

Volumetric solutions (4.2.2): I have trouble achieving the repeatability criterion of 0.2% relative standard deviation (RSD).



You are here:

[EDQM FAQs](#) / [EDQM FAQs in English](#) / [EUROPEAN PHARMACOPOEIA & INTERNATIONAL HARMONISATION](#) / [General Chapters and Monographs](#) / [REAGENTS AND SUPPLIERS](#) / Volumetric solutions (4.2.2): I have trouble achieving the repeatability criterion of 0.2% relative standard deviation (RSD).

Answer:

It is acknowledged that the repeatability requirement of 0.2% RSD is ambitious; nevertheless, this is achievable under normal laboratory conditions. The error on the titre determination has to be limited as the content specifications of titrimetric assays are in most cases set at 100.0 ± 1.0 per cent.

The molarity of the volumetric solutions has to be determined by an appropriate number of titrations. Even if 3 titrations were sufficient to calculate the RSD, it is often better to increase the number of titrations to be able to fulfil the criterion (e.g. $n = 6$). The RSD criterion is applicable in all cases regardless of the titration mode (automatic or manual) and the type of end-point determination (electrometric or visual).