



Volumetric Solutions
Traceable to SRM of NIST

Concentrated
Volumetric Solutions

PanReac 
AppliChem
ITW Reagents

Concentrated Volumetric Solutions

Stable, accurate and long lasting solutions


PanReac AppliChem offers concentrated solutions for the preparation by dilution of volumetric solutions. With PanReac AppliChem Concentrated Volumetric Solutions you will save storage space. They are very stable and have very long conservation (5 years). Quick and easy to make, just dilute with the desired solvent.

You can prepare concentrations other than those specified on the label. If the solution has been diluted under optimal conditions, we guarantee the concentration with $\pm 0.2\%$ accuracy. The plastic ampoules are offered inside an anti-shock blister and the glass ones are delivered inside a polystyrene protective shell. All topics concerning the usage and the safety are notified in the packaging. Each ampoule includes a sticker for a perfect identification of the prepared solution.

You can find detailed specifications of these products in our General Catalogue or in www.panreac.com or www.applichem.com.



The following table shows our program of Concentrated Volumetric Solutions:

Code	Description	Package: 1 ampoule 
303118	EDTA Disodium Salt 0.1 mol (37.224g $C_{10}H_{14}N_2Na_2O_8 \cdot 2H_2O$) to prepare 1l of 0.1M solution	
303110	Hydrochloric Acid 0.1 mol (3.646g HCl) to prepare 1l of 0.1N solution	
303112	Hydrochloric Acid 1 mol (36.461g HCl) to prepare 1l of 1N solution	
303119	Iodine 0.05 mol (12.690g I_2) to prepare 1l of 0.1N solution	
303124	Potassium Permanganate 0.02 mol (3.161g $KMnO_4$) to prepare 1l of 0.1N solution	
303117	Silver Nitrate 0.1 mol (16.987g $AgNO_3$) to prepare 1l of 0.1N solution	
303125	Sodium Hydroxide 0.1 mol (4.000g NaOH) to prepare 1l of 0.1N solution	
303126	Sodium Hydroxide 1 mol (40.00g NaOH) to prepare 1l of 1N solution	
303127	Sodium Thiosulfate 0.1 mol (24.818g $Na_2S_2O_3 \cdot 5H_2O$) to prepare 1l of 0.1N solution	
303114	Sulfuric Acid 0.05 mol (4.904g H_2SO_4) to prepare 1l of 0.1N solution	

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PanReac AppliChem elaborates more than 100 different volumetric solutions. The program of sale includes a great variety of solutes, solvents and concentrations for most of the analytical applications of a laboratory. The factor of the volumetric solutions is adjusted to f: 1.000 with a tolerance of $\pm 0.1\%$. In order to keep a better respect of the quality procedures, the expiry date of the product is indicated on the label of each bottle. The volumetric solutions of PanReac AppliChem are packaged in bottles of 1 l, 2.5 l, 5 l or in 10 l Cubitainers SOL-PACK.

In the following table, you will find the complete program. If you wish to receive more information, don't hesitate to request our General Catalogue or visit our web in www.panreac.com or www.applichem.com. In case you require another solution, please consult us.



Ordering Information

Product	Concentration	Code	Package				
			1 l	2,5 l	5 l	10 l	25 l
Acetic Acid	0.1 M	181011	P				
	1 M	181009	P				
Ammonium Iron(II) Sulfate (¹) for determination of COD according to NFT 90-101	0.1 M	181369	P		P		
	0.12 M (¹)	185227	P				
Ammonium Thiocyanate	0.1 M	181144	P				
Benzethonium Chloride for the titration of anionic surfactants	0.004 M	183141	P				
Bromine (Bromate-Bromide)	0.05 M (0.1N)	182000	P				
Cerium(IV) Sulphate	0.05 M	182136	P				
	0.1 M	181249	P				
Copper(II) Sulfate	0.1 M	181271	P				
EDTA Disodium Salt (¹) for determination of water hardness in german degrees	0.01 M	181671	P	P		P	
	0.01783 M (¹)	187087	P				
	0.05 M	182120	P		P	P	
Hydrochloric Acid (¹) for determination of starch in feed, according to Ewers	0.1 M	182884	P				
	0.02 M	183458	P				
	0.05 M	182107	P				
	0.1 M	181023	P	P	P	P	P
	0.25 M	182318	P				P
	0.310 M (1.128% w/v) (¹)	185423	P		P		
	0.5 M	181022	P		P	P	
	1 M	181021	P	P	P	P	P
	1 M (Reag. Ph.Eur.)	186985					
	2 M	182108	P		P	P	P
	3 M	182057	P		P	P	
	4 M	182552	P		P		
	5 M	182109	P			P	
6 M	182883	P					
10 M	187051	P					

Product	Concentration	Code	Package					
			500 ml	1 l	2,5 l	5 l	10 l	25 l
Iodine ([†]) for determination of iodine adsorption number according to ASTM D 1510	0.01 M (0.02N)	181969						
	0.02365 M (0.0473N) ([†])	182915						
	0.025 M (0.05N)	182161						
	0.05 M (0.1N)	181772						
	0.5 M (1N)	182162						
Iodine (Iodate-Iodide)	N/50	185733						
	N/64	186880						
Lanthanum(III) Nitrate	0.1 M	187042						
Magnesium Sulfate	0.01 M	187098						
Mercury(II) Nitrate	0.005 M (0.01N)	182138						
	0.05 M (0.1N)	181424						
Nitric Acid	0.1 M	181040						
	1 M	181039						
	2 M	182112						
	4 M	186195						
Oxalic Acid	0.005 M (0.01N)	182812						
	0.05 M (0.1N)	181043						
	0.5 M (1N)	181042						
Perchloric Acid	0.1 M in acetic acid	181046						
	0.1 M in 1,4-dioxan	181047						
	0.6 M aqueous	187078						
Potassium Bromate	1/60 M (0.1N)	181488						
Potassium Chloride	0.01 M	183418						
Potassium Dichromate	1/60 M (0.1N)	181502						
	1/24 M (0.25N)	182142						
	1/6 M (1N)	181501						
Potassium Dichromate with 80 g/l of Mercury(II) Sulfate for determination of COD according to NFT 90-101	0.04 M	184385						
Potassium Hydroxide ([†]) for determination of raw fibre	0.1 M	181521						
	0.23 M ([†])	183354						
	0.5 M	181518						
	1 M	181517						
	3 M	187080						
Potassium Hydroxide ethanolic	0.1 M	182146						
	0.5 M	181519						
Potassium Hydroxide methanolic	0.1 M	182147						
	0.5 M	181520						
Potassium Hydroxide in 2-Propanol	0.01 M	183034						
	0.1 M	183336						
Potassium Iodide	0.1 M	181544						
	1 M	182256						
	2 M (pH 7.0)	183425						
Potassium Permanganate ([†]) for the titration of percarbonates	0.002 M (0.01N)	181790						
	0.02 M (0.1N)	181529						
	0.02 M (0.1N)(Reag. Ph. Eur.)	186986						
	0.1 M (0.5N) ([†])	182651						
	0.2 M (1N)	181528						
Potassium Thiocyanate	0.1 M	181535						
Silver Nitrate	0.01 M	182564						
	0.02 M	181465						
	0.05 M	182115						
	0.1 M	181464						
	0.1 M (Reag. USP)	186983						
	0.5 M	185560						
	1 M	182116						

Product	Concentration	Code	Package							
			100 ml	250 ml	500 ml	1 l	2,5 l	5 l	10 l	25 l
Sodium Carbonate	0.5 M (1N)	181649								
Sodium Dodecyl Sulfate for the titration of cationic surfactants	0.004 M	182792								
Sodium Hydroxide ⁽¹⁾ for analysis of acidity in milk ⁽²⁾ for determination of raw fibre ⁽³⁾ for analysis of oils	0.01 M	181845								
	0.02 M	183397								
	0.05 M	182153								
	0.1 M (bromophenol blue)	181693								
	0.1 M (phenolphthalein)	181694								
	0.111 M acc. Dornic ⁽¹⁾	183154								
	0.2 M	182971								
	0.25 M	182155								
	0.313 M ⁽²⁾	183337								
	0.330 M	184912								
	0.3546 M (N/2.82) ⁽³⁾	182156								
	0.5 M	181692								
	1 M (bromophenol blue)	181691								
	1 M (phenolphthalein)	182415								
	1 M (Reag. Ph. Eur.)	186982								
	1.02 M	185528								
	2 M	182158								
	4 M	183466								
	5 M	182159								
	8 M	187063								
10 M	183508									
Sodium Hydroxide ethanolic	0.1 M	182284								
Sodium Tetrphenylborate	0.01 M	187057								
Sodium Thiosulfate ⁽¹⁾ for determination of iodine adsorption number according to ASTM D 1510	0.01 M	182577								
	0.0394 M ⁽¹⁾	182914								
	0.05 M	182160								
	0.1 M	181723								
	0.1 M (Reag. Ph.Eur.)	186987								
	0.2 M	183489								
	1 M	181722								
Sulfuric Acid ⁽¹⁾ for determination of raw fibre ⁽²⁾ for determination of COD according to NFT 90-101	0.005 M (0.01N)	187094								
	0.01 M (0.02N)	182102								
	0.025 M (0.05N)	182103								
	0.05 M (0.1N)	181061								
	0.1 M (0.2N)	182011								
	0.1275 M (0.255N) ⁽¹⁾	183335								
	0.25 M (0.5N)	181060								
	0.5 M (1N)	181059								
	1 M (2N)	182105								
	2 M (4N)	183426								
2.5 M (5N)	182106									
4 M (8N) ⁽²⁾	185314									
Tetrabutylammonium Hydroxide	0.1 M (in methanol)	187037								
	0.1 M (in 2-propanol/methanol 11:1)	183669								
	0.1 M (in toluene/methanol 9:1)	185225								
	1 M (in methanol)	187139								
Zinc Sulfate	0.05 M	182163								
	0.1 M	181789								

Packaging symbols:

Glass bottle
 Polyethylene bottle

Polyethylene container (cubitainer) with tap
 Polyethylene canister



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