

Every One an Expert

eVol[®] XR

- Speed up and simplify laboratory workflow
- Improve accuracy and reproducibility
- Standardize results independent of operator skill

1 mL
Syringe
now
available

 **SGE Analytical Science**
www.sge.com

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Discover the Many Advantages of the Award Winning eVol®

eVol is the World's First Digital Analytical Syringe

eVol is the coupling of two precision devices: a digitally controlled electronic drive and an XCHANGE® enabled analytical syringe.

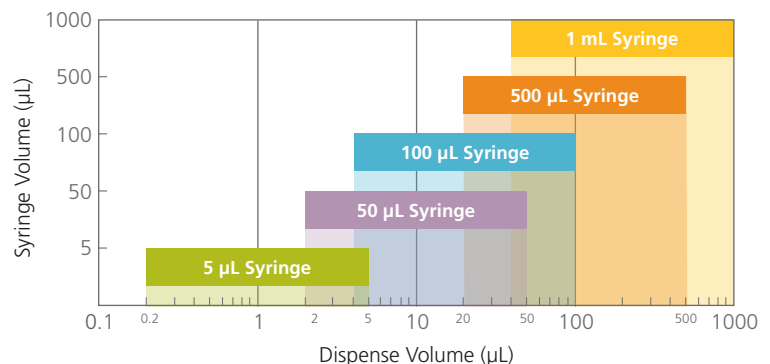
- XCHANGE syringes are easily and quickly changed allowing them to be dedicated to individual liquids or methods to prevent possible cross-contamination of reagents.
- eVol is ergonomic, comfortable and easy to use.
- eVol is easily calibrated and calibration factors saved for each syringe, enabling laboratories to comply with stringent global laboratory standards (e.g. GLP, GMP, FDA).
- eVol is suitable for use with volatile samples.
- eVol is programmable to store a laboratory workflow (up to 98 steps).
- eVol is suitable for direct injection onto a chromatography column with a consistent flow rate.
- eVol's stainless steel needle enables direct injection through septa.
- Password protection options enabling standardization of work processes
- Variable speed of operation

Applications and Volume Range of eVol XCHANGE Syringes

Applications for eVol include:

- Preparation of calibration standards
- Preparation and addition of internal standards
- Precise dispensing of aqueous and non-aqueous liquids
- Routine dispensing
- Ergonomic operation with substances in a fume hood
- Sample dilution
- GC and LC Instrument injections
- Eliminates the need for serial dilutions
- Micro titrations
- TLC spotting
- FDA methods requiring a 1 mL syringe

Volume range of eVol XCHANGE Syringes:



**New
1 mL Syringe
expands
applications
for eVol®**

The award winning eVol improves the pace of laboratory processes while delivering improved accuracy and reproducibility.

eVol Improves Standard Laboratory Processes

PROCESS	Without eVol®	With eVol®	eVol® BENEFIT
Standard Preparation	Standards prepared in a large volume flask. From this standard aliquots are individually dispensed into autosampler vials.	Standards are made up directly in the vial, including the make up solvent.	<ul style="list-style-type: none"> • Less glassware usage • Reduces waste fluid • Significant time saving • Improved accuracy and reproducibility
Addition of Standards	Small amounts of standard aspirated and dispensed into all samples before being transferred to an autosampler vial.	One aspiration and a fast series of repeated accurate dispenses directly into vials.	<ul style="list-style-type: none"> • Significant time saving • Improved accuracy and reproducibility
Delivery of derivatization agents	Laboratory staff required to work in a fume hood with potentially hazardous materials, to prepare combinations of derivatization agents in open vials.	Process completed with eVol® programmed to aspirate an amount of solvent or agent and then dispense aliquots into sealed vials, Single handed operation.	<ul style="list-style-type: none"> • Improved operator safety, lower spill and splash risk • Ergonomic benefits behind fume hood screen • Improved accuracy and reproducibility • Less glassware use
Serial dilutions	Transfer of a small amount of solution to another container. Solvent added to achieve the required volume. This is repeated multiple times to obtain the required final accurate concentration.	One aspiration of the solution can be dispensed directly into the solvent to achieve the required accurate concentration.	<ul style="list-style-type: none"> • Complete workflow simplification • Significant time savings • Improved accuracy • Less solvent required • Less glassware used

The table above includes examples of how eVol® improves standard laboratory processes.

eVol NMR Edition and Mighty MEPS™

eVol NMR

eVol NMR Edition, featuring long stainless steel needles, enables in tube sample dilution and mixing, and recovery of samples facilitating re-use of NMR tubes. Contact SGE for details.

Mighty MEPS

The eVol custom programming function enables MEPS (micro SPE) to be semi-automated and proofed before transition to fully automated platforms. Ask SGE for more information on how eVol MEPS can improve your method development.



Starter Kit and Accessories



Description	Part No.
eVol® XR Syringe Starter Kit Contains: <ul style="list-style-type: none"> eVol® XR Electronic Syringe 3 eVol® Syringes – 5 µL, 100 µL and 1 mL Stand Universal Charger Comprehensive Instruction Manual Disc with Manual in Multiple Languages 	2910200
eVol® NMR Edition Contains: <ul style="list-style-type: none"> eVol® Electronic Syringe 3 eVol® Syringes – 5 µL syringe is supplied with a 115 mm needle, 50 µL and 500 µL syringes are supplied with both 115 and 180 mm needles Stand Universal Charger Comprehensive Instruction Manual Disc with Manual in Multiple Languages 	2910100
eVol® Electronic Syringe (handle only)	2910205



Part No. 2910010
eVol® Stand



Part No. 2910012
eVol® Universal Charger



Part No. 2910040
eVol® Replacement Battery



Part No. 2910030
eVol® Charging Stand

eVol XCHANGE and eVol MEPS Syringes

Description	Needle Length (mm)	Needle Gauge	Needle OD (mm)	Needle ID (mm)	Needle Tip	Replacement Needle Part No.	Replacement Plunger Part No.	Syringe 3 Pack Part No.	Syringe Part No.
5 µL	50	25	0.5	0.12	Bevel	036910	2910380	2910320	2910020
5 µL (supplied without needle)	–	–	–	–	–	–	2910380	–	2910021
50 µL	50	25	0.5	0.2	Bevel	038110 [∇]	2910382	2910322	2910022
50 µL (supplied without needle)	–	–	–	–	–	–	2910382	–	2910023
50 µL for MEPS™ applications*	–	–	–	–	–	–	2910382	–	2910027
100 µL	50	25	0.5	0.2	Bevel	038110	2910383	2910329	2910029
100 µL for MEPS™ applications*	–	–	–	–	–	–	2910383	–	2910028
500 µL	50	23	0.63	0.32	Bevel	039110 [^]	2910384	2910324	2910024
500 µL (supplied without needle)	–	–	–	–	–	–	2910384	–	2910025
500 µL for MEPS™ applications*	–	–	–	–	–	–	2910384	–	2910026
1 mL [#]	50	23	0.63	0.32	Bevel	039110	2910385	2910335	2910035

[#] 1 mL syringe can only be used with eVol® XR, not compatible with eVol® Classic. [∇] All SGE 25 – 500 µL replacement needles can be used with 50 µL and 100 µL eVol® syringes.

[^] All SGE 1 – 2.5 mL replacement needles can be used with 500 µL and 1 mL eVol® syringes. * The eVol® MEPS™ syringes can be used with the range of MEPS™ BINs.

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