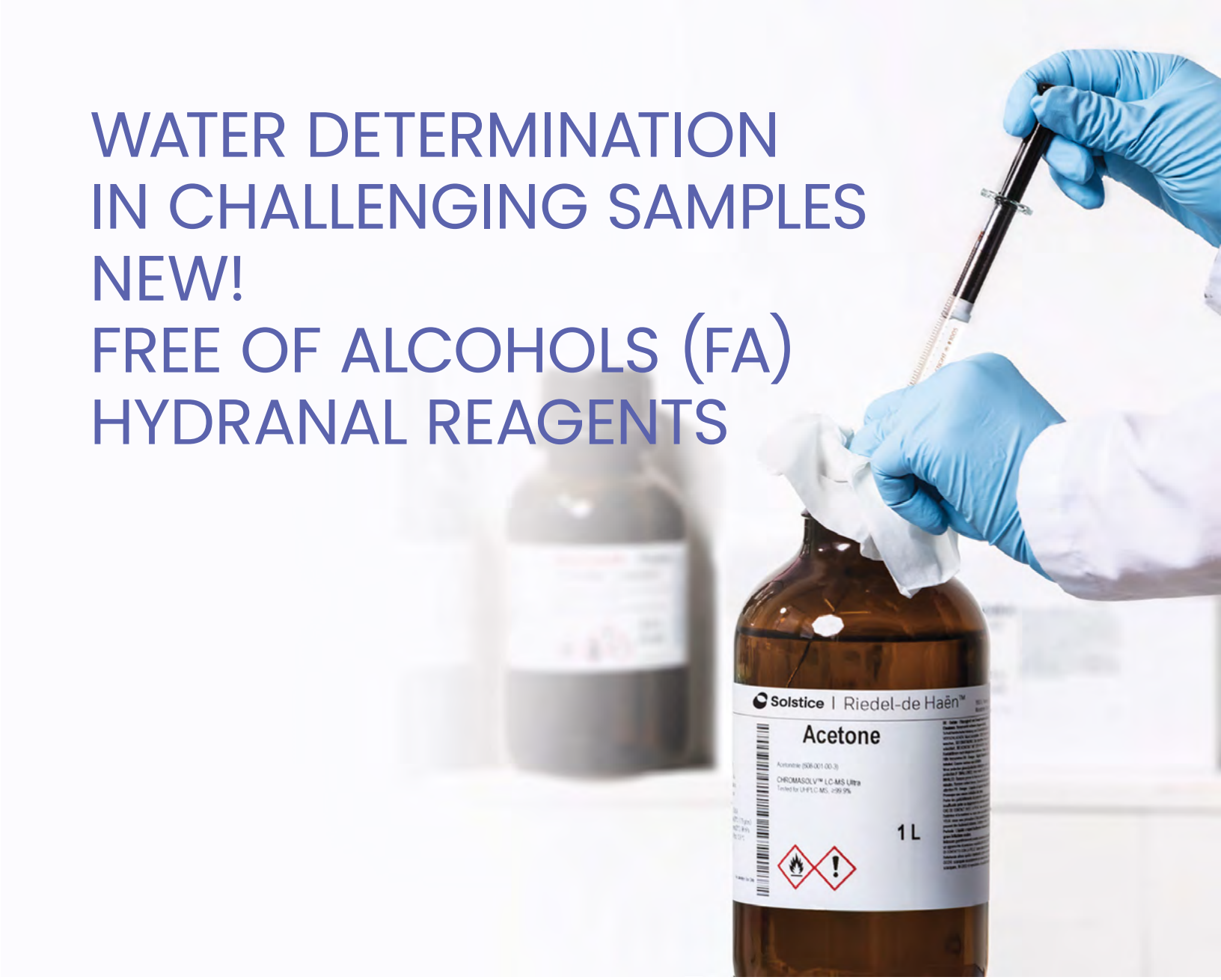
WATER DETERMINATION IN CHALLENGING SAMPLES NEW! FREE OF ALCOHOLS (FA) HYDRANAL REAGENTS



Hydranal™ NEXTGEN Coulomat A-FA & C-FA are the first alcohol-free reagents for Karl Fischer (KF) titration that suppress side effects and provide consistent results for many challenging alcohol-sensitive samples.

The KF titration of certain types of samples, like ketones and aldehydes, can be challenging, due to the side reactions of these compounds with alcohols. Such challenges include erroneous water content results, and unstable, vanishing or no titration endpoints.

The new Hydranal™ NEXTGEN FA (free of alcohol) reagents avoid many such side effects and allow for accurate water content determination, even in difficult samples. These reagents are also safer, as they do not contain CMR (carcinogenic, mutagenic and reprotoxic) substances or halogenated hydrocarbons.

NEW HYDRANAL FA-TYPE REAGENTS

- Free of alcohols
- Recommended for alcohol sensitive samples
- Less toxic, non-CMR classification
- High performance
- High accuracy
- Cost efficient

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In addition to their superior performance and safety profiles, the Hydranal™ NEXTGEN FA reagents are also more cost-efficient, permitting the titration of multiple samples in one vessel filling and over a longer period of time.

The titration of ketones and other alcohol sensitive samples can now be performed with increased accuracy and lower overall cost using the Hydranal™ NEXTGEN Coulomat A-FA/C-FA reagents.

Furthermore, FA reagents allow the titration of many unsaturated compounds with double and triple bonds like vinylene carbonate, vinyl acetate, allyl acetate, or propynyl derivatives.

Hydranal™ NEXTGEN Coulomat A-FA & C-FA avoid many alcohol-related side reactions and provide consistent performance and high accuracy even for difficult samples (see comparison on Fig. 1 and 2).

Ketones like acetone cannot be titrated at all by using standard methanolic KF reagents, as illustrated in Figure 1. A strong water releasing side reaction occurs and no titration endpoint is reached.

However, many titrations can be performed and reach stable end points by using special methanol-free reagents, like Hydranal™ Coulomat AK/CG-K, or the alcohol free Hydranal™ NEXTGEN Coulomat A-FA/C-FA reagents.

Figure 2 illustrates the successive titration of 20 x 1 mL acetone. When using Hydranal™ Coulomat AK/CG-K, the start drift increases above 20 µg/min after the titration of approx. 3 mL acetone, while when Hydranal™ NEXTGEN Coulomat FA reagents are used, the start drift stays below 20 µg/min, even after the titration of 20 mL of acetone. Furthermore, the accuracy of the results is higher compared to that of Hydranal™ Coulomat AK/CG-K.

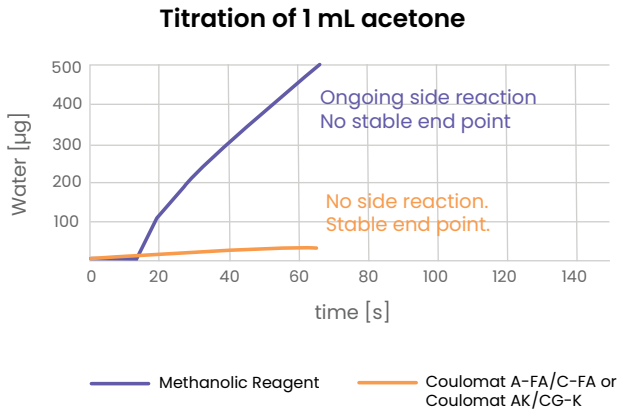


Fig. 1 Titration of acetone cannot be performed using standard methanolic KF reagents

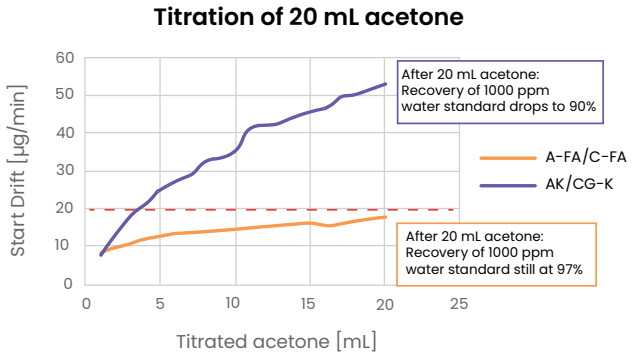


Fig. 2: Titration of acetone (1 mL portion) in Hydranal™ NEXTGEN Coulomat A-FA/C-FA and Coulomat AK/CG-K, respectively.

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