

# Volumetric solutions



Titration is a high-precision analytical method that requires titrants of accurately known concentration.

Scharlau's volumetric solutions are manufactured with utmost precision, allowing us to guarantee a factor of 1.000.

## Traceability

All Scharlau solutions are traceable to NIST (National Institute of Standards and Technology) primary reference materials to ensure accurate concentrations.

## Titre

The titre or factor of a volumetric solution is the ratio between the molar concentration obtained ( $M(x)$ ) and the molar concentration expected ( $Me(x)$ ).  $t = M(x) / Me(x)$  Our solutions are manufactured with a titre of 1.000. Because the titre is important for the results of titrations, solution titre should be checked regularly.

## Accuracy

To manufacture solutions of accurate concentration, we use modern reactors that allow thorough solution mixing and optimal concentration adjustment to obtain a factor of 1.000.

## Expiry date

Ready-to-use volumetric solutions have a shelf life of 3 years, except those with a lower concentration, which have a shelf life of 2 years.

## Complete certificate of analysis

Volumetric solutions are used as reference materials to calculate the concentration, and it is important for the certificate of analysis to list all data characterizing the solution.

Our CoA list all the critical data, and always is accompanying the product.

## Convenient HPDE Bottle

Our 1 litre bottle can be directly used in the automatic titrator. It fits perfectly into the titrator support and does not move, not even when empty.

In addition, raised titration marks allow the user to accurately estimate the amount of liquid remaining in the bottle.

## Tailor-made solutions

We can prepare your solutions. Over 50 years of experience in reagent manufacture are your assurance of quality.

**All solutions are precise and reliable for guaranteed quality**

	DESCRIPTION	CONCENTRATION	ART No.		DESCRIPTION	CONCENTRATION	ART No.
<b>ACID BASE</b>	Acetic acid	0,1 mol/l (0,1 N)	AC0364	<b>TITRATION</b>	Ethylenediaminetetraacetic acid, EDTA, disodium salt	0,01 mol/l (0,02 N)	AC0971
		1 mol/l (1 N)	AC0365			0,02 mol/l (0,04 N)	AC0973
	0,01 mol/l (0,01 N)	AC0757	0,025 mol/l (0,05 N)			AC0974	
	0,05 mol/l (0,05 N)	AC0754	0,05 mol/l (0,1 N)			AC0972	
	0,1 mol/l (0,1 N)	AC0746	0,1 mol/l (0,2 N)			AC0970	
	Hydrochloric acid	0,2 mol/l (0,2 N)	AC0740		Calcium chloride	1 mol/l	CA0195
		0,25 mol/l (0,25 N)	AC0755		Zinc sulfate	0,05 mol/l	CI0230
		0,31 mol/l (0,31 N)	AC0769			0,1 mol/l	CI0231
		0,5 mol/l (0,5 N)	AC0745		Copper(II) sulfate	0,02 mol/l	CO0103
		1 mol/l (1 N)	AC0744			0,1 mol/l	CO0102
		1,4 mol/l (1,4 N)	AC0751		Magnesium chloride	0,1 mol/l (0,2 N)	MA0038
		2 mol/l (2 N)	AC0748		Magnesium sulfate	0,01 mol/l	MA0087
		3 mol/l (3 N)	AC0738		Lead(II) nitrate	0,05 mol/l	PL0145
		5 mol/l (5 N)	AC0749		Oxalic acid	0,005 mol/l (0,01 N)	AC1725
		6 mol/l (6 N)	AC0752		0,05 mol/l (0,1 N)	AC1723	
	Nitric acid	0,1 mol/l (0,1 N)	AC1611	Amonium iron(III) sulfate, solution	0,1 mol/l (0,1 N)	HI0317	
		0,5 mol/l (0,5 N)	AC1615	Bromide-bromate	0,05 mol/l (0,1 N), according to ASTM D5776-99	BR0070	
		1 mol/l (1 N)	AC1610	Cerium(IV) sulfate	0,05 mol/l (0,05 N)	CE0101	
	Ortho-Phosphoric acid	2 mol/l (2 N)	AC1612		0,1 mol/l (0,1 N)	CE0102	
		1 mol/l	AC1105	Potassium bromate	1/60 mol/l (0,1 N)	PO0165	
	Sulfuric acid	1 mol/l	AC1106		0,04 mol/l, for COD determination	PO0233	
		0,01 mol/l (0,02 N)	AC2083	Potassium dichromate	1/120 mol/l (0,05 N)	PO0218	
		0,025 mol/l (0,05 N)	AC2076		1/24 mol/l (0,25 N)	PO0232	
		0,05 mol/l (0,1 N)	AC2082		1/6 mol/l (1 N)	PO0231	
		0,1 mol/l (0,2 N)	AC2087		1/60 mol/l (0,1N)	PO0230	
		0,125 mol/l (0,25 N)	AC2088		Potassium permanganate	0,02 mol/l (0,1 N)	PO0336
		0,1275 mol/l (0,255 N)	AC2106		0,2 mol/l (1 N)	PO0335	
		0,13 mol/l (0,26 N)	AC2084	Sodium lauryl sulfate	0,004 mol/l	SO0458	
		0,25 mol/l (0,5 N)	AC2081	Sodium metaarsenite	0,05 mol/l (0,1 N)	SO0100	
		0,5 mol/l (1 N)	AC2080	Sodium nitrate	1 mol/l	SO0505	
		1 mol/l (2 N)	AC2085		0,002 mol/l (0,002 N)	SO0734	
		2,5 mol/l (5 N)	AC2086		0,01 mol/l (0,01 N)	SO0733	
		4 mol/l (8 N), for COD determination, according ISO 6060	AC2075	Sodium thiosulfate	0,05 mol/l (0,05 N)	SO0737	
		5 mol/l (10 N)	AC2089			0,1 mol/l (0,1 N)	SO0731
	0,1 mol/l (0,1 N)	PO0282			0,282 mol/l (0,282 N)	SO0732	
	0,23 mol/l (0,23 N), for det. crude fibre, according Weende	PO0283			0,5 mol/l (0,5 N)	SO0729	
	0,5 mol/l (0,5 N)	PO0281	Iodine		1 mol/l (1 N)	SO0730	
	1 mol/l (1 N)	PO0280			0,01 mol/l (0,02 N)	YO0025	
	Potassium hydroxide	2 mol/l (2 N)	PO0288		0,02365 mol/l (0,0473 N)	YO0027	
		0,05 mol/l (0,1 N)	SO0051	Amonium thiocyanate	0,05 mol/l (0,1 N)	YO0023	
		0,5 mol/l (1 N)	SO0050			0,5 mol/l (1 N)	YO0024
	Sodium carbonate	0,01 mol/l (0,01 N)	SO0439		0,1 mol/l (0,1 N)	AM0420	
		0,02 mol/l (0,02 N)	SO0448		1 mol/l (1 N)	AM0421	
	Sodium hydroxide	0,025 mol/l (0,025 N)	SO0447	<b>PRECIPITATION</b>	Hyamine® 1622 <i>(Hyamine® is a trademark of Rohm and Haas company)</i>	0,004 mol/l	HY0001
		0,05 mol/l (0,05 N)	SO0453		Mercury(II) nitrate	0,01 mol/l (0,02 N)	ME0197
		0,1 mol/l (0,1 N)	SO0443			0,01 mol/l (0,01 N)	PL0058
		0,2 mol/l (0,2 N)	SO0445		Silver nitrate	0,02 mol/l (0,02 N)	PL0056
0,25 mol/l (0,25 N)		SO0444				0,05 mol/l (0,05 N)	PL0059
0,313 mol/l (0,313 N)		SO0474				0,1 mol/l (0,1 N)	PL0055
0,3546 mol/l (0,3546 N)		SO0449			1 mol/l (1 N)	PL0057	
0,4 mol/l (0,4 N)		SO0452	Potassium thiocyanate		0,1 mol/l (0,1 N)	PO0375	
0,5 mol/l (0,5 N)		SO0442	Sodio chloride		0,1 mol/l (0,1 N)	SO0229	
1 mol/l (1 N)		SO0441	<b>PACKAGING</b>		500ml		
1,66 mol/l (1,66 N)		SO0430		Bottles	1 liter		
1/4,9 mol/l (1/4,9 N)		SO0464			5 liters		
1/49 mol/l (1/49 N)		SO0465		Jerricans	5 liters		
1/9 mol/l (1/9 N)		SO0429			10 liters		
2 mol/l (2 N)		SO0440		Kubitainer	10 liters		
5 mol/l (5 N)		SO0455					
6 mol/l (6 N)		SO0451					
<b>NON-AQUEOUS MATRIX</b>	Perchloric acid	in acetic acid 0,1 mol/l (0,1 N)	AC1765				
		0,01 mol/l (0,01 N) in 2-propanol	PO0294				
	Potassium hydroxide	0,05 mol/l (0,05 N) in 2-propanol	PO0293				
		0,1 mol/l (0,1 N) in 2-propanol	PO0289				
		0,1 mol/l (0,1 N) in methanol	PO0292				
		0,5 mol/l (0,5 N) in methanol	PO0286				
		ethanolic solution 0,1 mol/l	PO0284				
		ethanolic solution 0,5 mol/l	PO0278				
		Tetrabutylamonio hidróxido	0,1 mol/l in 2-propanol/methanol	TE0116			

Find more information here:

