for septum penetration; only needle gauges 26s – 22 are recommended for optimum septum penetration

Point Style 3: blunt needle point for use with HPLC injection valves and for sample pipetting

Point Style 4: $10 - 12^{\circ}$ beveled needle point recommended for life science applications; special point styles such as 12° , 30° , and 45° are available on request

Point Style 5: conical needle with side port for penetration of septa, thin-gauged vinyls and plastics without coring; minimizes septum damage



- Syringe Guide easily installed on a syringe to prevent the plunger from bending or from being pulled out
- Reproducibility (Chaney) Adapter easily installed on a syringe for consistent, reproducible injections; also prevents plunger damage
- Reinforced Plungers Series 600, 800, 900 and 1800 syringes offer an extended barrel which prevents bent plungers



Super Syringes .5 L to 2 L

For air sampling, preparing gas standards; or calibrating reservoirs, pneumographs, and spirometers. Used in industries such as: mining, chemical production, grinding and mineral processing. Syringe barrel is made of a clear acrylic material.



Purge & Trap Syringes 5 mL and 25 mL

These syringes are designed for the analysis of drinking water samples according to EPA purge and trap concentration techniques.



Carbon Analyzer Syringes 50 μL to 250 μL

For water analysis with Total Organic Carbon (TOC) analyzers. Wetted parts are stainless steel and borosilicate glass. Syringes have a metal luer tapered hub cemented over a MICROLITER 700 Series N syringe. The luer hub fits precisely into the inlet of a total carbon analyzer.



PB600 Repeating Dispensers 10 μL to 10 mL

Consistently dispense sample up to 50 times with the push of a button. The repeating dispenser works with MICROLITER or GASTIGHT syringes from 10 μL to 10 mL.

200 µL

Use this Syringe Volume	μL Per Dispense
10 μL	.2 μL
25 μL	.5 μL
50 μL	1 μL
100 μL	2 μL
250 μL	5 μL
500 μL	10 μL
1 mL	20 μL
1.25 mL	25 μL
2.5 mL	50 μL
5 mL	100 uL

10 mL