VWR® ELECTRONIC PIPETTE

FAQ

1/ what kind of Battery enables the VWR® Electronic Pipette to function?
VWR Electronic Pipette is equipped with a Lithium-ion battery. This battery allows no memory effect so you can leave it in charge as long as you want and it has a slow loss of charge when not in use.

2/ how long before recharging the battery and how long it takes to charge it?
The Battery has been designed to ensure around 900 pipetting cycles (around 750 for Multichannel models) at maximum speed: It means around 2h30 in continuous use.
80% of full battery capacity in less than one hour and 3 hours to full charge.

3/ what is the Battery lifetime?
The lithium-ion battery features high energy density. It is given for several years; but this is strongly dependent on usage and storage conditions.

4/ Can I autoclave my VWR® electronic Pipette?
Yes, Lower parts of Single and Multichannel models are autoclavable for 20 minutes at 121°C and 0.1MPa. Please refer to the User guide for disassembly and autoclaving instructions.

5/ what is the weight of the VWR® Electronic Pipette?
Average weight for Single Models: 120g (0.26lbs)
Average weight for Multi Models (excl. x1200µl):
8x Models: 210g (0.46lbs)
12x Models: 240g (0.53lbs)

6/ Does the VWR® electronic Pipette resistant against UV-light?
Yes, VWR electronic pipette is UV-resistant (tested at 254nm).
Longer periods of irradiation can lead to very minimal material discoloration that does not have any effect on functionality.

7/ Can I adjust the speed of the VWR® Electronic Pipette and why is it used for?

Yes, Aspiration Speed and Dispense speed can be changed independently of one other: from very slow to very fast (speed 1 to speed 6). You may need to change the speed depending on your application. For example, when dealing with viscous liquids, it is recommended to lower the aspiration speed and dispense speed.

8/ Can I precisely dispense volatile liquids or viscous liquids?

Standard readjustment functions allow you to adjust the pipette using 3 calibration volumes: 10%, 50% and 100% of the nominal volume (in compliance with ISO 8655 recommendations). So you may want to calibrate your pipette for solutions with a density, viscosity, surface tension or vapor pressure that are different to the values given for water.

9/ Can I precisely dispense cold or warm liquids?

Yes, VWR Electronic Pipette can dispense precisely cold and warm liquids but some recommendations have to be taken into account for higher precision and accuracy as it is an Air-displacement pipette.

When pipetting liquids with a temperature different from the ambient temperature, pre-rinse the tip several times before use in order to reach equilibrium between the temperature of the liquid and the pipette's dead volume.

10/ Do the VWR® Electronic Pipette always need to be greased?

No, it does not need to be greased regularly but it is recommended to grease the piston after cleaning (in case the piston has been wiped with organic solvents for example) or after sterilization or any other decontamination method. Please see the User guide for more detailed info on cleaning and decontamination.

11/ when does the pipette need to be calibrated?

As per the ISO 8655-6, at least one inspection per year should be carried out by an ISO 17025 recommended Service center. Between two inspections, the frequency of calibration, the volumes tested and the number of measurement per volume tested will be decided by the user as per the usage of the pipette in terms of frequency of use and types of liquids used. To avoid doubts about results obtained, we recommend performing a first level maintenance and a leak test at least every quarter (Please see the User guide for more detailed info on Cleaning/ decontamination and leak test).

12/ What do the terms Systematic error (Accuracy) and Random error (Precision) mean in the Pipette's Specifications?

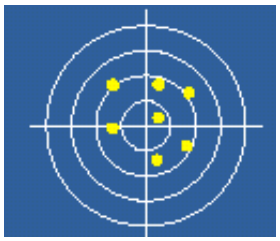
The Accuracy or Systematic error is the ability of a measuring instrument to give responses close to a true value.

The Precision or Random error is the ability of an instrument to provide closely similar responses (measurements).

See below examples:

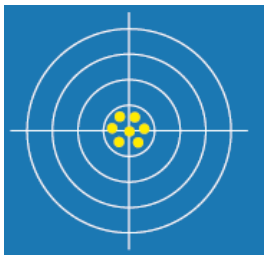
Precise But not Accurate:

There is no variation between the separate pipettings, but the mean volume differs from the set volume



Accurate But not Precise:

The mean volume is the correct (set) volume, but separate pipettings differ from the set volume



Accurate and Precise:

The mean volume is the correct (set) volume.

There is no variation between the separate pipettings

13/ what VWR Electronic Pipette components are made of?

And what is the Chemical compatibility Table with Pipette's Materials?

The Upper part of the pipette is mainly made of:

- PP: Polypropylene
- PBT: Polybutylene Terephthalate
- POM: Polyoxymethylene

The Lower part of the pipette is mainly made of:

- PVDF: Polyvinylidene fluoride
- PBT: Polybutylene Terephthalate
- PC: Polycarbonate

Product		Steel	PET	Nitril	EPDM	LCP	PA	PBT	PC	PE	PVDF	TPX	POM	PP
Acetamide		++	N/A	++	++	N/A	++	N/A	N/A	++	N/A	N/A	++	++
Ethyl acetate		++	+	-	++	++	++	++	++	++	++	+	N/A	++
Acetone		++	+	-	++	++	++	++	-	++	++	+	+	++
Acetonitrile		++	N/A	+	++	+	N/A	N/A	-	++	+	N/A	N/A	++
Acetic acid	20%	++	++	+	++	++	++	N/A	++	++	++	++	++	++
	50%	++	++	+	++	++	-	N/A	+	++	++	++	++	++
	100%	++	++	-	++	+	-	N/A	-	++	++	+	+	++
Hydrochloric acid	10%	-	++	++	++	++	-	++	++	++	++	++	++	++
	20%	-	+	+	++	++	-	+	++	++	++	++	+	++
	37%	-	-	-	++	++	-	-	+	++	++	++	-	++
Hydrofluoric acid	20%	+	+	-	++	+	-	+	++	++	++	++	+	++
	40%	-	+	-	++	-	-	-	+	++	++	++	+	++
Formic acid	100%	++	N/A	-	++	++	-	+	-	++	++	N/A	+	++
Nitric acid	10%	++	++	+	++	++	-	++	++	++	++	++	+	++
	30%	++	+	-	+	++	-	+	++	++	++	++	-	+
	65%	++	-	-	-	+	-	-	+	+	+	++	-	-
Phosphoric acid	20%	++	N/A	+	++	N/A	-	++	++	++	++	++	+	++
	85%	++	N/A	-	++	N/A	-	++	++	++	++	++	-	++
Propionic acid	50%	++	-	+	N/A	N/A	++	++	+	++	++	N/A	-	++
	100%	++	-	-	N/A	N/A	+	++	-	++	++	N/A	-	++
Sulfuric acid	20%	++	++	+	+	++	+	++	++	++	++	++	+	++
	50%	++	++	-	+	++	-	+	++	++	++	++	-	++
	95%	++	+	-	-	-	-	-	+	+	+	++	-	+
Trifluoroacetic acid	20%	++	N/A	-	N/A	N/A	+	N/A	++	++	++	N/A	++	++
	80%	++	N/A	-	N/A	N/A	-	N/A	+	++	++	N/A	+	++
	100%	++	N/A	-	N/A	N/A	-	N/A	-	++	++	N/A	-	++
Benzyl alcohol		++	++	-	N/A	N/A	+	N/A	-	++	++	++	-	++
Aniline		++	-	+	++	N/A	++	N/A	-	+	++	N/A	+	++
Butanol / Butyl alcohol		++	++	++	++	N/A	++	++	++	++	++	N/A	++	++
Chloroform		++	-	-	-	N/A	+	-	-	+	++	+	+	-
Cyclohexane		++	++	++	-	N/A	++	N/A	++	++	-	+	++	+
Diacetone alcohol		++	++	+	N/A	N/A	N/A	N/A	N/A	N/A	+	N/A	N/A	++
Methylene chloride		++	+	-	-	N/A	-	-	-	+	++	++	++	+
Diethylene glycol		++	N/A	++	++	++	N/A	N/A	N/A	++	++	++	++	++
Dimethylformamide (DMF)		++	++	-	+	++	++	++	-	++	-	++	++	++
Dimethylsulfoxide (DMSO)		++	N/A	-	N/A	N/A	+	N/A	-	++	N/A	N/A	N/A	N/A
Dioxane (1,4)		++	++	-	+	N/A	++	++	-	++	+	N/A	++	+
Ethanol		++	++	++	++	++	++	++	++	++	++	++	++	++
Ether		++	++	++	+	N/A	++	++	++	+	++	+	++	++
Formaldehyde		++	++	++	++	N/A	++	N/A	++	++	++	++	++	++
Hexane		++	N/A	++	-	+	++	++	++	+	++	+	++	++
Hydrogen peroxide	50%	++	N/A	+	++	N/A	++	++	++	++	++	++	++	++
Ammonium hydroxide	20%	++	++	++	++	N/A	N/A	+	-	++	N/A	++	++	++
Sodium hydroxide	10%	++	+	++	++	++	++	+	-	++	++	++	++	++
	40%	++	-	+	++	++	++	+	-	++	++	++	++	++
Sodium hypochlorite	15% Cl	+	N/A	+	++	++	++	++	++	++	++	++	-	+
Methanol		++	++	++	++	+	++	++	+	++	++	++	++	++
Methyl ethyl ketone		++	++	-	+	++	++	++	-	++	-	+	+	++
Pentane		++	N/A	++	-	N/A	N/A	N/A	++	++	++	+	++	N/A
Tetrahydrofuran (TH-)		++	++	+	+	+	++	+	-	-	+	+	N/A	+
Urea		++	++	N/A	N/A	-	++	++	N/A	++	++	N/A	++	++

PET = Polyethylene Terephthalate
Nitril = Nitril
EPDM = Ethylene Propylene
LCP = Liquid Cristal Polymer
PA = Polyamide
PBT = Polybutylene Terephthalate

PC = Polycarbonate
PE = Polyethylene
PVDF = Polyvinylidene fluoride
TPX = Polymethylpentene
POM = Polyoxymethylene
PP = Polypropylene

++ No chemical degradation
+ Medium resistance to chemical agents
- Low resistance to chemical agents
N/A No data available

14/ what is the Volume range in REPETITIVE Mode? How many Aliquots can I perform per Model?

Models	Volume aliquot mini (% of nom. Vol.)	Volume aliquot mini µl	Number of aliquots µl
VWR 10	5%	0.5 µl	20
VWR 20	10%	2 µl	10
VWR 300	3%	10 µl	30
VWR 1200	1.5%	20 µl	60
VWR 8x10 VWR 12x10	5%	0.5 µl	20
VWR 8x20 VWR 12x20	5%	1 µl	20
VWR 8x300 VWR 12x300	3%	10 µl	30
VWR 8x1200 VWR 12x1200	4%	50 µl	24