# Volumetric solutions for sugar analysis





Today, titration developed more than 200 years ago, is one the most common quantitative method, essential in all modern control labs and mainly in sugar analysis.

The importance of this method has been created by:

- A lot of inorganic and organic compounds that can be determine volumetry in a large variety of concentrations
- Minimum equipment: One balance and a burette are sufficient to find exact titer values
- Easier methods
- Automatic methodology: Titrators are managed by software bringing an important simplification of the analytical process
- Speed of the analysis
- Large selectivity: Titrant choice and different titration conditions can enable you to measure selectively the different components of a mix
- Excellent reproducibility and accuracy of results

Recent improvements in titrators have made important progress in the measurement technique and final point determination.

The accuracy of this method has been greatly improved, but for all that, volumetric 'ready to use' solutions need to be:

- Accurate
- Very pure
- Reproducible

In the control analytical labs of sugar companies, many solutions at different concentrations are used. But unfortunately, the majority of them don't exist as catalogue products. The analyst needs to produce these themselves.

VWR has decided to launch a complete range of volumetric solutions for sugar analysis of which there are 27 different solutions available.

# TRUST IN THE PRODUCTION PROCESS

- High purity of the substances and water used for production
- Electronic installations and automatic filling lines
- Strong expertise and know-how gained from many years of experience
- Very high accuracy (0,2%) impossible to obtain manually

Finally, the solution is filled into a high density polyethylene bottle (HDPE) or bag-in-box without contamination during the transfer process.

# STORAGE AND STABILITY

We've chosen HDPE bottles or bag-in-box (10 litres) which can guarantee perfect stability and are ideal for volumetric solutions. The expiry date is clearly mentioned on the label.

## **CERTIFICATE OF ANALYSIS**

A comprehensive and complete Certificate of Analysis is available in our website. It shows:

- Lot-specific concentration value
- Expanded measurement uncertainty
- Traceability to NIST
- Expiry date

## **RANGE**

Our range is composed by 27 'ready to use' solutions, available in 1, 5 or 10 litre bag-in-box. We are able also to produce 'customised' volumetric solutions depending on your special requirements.

Description	Pk 1 I	Pk 2,5 l	Bag-inbox 10 l	Pk 10 l
Aluminium sulphate 18H <sub>2</sub> O				
solution 20%			86656.9011	-
Carrez solution I	5056.1000	-	-	-
Carrez solution II	85733.290	-	-	-
EDTA reagent solution N/28			30029.400	-
EDTA reagent solution 7,444 g/l	-	-	88826.9011	-
EDTA reagent solution 3,722 g/l	-	-	88825.9011	-
Hydrochloric acid 0,0714N	-	-	307902.400	-
Hydrochloric acid 0,1N	31955.293	-	31955.407	-
Hydrochloric acid 0,357N	30023.296	-		-
Hydrochloric acid 0,714N	_	-	307904.400	-
Hydrochloric acid 1N Reag. Ph.				
Eur., USP	30024.290	-	30024.404	-
Hydrochloric acid 3,571N	5610.1000		5610.9010	-
Hydrochloric acid 4N	310701.1000		-	-
Hydrochloric acid 5N	30018.298	30018.320	-	-
Potassium hydroxide 30%		310550.2500	-	-
Potassium hydroxide solution				
0,23N			5045.9010	5045.9011
Sodium chloride in aqueous				
solution 27%			6241.9011	
Sodium hydroxide solution 0,1N	31770.294		31770.408	
Sodium hydroxide solution 0,205N			30036.400	-
Sodium hydroxide solution 0,5N				
Reag. Ph. Eur.	31951.290		31951.404	
Sodium hydroxide solution 0,714N			30028.400	
Sodium hydroxide solution 1N	31627.290		31627.404	
Sodium hydroxide solution 2N	98108.290		98108.400	-
Sodium hydroxide solution 4N		306452.2500	-	-
Sulphuric acid solution 0,04N	30146.291		30146.400	
Sulphuric acid solution 0,02N			191738C	-
Sulphuric acid solution 0,26N	_	-	5046.9010	-
Sulphuric acid solution 1N	30144.294		30144.408	-
Sulphuric acid solution 2N	-	30149.291	-	-

Don't forget to see check out our website to find all the other volumetric solutions we are able to supply.