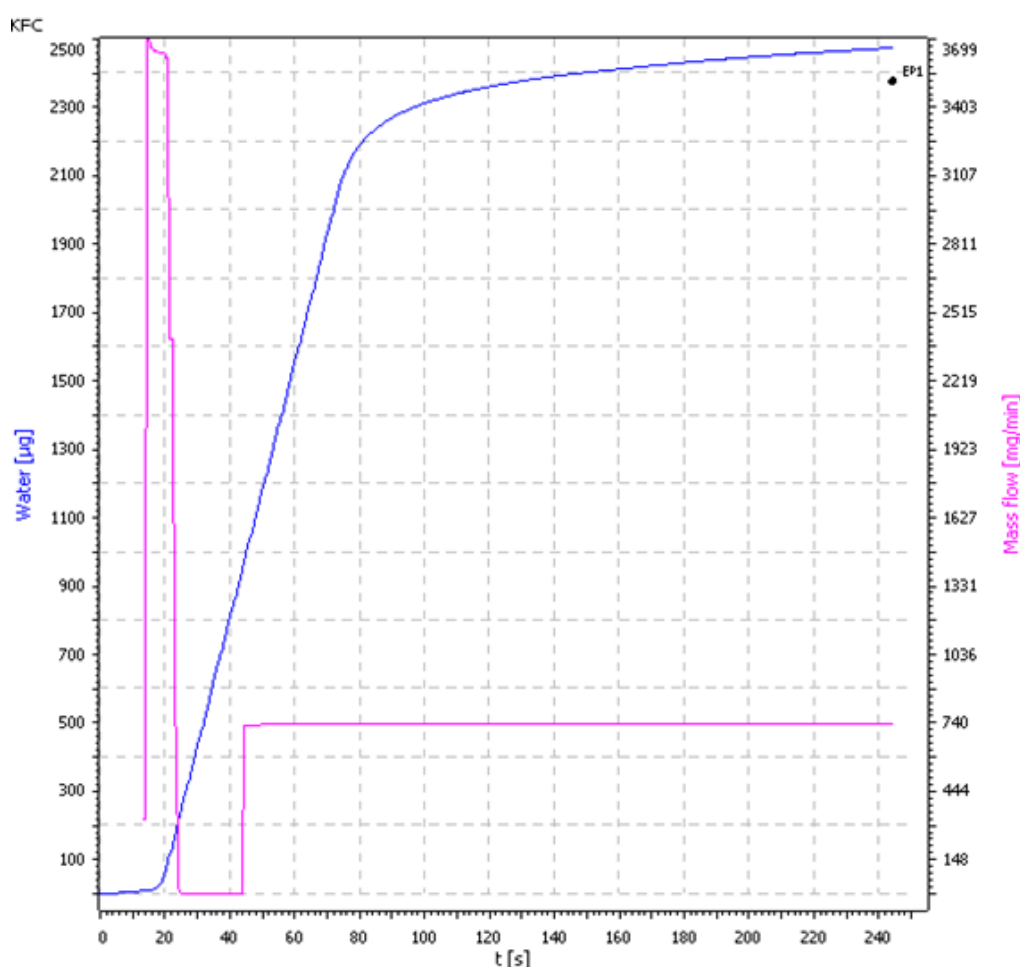


# Determination of water in isobutane before and after drying



Isobutane is used as refrigerant and as feedstock in the petrochemical industry: By dehydrogenation isobutane provides isobutylene which is an important precursor for the production of methyl tert-butyl ether (MTBE), an important fuel additive. This Application Note describes the automated determination of the water content in liquid isobutane using the 875 KF Gas Analyzer.

# Method description

## Samples

Isobutane before drying > 94%

Isobutane after drying > 94%

## Sample preparation

The sample cylinder is connected to the 875 KF Gas Analyzer with the appropriate connectors. It is installed upside down to sample the liquid phase of the sample cylinder.

## Configuration

875 KF Gas Analyzer	2.875.9020
---------------------	------------

## Reagents

HYDRANAL®-Coulomat AK	Fluka 34820
HYDRANAL®-Coulomat CG-K	Fluka 34821
Nitrogen 5.0 (>99.999, <3 ppm H <sub>2</sub> O)	Carbagas

## Analysis

### System preparation

To prepare the system, it is first flushed with sample followed by drying with nitrogen.

## Method

To measure the sample the method "Sample\_measurement.mmet" is used. The method is preinstalled on every Gas Analyzer system.

## Sample determination

The minimum sample amount for the isobutane before drying is 50 mg and 2000 mg for the isobutane after drying.

## Results

Content of water in the sample

Sample	Mean / [ppm]	RSD / [%]
Isobutane before drying	4159.3 (n = 4)	1.06
Isobutane after drying	20.7 (n = 4)	11.94

[www.metrohm.com](http://www.metrohm.com)

