

### Abstract:

The impact of storage conditions on compound stability and compound solubility has been debated intensely over the past 5 years. At Novartis, the authors decided to opt for a storage concept that can be considered controversial because they are using a DMSO/water (90/10) mixture as standard solvent. To assess the effect of water in DMSO stocks on compound stability, the authors monitored the purity of a subset of 1404 compounds from ongoing medicinal chemistry projects over several months. The study demonstrated that 85% of the compounds were stable in wet DMSO over a 2-year period at 4 °C. This result validates the storage concept developed at Novartis as a pragmatic approach that takes advantage of the benefits of DMSO/water mixtures while mediating the disadvantages. In addition, the authors describe how purity data collected over the course of the chemical validation of high-throughput screening actives are used to improve the analytical quality of the Novartis screening deck.

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