Calibrex™

your choice for flexibility and performance

bottle-top dispensers

additional volumes

The Calibrex™ line includes a large selection of robust dosing instruments with excellent chemical resistance, high performance and simplified maintenance. Intended for the safe and reproducible liquid distribution in volumes ranging from 0.1 mL to 100 mL.

Choose from three different models; whatever the application, there will be a Calibrex™ fitting your needs.

The Calibrex™ line features:

- Selection between three different models
- Colour coding identification
- Integrated calibration key
- Long lasting performance stability
- QR coded chemical compatibility
- Quick disassembling, no tool needed
- Autoclavable at 121° C fully assembled

2 YEAR WARRANTY

The Calibrex™ models

520 *universal*
525 *organo*
530 *solutae*

SOCOREX SWISS

Calibrex™ *organo / solutae*

your choice for flexibility and performance

▶ Ease of use ①

Smooth aspiration and distribution for trouble-free routine dispensing. Dual scale enables volume reading from a wide angle.

▶ Volume setting

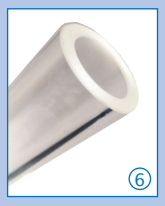
Spring loaded sliding cursor ② softly moves up and down dual scale and precisely stops at desired graduation. Easy exchange for the alternative classical screw button ③, available as accessory.

▶ Permanent visibility ④

Safety transparent thick sleeve around barrel and delivery jet window allow liquid flow monitoring.

▶ Optimal working position ⑤

The instrument rotates 360° for adequate positioning on the bottle. Freely rotating dispenser body makes volume clearly visible from any position.



▶ Robustness

Glass barrel with thick wall contributes to overall dispenser robustness.

Calibrex™ *organo*

Calibrex™ *organo* 525 includes a ground glass or ceramic plunger, both suited for organics and non-crystallizing acid and base solutions.

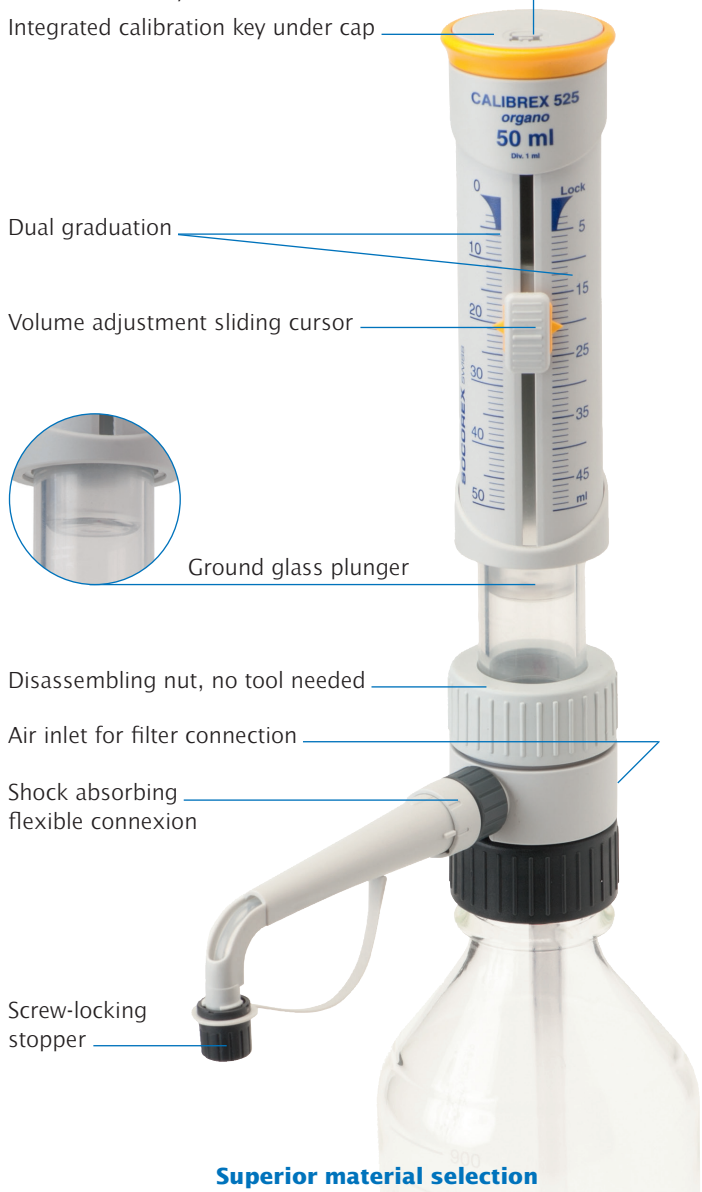
525

organo

0.1 – 1 mL
0.25 – 2.5 mL
0.5 – 5 mL
1 – 10 mL
2.5 – 25 mL
5 – 50 mL
10 – 100 mL

2 YEAR WARRANTY

AUTOCLAVE AT 121°C



Superior material selection

Parts in contact with liquid flow are chemically inert, providing for stability and long instrument life.

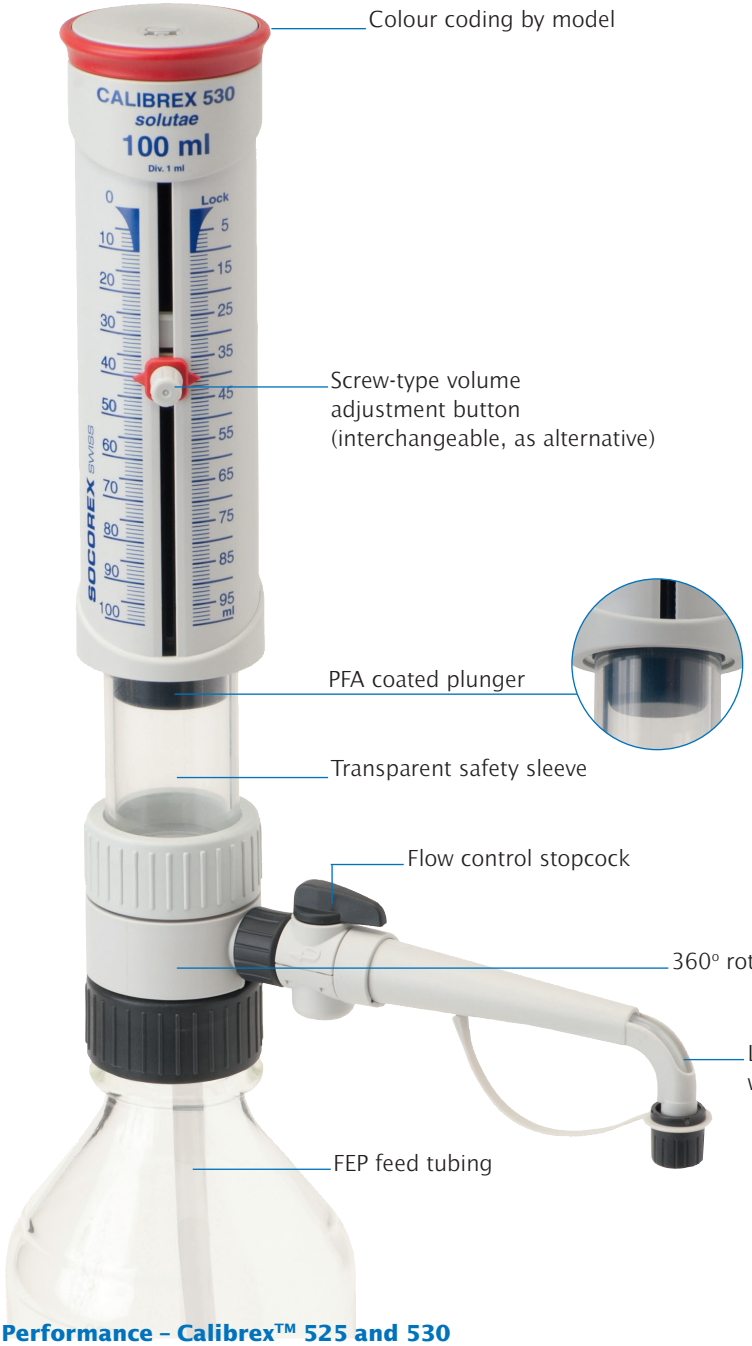
Parts	525 *organo*	530 *solutae*
Feed tubing 1 to 10 mL	PTFE	
Feed tubing 25 to 100 mL	FEP	
Valve body	Ceramic	
Valve balls 1 to 10 mL	Pyrex glass	
Valve balls 25 to 100 mL	Ceramic	
Valve spring	Platinum-iridium	
Valve plate	PTFE	
Barrel	Borosilicate glass	
Plunger 1 to 5 mL	Ceramic	PFA coated ceramic
Plunger 10 to 100 mL	Ground glass	PFA coated glass
Connecting body	ETFE	
Delivery jet	FEP/PCTFE	
Stopper	ETFE	

Chemical resistance ⑦

Printed QR code for instant access to chemical resistance chart.

Calibrex™ *solutae*

Calibrex™ *solutae* 530 has a glass or ceramic PFA coated plunger preventing the crystallization of chemicals. It enables trouble free distribution of salt solutions, weak and strong acids, as well as bases.



530

solutae

0.1 – 1 mL
0.25 – 2.5 mL
0.5 – 5 mL
1 – 10 mL
2.5 – 25 mL
5 – 50 mL
10 – 100 mL

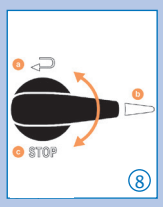
2 YEAR WARRANTY

AUTOCLAVE AT 121°C

Performance – Calibrex™ 525 and 530

Volume mL	Division mL	Inaccuracy (E%)			Imprecision (CV%)		
		Min. vol.	Mid. vol.	Max. vol.	Min. vol.	Mid. vol.	Max. vol.
0.1 – 1	0.02	<+/- 3.0%	<+/- 1.8%	<+/- 0.6%	< 1.2%	< 0.7%	< 0.17%
0.25 – 2.5	0.05	<+/- 2.7%	<+/- 1.6%	<+/- 0.6%	< 0.9%	< 0.55%	< 0.17%
0.5 – 5	0.1	<+/- 2.0%	<+/- 1.3%	<+/- 0.6%	< 0.5%	< 0.35%	< 0.1%
1 – 10	0.2	<+/- 1.5%	<+/- 1.2%	<+/- 0.6%	< 0.5%	< 0.35%	< 0.1%
2.5 – 25	0.5	<+/- 1.5%	<+/- 1.1%	<+/- 0.6%	< 0.5%	< 0.35%	< 0.1%
5 – 50	1.0	<+/- 1.5%	<+/- 1.1%	<+/- 0.6%	< 0.5%	< 0.35%	< 0.1%
10 – 100	1.0	<+/- 1.5%	<+/- 1.1%	<+/- 0.6%	< 0.5%	< 0.35%	< 0.1%

Performance values obtained by a smooth and steady pace movement, with bidest water at constant temperature (± 0.5°C) comprised between 20 and 25°C, according to EN ISO 8655.
Warning: omission to untighten connecting body ring before autoclaving, and/or over-tightening ring when dispensing, may reduce performance.



▶ Flow control stopcock ⑧

Both 525 and 530 models are available with or without stopcock, adding flexibility to safety. Next to its dispensing position (b), device enables liquid priming and recycling (a) without reagent loss or contamination. Locking position (c) for safe dispenser transportation.

▶ Easy In-lab calibration ⑨

Access to mechanism protected by safety seal sticker. Integrated key located under plunger cap. Engraved +/- arrows for easy and precise setting. Spare seal stickers are available.

▶ Maintenance ⑩

Disassembling/reassembling facilitated by limited number of elements – no tool needed. Key parts such as valves, plunger, barrel and delivery jet are removable in seconds for cleaning. Fully autoclavable at 121°C / 250°F.

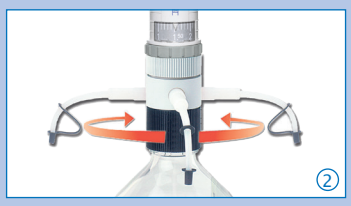
▶ Air filter ⑪

Air inlet can be enlarged to receive a Luer membrane filter, if airborne contamination is a concern.

Calibrex™ *universal*

your choice for flexibility and performance

▶ **Friendly volume setting** ①
Fast and precise adjustment. Efficient click-stop mechanism prevents unwanted alteration. Large display is easy to read; the window adjusts to desired side of instrument body. Each step on the cylindrical cam is pre-calibrated and corresponds to one division on the volume graduation.



▶ **Optimized working position** ②
The instrument rotates 360° for adequate positioning on top of the bottle.

▶ **Air filter** ③
Air inlet can be enlarged to receive a Luer membrane filter, if airborne contamination is a concern.

▶ **In-lab calibration** ④
Dispensers are factory calibrated and can be easily recalibrated. Integrated adjustment screw bears clear setting indications.

▶ **Easy maintenance** ⑤
Disassembling/reassembling is facilitated by the limited number of elements – no tool needed.
Fully autoclavable at 121°C / 250°F.

Calibrex™ *universal*

Calibrex™ *universal* 520 has a PFA coated plunger preventing the crystallization of chemicals. Made of high-tech materials, it provides for broad chemical resistance and is universally adapted for most laboratory reagents.

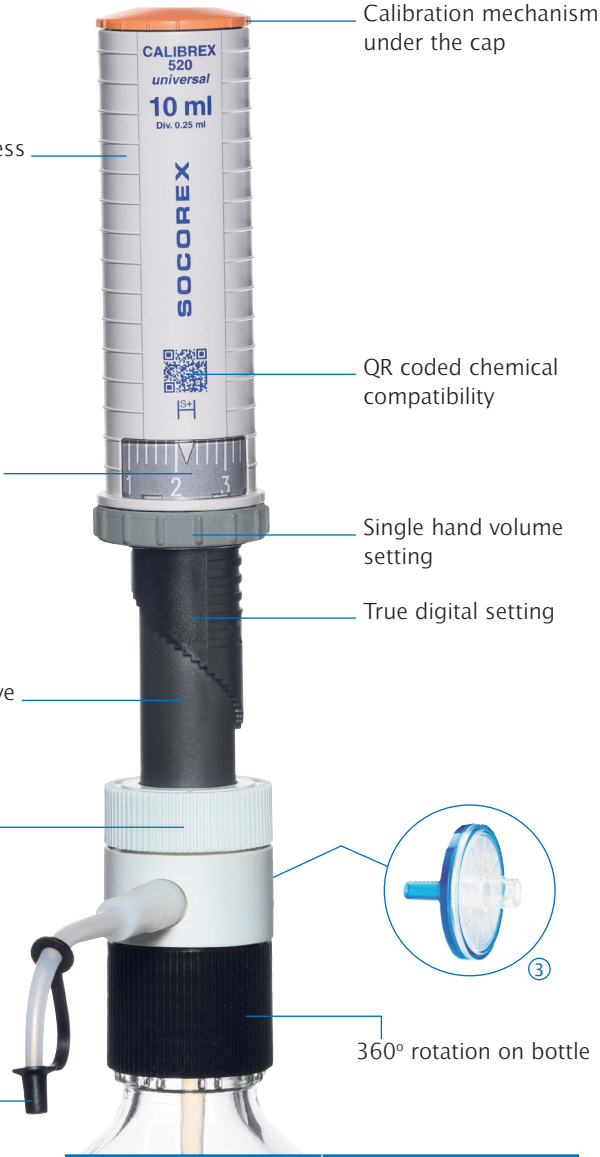
520

universal

0.25 – 2 mL
1 – 5 mL
1 – 10 mL

2 YEAR WARRANTY

AUTOCLAVE AT 121°C



Superior material selection

Special attention is paid to component materials, providing for long instrument life. Parts coming in contact with the liquid flow are chemically inert.

Parts	Materials
Feed tube	PTFE
Intake valve	Ceramic
Valve balls	Pyrex glass
Valve spring	Platinum-iridium
Barrel	Borosilicate glass
Barrel plate / base	PTFE
Plunger	Glass with PFA coating
Outlet valve	Ceramic
Body	ETFE
Delivery jet assembly	PTFE/ETFE

Chemical resistance

Printed QR code for instant access to chemical resistance chart.

Performance – Calibrex™ 520

Volume mL	Division mL	Inaccuracy (E%)			Imprecision (CV%)		
		Min. vol.	Mid. vol.	Max. vol.	Min. vol.	Mid. vol.	Max. vol.
0.25 – 2	0.05	< ± 3.0%	< ± 1.8%	< ± 0.6%	< 0.5%	< 0.35%	< 0.1%
1 – 5	0.1	< ± 2.0%	< ± 1.3%	< ± 0.6%	< 0.5%	< 0.35%	< 0.1%
1 – 10	0.25	< ± 1.5%	< ± 1.1%	< ± 0.6%	< 0.5%	< 0.35%	< 0.1%

Performance values obtained with bidest water at constant temperature (± 0.5°C) comprised between 20 and 25°C in accordance with ISO 8655.

Accessories for Calibrex™ dispensers

Ordering information – Accessories

Description	Packaging	Cat. No.
Work station for dispenser stability ①		
Fits Calibrex™ 520 dispenser	1/pk	320.SB050
Fits Calibrex™ 525/530 dispensers	1/pk	320.SB100
Remote aspiration work station and feed tubing set ②		
Fits Calibrex™ 520 dispenser*	1/pk	320.BC050
Fits Calibrex™ 525/530 dispensers* as of 25 mL	1/pk	320.BC100
Feed tubing set, 2.5 m with connector for remote aspiration, fits Calibrex™ 525/530 as of 25 mL	1/pk	1.525.581

* Dispenser and feed tubing / connector to be ordered separately

Description	Material	Length	int. Ø	Cat. No.
Extension tubing and Jet-Pen™ ③				
Fits Calibrex™ 520	PTFE	600 mm	2.2 mm	1.524
Fits Calibrex™ 525/530, up to 10 mL	FEP/PCTFE	600 mm	4 mm	1.525.610
Fits Calibrex™ 525/530, 25 mL	FEP/PCTFE	600 mm	4 mm	1.525.625
Fits Calibrex™ 525/530, 50 and 100 mL	FEP/PCTFE	600 mm	4 mm	1.525.650

Description	Packaging	Cat. No.
Flow control stopcock for Calibrex™ 525/530 ④		
Fits models up to 10 mL	1/pk	1.525.544
Fits models as of 25 mL	1/pk	1.525.546
Delivery jet assembly, 90 mm, for Calibrex™ 525/530 ⑤		
Fits 1 mL model	1/pk	1.525.090
Fits 2.5, 5 and 10 mL models	1/pk	1.525.091
Delivery jet assembly, 120 mm, for Calibrex™ 525/530 ⑤		
Fits 25 mL model	1/pk	1.525.120
Fits 50 and 100 mL models	1/pk	1.525.121
Delivery jet assembly, extended, 120 mm, for Calibrex™ 525/530 ⑤		
Fits 1 mL models	1/pk	1.525.123
Fits 2.5, 5 and 10 mL models	1/pk	1.525.125
Delivery jet assembly, extended, 150 mm, for Calibrex™ 525/530 ⑤		
Fits 25 mL models	1/pk	1.525.150
Fits 50 and 100 mL models	1/pk	1.525.151

Description	Colour	Packaging	Cat. No
Screw type volume setting button ⑥			
Fits Calibrex™ 525 dispensers	Yellow	1/pk	1.525.918
Fits Calibrex™ 530 dispensers	Red	1/pk	1.530.918

Description	Length	int. Ø	Cat. No
Replacement feed tubing, PTFE ⑦			
Fits Calibrex™ 520/525/530 up to 10 mL, cut	300 mm	5 mm	511.707
Fits Calibrex™ 520/525/530 up to 10 mL, by the meter, uncut	specify	5 mm	511.709
Replacement feed tubing, FEP ⑦			
For Calibrex™ 525/530 as of 25 mL, cut	350 mm	7 mm	525.350
For Calibrex™ 525/530 as of 25 mL, by the meter, uncut	specify	7 mm	525.706
Telescopic feed tubing, FEP ⑦			
Fits Calibrex™ 520/525/530 up to 10 mL	150 - 255 mm	1/pk	1.525.352
Fits Calibrex™ 525/530 as of 25 mL	195 - 345 mm	1/pk	1.525.355

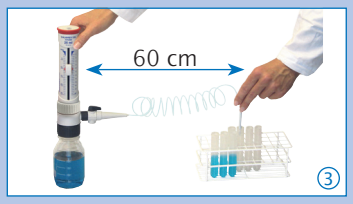
Description	Packaging	Cat. No
Safety seal sticker		
Fits Calibrex™ 525/530 dispensers	25/pk	1.525.525
Fits Calibrex™ 525/530 dispensers	100/pk	1.525.526

▶ Dispenser stability ①

Stand holds dispenser when screwed on small-size bottle.

▶ Remote aspiration ②

Work station facilitates liquid intake from drum or other remote container (<10 m distance, <2 m elevation).



▶ Extension tubing ③

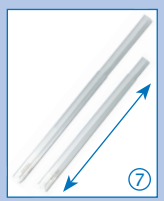
Spiral tubing and delivery Jet-Pen™ help dispense into vessels with maximum comfort within a 60 cm distance. No tool needed to assemble or to remove for cleaning. Autoclavable.

▶ Flow control stopcock ④

Fitting Calibrex™ 525/530 models. No tool needed to assemble or to remove for cleaning. Autoclavable.

▶ Delivery jet ⑤

Extended sizes exchangeable without any tool on Calibrex™ 525/530 models. Autoclavable.



▶ Alternative setting button ⑥

Classical screw-type button easily replaces the original sliding cursor, according to user preference.

▶ Standard and telescopic feed tubings ⑦

Supplied either cut to standard size or uncut, by the meter.
Optional telescopic tubing for instant fitting to bottle size.

Calibrex™ *universal / organo / solutae*

your choice for flexibility and performance

Chemical resistance chart

Chemicals A – H	Calibrex ™		
	520	525	530
Acetaldehyde (Ethanal)	A	A	A
Acetic acid 96%	A	A	B/2
Acetic acid 100% (Glacial)	A	B/4	B/2/4
Acetone (Propanone)	B/4	B/4	B/4
Acetonitrile (MECN)	A	B/4	B/4
Amino acids	A	C/1	A
Ammonium hydroxide (amonia)	A	B/4	B/4
Amyl alcohol (Pentanol)	A	A	A
Aniline	A	A	A
Ascorbic acid	A	C/1	A
Benzaldehyde	A	A	A
Benzene	B/4	B/4	B/4
Boric acid 10%	A	B/1	A
Bromine	B/2	C/4	C/2/4
Butanol	A	A	A
Butanone (MEK)	B/4	B/4	B/4
Butyl acetate	A	B/4	B/4
N-Butylamine	B/4	B/4	B/4
Calcium chloride	A	C/1	A
Calcium hydroxide	B/1	C/1	B/1
Carbon disulfide	A	B/4	B/4
Carbon tetrachloride	A	B/4	B/4
Chlorine dioxide	B/2/4	B/4	B/2/4
Chlorobenzene	A	B/4	B/4
Chlorobutane	A	B/4	B/4
Chloroethanol	A	B/4	B/4
Chloroform	B/4	B/4	B/4
Chlorosulfuric acid 100%	B/3	B/3/4	B/3/4
Chromic acid 100%	B/3	B/3/4	B/3/4
Citric acid	A	B/1	A
Cyanoacrylate	C/1	C/1	C/1
Cyclohexane	A	B/4	B/4
Cyclohexanone	A	B/4	B/4
1,4-Dioxane (Diethylene dioxide)	A	B/4	B/4
Dichlorobenzene	A	A	A
Dichloroethane (DCE)	B/4	A	A
Diesel oil (Heating oil)	A	A	A
Diethylene glycol	A	A	A
Diethylether	A	B/4	B/4
Dimethyl sulfoxide (DMSO)	A	B/1/4	B/4
Dimethylformamide (DMF)	B/4	B/4	B/4
Ethanol	A	A	A
Ether	B/4	B/4	B/4
Ethyl acetate	A	B/4	B/4
Ethylenediamine	A	A	A
Ethylene glycol	A	A	A
Formaldehyde (Formalin)	A	A	A
Formamide	A	A	A
Formic acid	A	A	A
Gamma-butyrolactone	A	A	A
Gasoline	A	B/4	B/4
Glycerin <40%	A	A	A
Heptane	A	A	A
Hexane	A	A	A
Hydrochloric acid 20%	A	A	A
Hydrochloric acid 37% (HCl)	A	B/3	B/3
Hydrofluoric acid (HF)	C/5	C/5	C/5
Hydrogen peroxide	A	A	B/2

Chemicals I – Z	Calibrex ™		
	520	525	530
Iodine	A	C/1	B/1
Iodine bromide / chloride	C/2/4	C/4	C/2/4
Isooctane	A	A	A
Isopropanol	A	A	A
Isopropylamine	A	B/4	B/4
Lactic acid	A	C/1	A
2-Methoxyethanol	A	A	A
Methanol	A	A	A
Methyl chloride (Chloromethane)	A	B/4	B/4
Methyl methacrylate (MMA)	A	B/4	B/4
Methyl propyl ketone (2-Pentanone)	B/4	A	A
Methylene chloride (Dichloromethane) (DCM)	B/2/4	B/4	B/2/4
Nitric acid 100%	B/3	C/3/4	C/2/3/4
Nitric acid dil. <30%	A	B/4	B/4
Nitro-hydrochloric acid (Aqua regia)	B/3	B/4	B/2/4
N-methyl-2-pyrrolidone (NMP)	A	A	A
Octane	A	A	A
Octanol	A	A	A
Oil, mineral (engine oil)	A	A	A
Oil, vegetable, animal	A	B/4	B/4
Oil of turpentine	A	B/4	B/4
Oxalic acid	A	C/1	A
Pentane	B/4	B/4	B/4
Perchloric acid 100%	B/3	B/4	B/4
Perchloric acid diluted	A	A	A
Petroleum	A	B/4	B/4
Petroleum ether / spirit	A	B/4	B/4
Phenol	A	A	A
Phenylhydrazine	A	B/1/4	B/4
Phosphoric acid 85%	A	A	A
Potassium chloride	A	C/1	A
Potassium dichromate	A	C/1	B/1
Potassium hydroxide	B/1	C/1	A
Potassium iodide	A	C/1	A
Potassium permanganate	A	C/1	B/1
Propionic acid (Propanoic acid)	A	A	A
Propylene glycol (Propane-1,2-diol)	A	A	A
Picric acid (Trinitrophenol)	A	B/4	B/4
Pyridine	B/4	B/4	B/4
Scintilation fluid	A	A	A
Silver nitrate	B/1	C/1	A
Sodium acetate	A	C/1	A
Sodium chloride (Kitchen salt)	A	C/1	A
Sodium hydroxide 30%	B/1	C/1	A
Sodium hypochlorite (Javel water)	A	C/1	B/4
Sodium thiosulfate	A	C/1	A
Sulfonitric acid 100%	B/2/3	B/3/4	B/2/3/4
Sulfuric acid 98%	B/2	B/4	B/2/4
Tetrachloroethylene	B/4	B/4	B/4
Tetrahydrofuran (THF)	B/2/4	B/4	B/2/4
Toluene	B/4	B/4	B/4
Trichlorethylene	B/4	B/4	B/4
Trichloroacetic acid	A	B/1/4	B/4
Trichloroethane	B/4	B/4	B/4
Trichloromethane (Chloroform)	B/4	B/4	B/4
Triethylene glycol	A	A	A
Trifluoroacetic acid (TFA)	B/3	B/4	B/4
Xylene	B/4	B/4	B/2/4

Compatibility statement

A = Good resistance – B = Acceptable with limitations – C = Not recommended

Technical risks

1 = Possible crystallization, valve or plunger blockage. Scratches on plunger coating if plunger/barrel dried and stick together.
2 = Swell of plunger coating, possible peeling.
3 = Release of acid vapours (risk increases with concentration). Do not leave dispenser on bottle.
4 = Damage, softening or discoloration of external parts through vapours. Do not leave dispenser on bottle.
5 = Chemical degradation of glass parts (plunger/barrel).

Model differentiation 520 / 525 / 530

* Except hydrofluoric acid (HF)

Ordering information – Instruments

Calibrex™ *universal* 520

32 mm base thread. Supplied with 300 mm feed tubing, 80 mm delivery jet with stopper, 28, 40, 45 mm bottle neck adapters, QC certificate and operating instructions.

Volume mL	Division mL	Cat. No. Fixed volume*	Cat. No. Adj. Volume
0.25 – 2	0.05	520.F02	520.002
1 – 5	0.1	520.F05	520.005
1 – 10	0.25	520.F10	520.010

* Specify desired fixed volume within instrument range when ordering.

Calibrex™ *organo* 525

45 mm base thread. Supplied with feed tubing, delivery jet with stopper, bottle neck adapters, QC certificate and operating instructions.
1 and 2.5 mL: 300 mm feed tubing, 90 mm delivery jet, 25, 28 and 32 mm adapters.
5 and 10 mL: 300 mm feed tubing, 90 mm delivery jet, 28, 32 and 40 mm adapters.
As of 25 mL: 350 mm feed tubing, 120 mm delivery jet, 32, 38 and 40 mm adapters.

Volume mL	Division mL	Cat. No. Without stopcock	Cat. No. With stopcock
0.1 – 1	0.02	525.001	525.001FC
0.25 – 2.5	0.05	525.002.5	525.002.5FC
0.5 – 5	0.1	525.005	525.005FC
1 – 10	0.2	525.010	525.010FC
2.5 – 25	0.5	525.025	525.025FC
5 – 50	1.0	525.050	525.050FC
10 – 100	1.0	525.100	525.100FC

Calibrex™ *solutae* 530

45 mm base thread. Supplied with feed tubing, delivery jet with stopper, bottle neck adapters, QC certificate and operating instructions.
1 and 2.5 mL: 300 mm feed tubing, 90 mm delivery jet, 25, 28 and 32 mm adapters.
5 and 10 mL: 300 mm feed tubing, 90 mm delivery jet, 28, 32 and 40 mm adapters.
As of 25 mL: 350 mm feed tubing, 120 mm delivery jet, 32, 38 and 40 mm adapters.

Volume mL	Division mL	Cat. No. Without stopcock	Cat. No. With stopcock
0.1 – 1	0.02	530.001	530.001FC
0.25 – 2.5	0.05	530.002.5	530.002.5FC
0.5 – 5	0.1	530.005	530.005FC
1 – 10	0.2	530.010	530.010FC
2.5 – 25	0.5	530.025	530.025FC
5 – 50	1.0	530.050	530.050FC
10 – 100	1.0	530.100	525.100FC

▶ Bottle-neck adapters

Each Calibrex™ dispenser comes along with three additional PP material bottle neck adapters. To fit additional bottle neck diameter, order the appropriate adapter size or combine two adapters to reach the adequate solution.

Type	Ext. Ø of bottle neck	Cat. No.
Adapters for Calibrex™ 525/530 ①		
Threaded, PP	32 – 25 mm	1.525.GL25
Threaded, PP	32 – 28 mm	1.525.GL28
Threaded, PP	45 – 32 mm	1.525.GL32
Threaded, PP	45 – 38 mm	1.525.GL38
Threaded, PP	45 – 40 mm	1.525.GL40
Adapters for Calibrex™ *universal* 520 ②		
Threaded, PP	22, 25, 28, 30, 34, 36, 38, 40, 45 mm	GLP + Ø
Threaded, PTFE	36, 38, 40, 45 mm	GLT + Ø
Tapered, PP	18.8, 24, 29.2, 45 mm	NSP + Ø
Tapered, PTFE	18.8, 24, 29.2 mm	NST + Ø

Calibrex™

your choice for flexibility and performance

bottle-top dispensers

Reagent bottles

Glass and polyethylene reagent bottles supplied with its PP screw cap. Suitable for all bottle top dispensers. Corresponding neck adapters supplied with the dispensers.

Shape	Volume	Neck, ext. Ø	Cat. No.
Amber glass[1] ①			
Square	100 mL	32 mm	314.0100
Square	250 mL	32 mm	314.0250
Square	500 mL	32 mm	314.0500
Square	1000 mL	45 mm	314.1000
Round	2500 mL	45 mm	314.2500
Amber glass, with handle[1] ②			
Round	2500 mL	45 mm	314.2500H
PE coated amber glass[2] ③			
Square	500 mL	32 mm	314.0500PE
Square	1000 mL	45 mm	314.1000PE
Round	2500 mL	45 mm	314.2500PE
Clear borosilicate glass[1] ④			
Round	250 mL	45 mm	314.0250C
Round	500 mL	45 mm	314.0500C
Round	1000 mL	45 mm	314.1000C
Round	2000 mL	45 mm	314.2000C
Clear Pyrex glass, with connection neck[1] ⑤			
Round	500 mL	32 mm	314.0500P
Polyethylene[2] ⑥			
Square	250 mL	25 mm	315.0250
Square	500 mL	25 mm	315.0500
Square	1000 mL	32 mm	315.1000
Square	2500 mL	45 mm	315.2500

[1] autoclavable, [2] not autoclavable

Safety first

Refer to package inserts for safety precautions, operating instructions and warranty terms.
Mind risks involved in handling hazardous liquids with respect to personal, third party and environmental protection and safety.

QC and warranty

The Calibrex™ line is manufactured and tested to fully comply with current regulations. Each instrument bears its own serial number and passes strict performance control attested by an individual QC certificate. Products and specifications are subject to change without prior notice.

2 YEAR WARRANTY

US Patent pending

www.socorex.com/patents-en.html

Accredited calibration laboratory ISO / IEC 17025

Q.M. SYSTEM ISO 9001/13485 CERTIFIED

Your local distributor

SOCOREX SWISS

B.CLX.E – B316

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Technical support information

Chemical resistance of Socorex® dispensers Calibrex™ models 520 / 521 Acurex™ models 501

Bottle-top dispensers are used daily for dispensing a wide range of chemicals. Therefore, instruments have to meet various requirements assuring safety of the laboratory staff and their work. Dispensers must not give off any substances which may interfere with trace analysis, have cytotoxic properties, distort optical tests or influence chromatographic methods and residue analysis.

Materials

Special attention was paid to component materials (see charts below). All parts of the Acurex™ and Calibrex™ dispensers in contact with the liquid are made of robust and chemically inert materials providing for long instrument life.

Parts	Acurex™ 501
Valve	Pyrex glass and synthetic ruby
Barrel	Neutral glass
Plunger	PTFE coated glass
Reservoir	Amber glass or borosilicate glass
Delivery jet and union	PTFE / ETFE / PFA

Parts	Calibrex™ 520	Calibrex™ 521
Feed tube	PTFE	
Intake valve	Ceramic	Borosilicate glass
Valve balls	Pyrex glass	Ceramic, ruby
Valve springs	Platinum-Iridium	
Barrel	Borosilicate glass	
Barrel plate	PTFE	- -
Plunger	PFA coated glass	
Outlet valve	Ceramic	
Body	ETFE	
Delivery jet assembly	PTFE/ETFE	

Chemicals from A to Z

The following list includes most currently used chemicals. It provides useful information for the safe and adequate use of Acurex™ 501 and Calibrex™ 520/521 dispensers. However, safety precautions and recommendations in operating instructions must be followed carefully.

Code explanations

A = Good resistance

B = Acceptable with limitations

C = Not recommended

1 = Possible crystallisation - blockage (do not let dry plunger/barrel together).

2 = Swell of plunger protection layer, possible peeling.

3 = Acid vapours (better resistance with lower concentration). Do not leave instrument on bottle.

4 = Risk of softening or discoloration of external parts through vapours. Do not leave instrument on bottle.

5 = Chemical degradation of glass parts (plunger/barrel).

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Technical support information

Chemicals A - Z	Acurex 501	Calibrex 520	Calibrex 521
A			
Acetic acid 100%	A	A	B/1
Acetic anhydride	B/4	B/4	B/4
Acetone	A	B/4	A
Acetonitrile	A	A	A
Ammonium hydoxide	A	A	B/4
Ammonium molybdate	A	A	A
Aniline	A	A	B/4
Antimony trichloride	B/2	A	A
Ascorbic acid	A	A	A
B			
Benzaldehyde	A	A	A
Benzene	A	B/4	B/4
Bis-(2-ethylhexyl) phthalate	A	B/4	B/4
Boric acid	A	A	A
Bromine	B/2	B/2	C/2/4
Butanol	A	A	A
Butanone	A	C/4	A
Butyl acetate	A	A	B/4
Butyl acrylate	A	A	A
C			
Calcium chloride	B/1	A	A
Carbon disulfide	A	A	A
Carbon tetrachloride	A	A	B/4
Chlorine water	C/2/4	B/2/4	C/2/4
Chlorobenzene	A	A	A
Chlorobutane	A	A	A
Chloroethanol	A	A	A
Chloroform / Trichloroethane	C/4	B/4	B/4
Chloronitric acid 100%	B/2/3	B/3	C/3
Chlorosulphuric acid 100%	B/2/3	B/3	B/3
Chromic acid 100%	B/2/3	B/3	B/3
Citric acid	A	A	A
Copper fluoride	A	A	B/4
Cyanocrylate	C/1	C/1	C/1
Cyclohexane	A	A	A
Cyclohexanone	A	A	A
D			
Di (2-ethylhexyl) peroxydicarb.	B/1	B/4	B/4
Dichlorethane (DCE)	B/4	B/4	A
Dichloromethane (DCM)	B/4	B/2/4	B/2/4
Diethylene glycol	A	A	A
Diethylether	A	A	A
Dimethylformamide (DMF)	A	B/4	A
Dimethylsulfoxide (DMSO)	A	A	A
Dioxane /Diethylene dioxide	A	A	B/4
Dioxide chlorine	B/2/4	B/2/4	B/2/4

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Technical support information

Chemicals A - Z	Acurex 501	Calibrex 520	Calibrex 521
E			
Essential oils	B/1	B/1	B/1
Ethanol	A	A	A
Ether	A	B/4	B/4
Ethyl acetate	A	A	B/4
Ethylene diamine	A	A	A
Ethylene glycol	A	A	A
F			
Formaldehyde (Formalin)	A	A	A
Formic acid	A	A	A
G			
Gamma-butyrolactone	A	A	A
Gazoline	A	A	A
Glycerin <40%	A	A	A
H			
Heptane	A	A	A
Hexane	A	A	A
Hydrofluoric acid (HF)	C/5	C/5	C/5
Hydrochloric acid <20% (HCL)	B/3	A	B/4
Hydrochloric acid 20 to 37% (HCL)	B/2/3	B/2/3	B/2/4
Hydrogen peroxide	A	A	A
I			
Iod (J2)/ Iodine	A	A	A
Iodine Bromide	C/2/4	C/2/4	C/2/4
Iodine Chloride	C/2/4	C/2/4	C/2/4
Isooctane	A	A	A
Isopropanol	A	A	A
Iso-propylamide	A	A	A
L			
Lactic acid	A	A	A
Liquid ammonia	A	A	A
M			
Methanol	A	A	A
Methyl chloride	B/4	B/4	B/4
2-Methoxyethanol	A	A	A
Methyl ethyl ketone (MEK)	A	B/4	A
Methylene chloride (DCM)	A	B/2/4	B/2/4
Methyliodide	A	A	A
Methylmethacrylate (MMA)	A	A	A
Methylpentanone	B/4	B/4	B/4
N			
N-Butylamin	B/4	B/4	B/4
Nitric acid >70%	B/2/3	C/2/3/4	C/2/3
Nitric acid 30 to 70%	B/2/3	B/2/3	B/2/3
Nitric acid <30%	A	A	A
Nitro-hydrochloric acid	B/2/3	B/3	C/3
Nitromethane	A	B/4	B/4
N-methyl-pyrolidone (NMP)	A	A	A

Technical support information

Chemicals A - Z	Acurex 501	Calibrex 520	Calibrex 521
O			
Octane	A	A	A
Octanol	A	A	A
Oil (vegetable, mineral, animal)	A	A	A
Oxalic acid	A	A	A
P			
Pentane	B/4	B/4	B/4
Perchloric acid 100%	B/2/3	B/3	B/3
Perchloric acid diluted	A	A	A
Petrol benzene	A	A	B/4
Petroleum ether / spirit	A	A	B/4
Phenol	A	A	A
Phenylhydrazine	A	A	B/4
Phosphine	A	A	A
Phosphoric acid 100%	A	A	A
Potassium chloride	B/1	A	A
Potassium dichromate	A	A	A
Potassium fluoride	C/4/5	C/4/5	C/4/5
Potassium hydroxide	B/1	B/1	B/1
Potassium iodide	A	A	A
Potassium permanganate	A	A	A
Propionic acid	A	A	A
Propylene oxide	A	A	A
Pyric acid (Trinitrophenol)	A	A	B/4
Pyridine	B/4	B/4	B/4
R			
Resorcin	B/4	B/4	B/4
S			
Silver nitrate	A	B/1	B/1
Sodium acetate	A	A	A
Sodium chloride/salt for cooking	B/1	A	A
Sodium hydroxide	B/1	B/1	B/1
Sodium hypochloride	A	A	A
Sodium thiosulfate	A	A	A
Sulfochromic acid 100%	B/2/3	B/2/3	B/2/3
Sulfonitric acid 100%	B/2/3	B/2/3	B/2/3
Sulfur dioxide	B/4	B/4	B/4
Sulfuric acid < 60%	B/3	A	B/4
Sulfuric acid >= 60%	B/2/3	B/2/3	B/2/4
T			
Terebentine oil	A	A	B/4
Tetrachloroethane	C/4	B/4	B/4
Tetrachloroethylene/methylene	B/4	B/4	B/4
Tetrahydrofurane THF	B/2/4	B/2/4	B/2/4
Tetramin	A	A	A
TKD Digest	B/1/3	B/1/2	B/1/2
Toluene	A	B/4	B/4
Trichlorethylene	B/4	B/4	B/4
Trichloroacetic acid	A	A	A

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Chemicals A - Z	Acurex 501	Calibrex 520	Calibrex 521
T (continued)			
Trichloroethane/methane	B/4	B/4	B/4
1,1,2 - Trichlortrifluoroethane	B/4	B/4	B/4
Trifluoroacetic anhydride (TFAA)	B/3	B/3	B/4
Trifluoroacetic acid (TFA)	B/3	B/3	B/4
X			
Xylene	A	B/4	B/4

The above guidelines have been carefully reviewed prior to publication. Should you require information on chemicals not listed, please feel free to contact us.

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