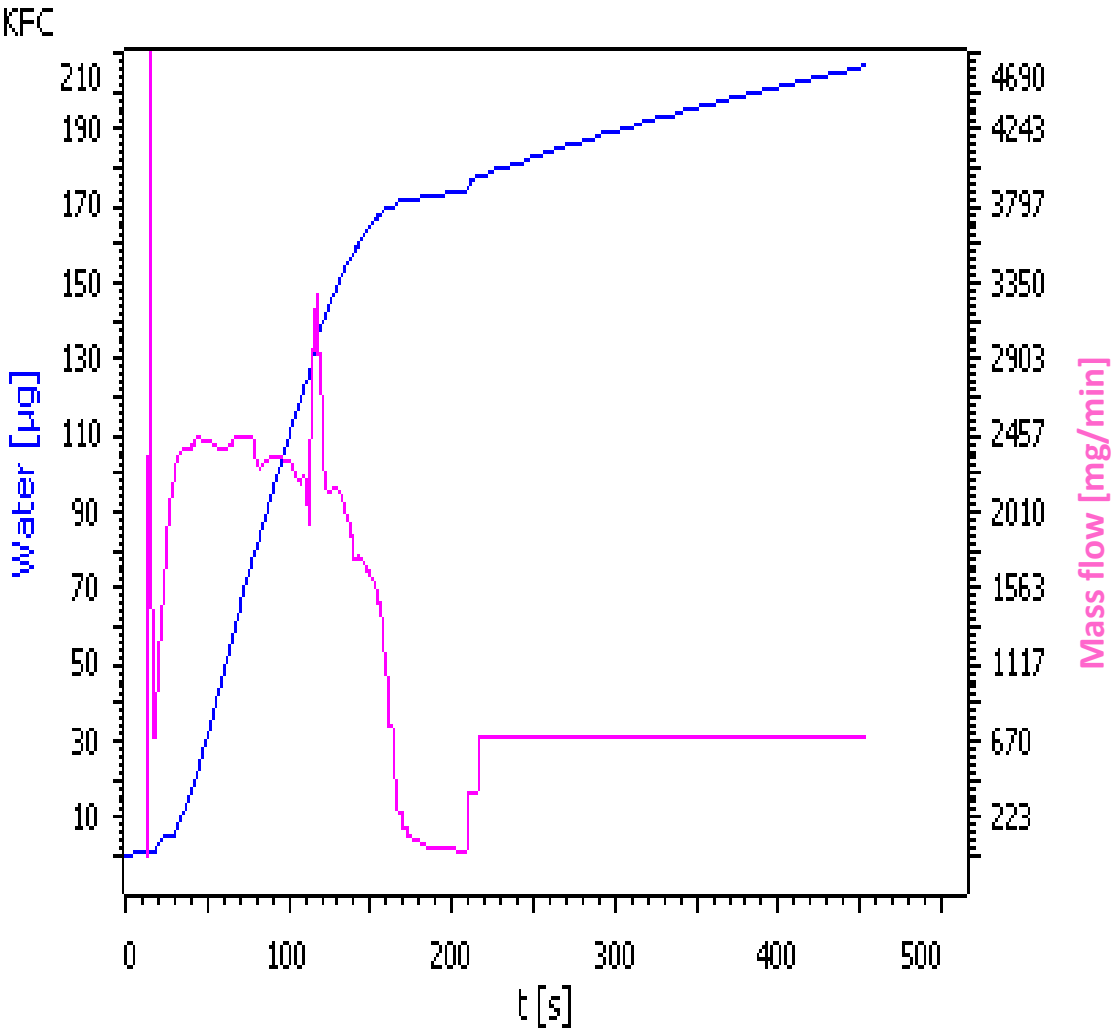
Titration Application Note K-060

Determination of water in butadiene



This Application Note describes the automated determination of the water content in liquid 1,3-butadiene using the 875 KF Gas Analyzer.

Metrohm

Method description

Sample

Butadiene (> 95%, 2.5 kg sample cylinder)

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®-Couloumat AG-Oven	Fluka 34739
HYDRANAL®-Coulomat CG	Fluka 34840
Nitrogen (>99.999, <4 ppm H_2O)	

Analysis

System preparation
To prepare the system, it is first flushed with sample followed by drying with nitrogen. As the water content of the sample might be very low, it is important to have a low start drift.

Method

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

Sample determination

For all measurements, a minimum sample amount of 4000 mg is used.

Results

Sample	Mean / [ppm]	RSD / [%]
1,3-butadiene	30.1 (n = 7)	3.32