Lab Essentials Information

Technical Data Sheet

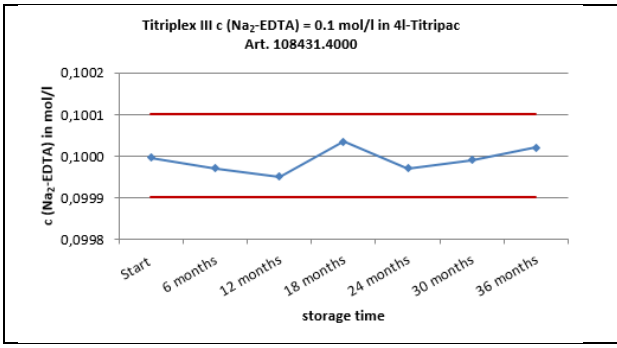
Item number: 1.08431
Titriplex III solution
according to Reag. Ph. Eur.

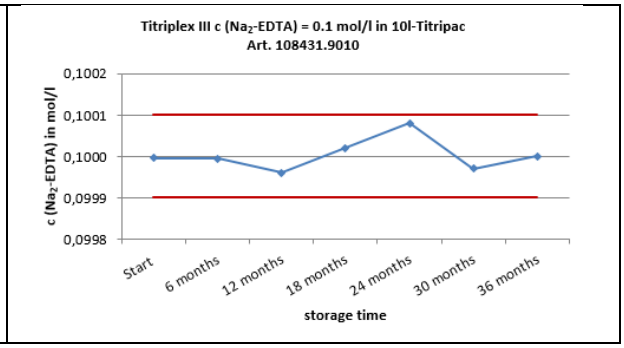
Technical data:

- Concentration: 0.1 mol/l
- Density: 1.02 kg/l
- Packaging: 4l-Titripac and 10l-Titripac
- Shelf life: 3 Years

Stability of titriplex III volumetric solution (item number: 1.08431) in a Titripac®:

Volumetric solutions contain reagents that react quantitatively with the substance to be measured in the sample solution. The concentration of the volumetric solution is indicated by the molarity (mol reagent per l solvent). For the optimal consumption per titration the concentration of the volumetric solution should be chosen according to the expected concentration of the sample. A standardisation (titer determination) with a volumetric standard is recommended to correct for all influences on the measurement results arising from lab conditions, equipment and handling.
To demonstrate the stability of this titriplex III volumetric solution the Titripac® was tested under daily routine conditions.
Every six months the concentration of the titriplex III solution was determined with volumetric standard zinc (item number 1.02409).
The following diagrams show the measured concentration of titriplex III solution (item number 1.08431) in a Titripac 4l and 10l over the shelf life of 36 months.





Ordering Information:	**Ordering Number:**
Titriplex III solution	1.08431.4000 (4l-Titripac®)
Titriplex III solution	1.08431.9010 (10l-Titripac®)

The Titripur® materials are produced and analyzed by Merck KGaA, Darmstadt, Germany.

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The diagrams on page 1 show the concentration of titriplex III volumetric solution 0.1mol/l in between the range of 0.0999mol/l and 0.1001mol/l over the shelf life of three years.
The solution is stable in both packages (Titripac 4l and 10l).
The calculation of the concentration is done according to the following equation:

$$c(x)_{\text{actual value}} = c(x)_{\text{indicated value}} \cdot t$$

c(x) indicated value = concentration as specified by the supplier
t = titer of the volumetric solution
c(x) actual value = concentration after correction for the titer

The titer as correction factor depends on lab conditions, equipment and handling.
The titer determination is carried out with volumetric standards or with standard solutions calibrated directly against volumetric standards.
Volumetric solutions are temperature sensitive. Therefore the titer changes with the temperature. Thus it is recommended to do the titer determination at the same temperature as the following sample titration.
The titer determination of a volumetric solution is essential for precise sample measurements. Errors due to titer determination affect the following measurements as systematic deviation.

Instructions for use of a Titripac®:

Open the Titripac® by pressing on the pre-cutted area.
(Do not use a knife for opening because you can easily damage the inner bag of the Titripac®.)
Take the installed tap out of the box and fix it by closing the pre-cutted area.
By opening the tap, solution can be withdrawn without the risk of contamination.
Finally the Titripac® can be connected directly to the titrator by means of a small adapter and a hose with a thread on both sides.
Hose and adapter can be ordered under item number 1.88075.0001.