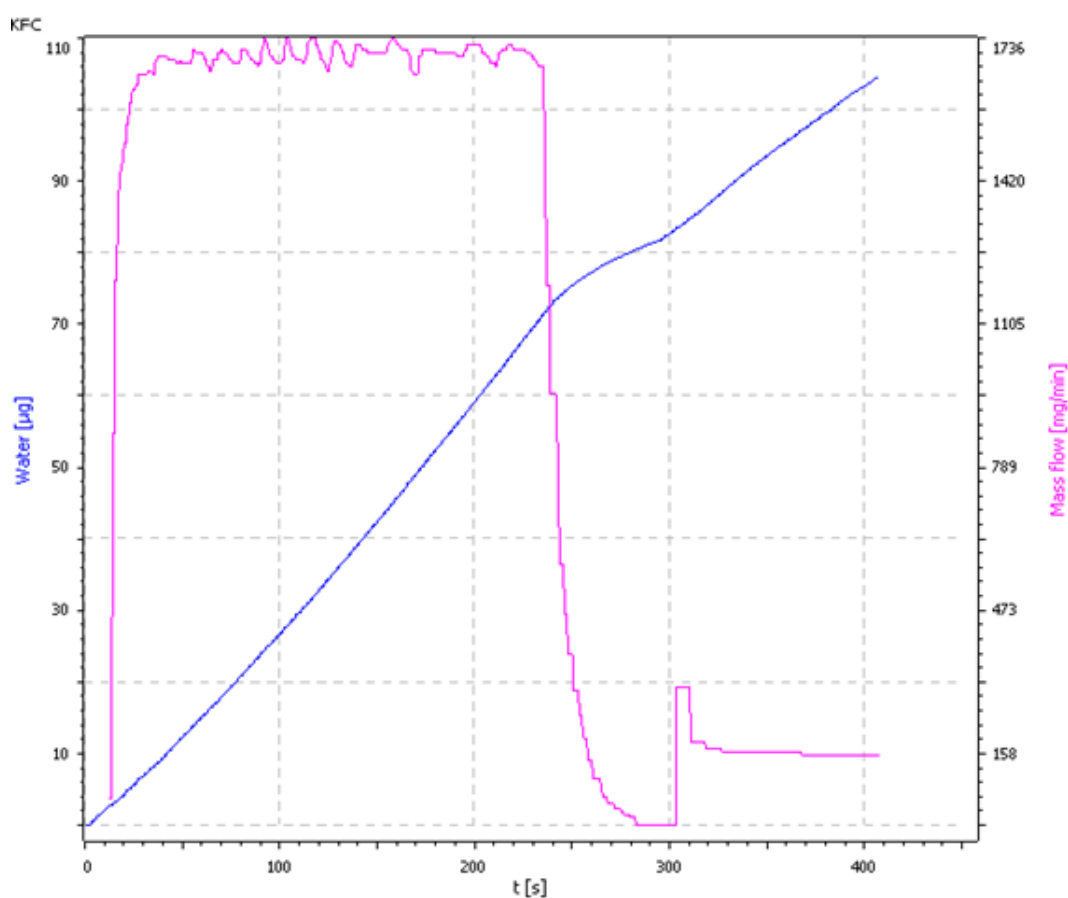


Determination of water in Propene



Propene is one of the major raw materials in the petrochemical industry. Two third of all propene goes into the production of polypropylene. Propene is also used for the production of important chemicals such as propylene oxide, acrylonitrile, cumene, butyraldehyde, and acrylic acid. This Application Note describes the automated determination of the water content in liquid propene (propylene) using the 875 KF Gas Analyzer.

Method description

Sample

Sample 1: Propene > 94%, 500 mL sample cylinder

Sample 2: Propene > 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
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Reagents

HYDRANAL®-Coulomat AG	Fluka 34836
HYDRANAL®-Coulomat CG	Fluka 34840
Nitrogen 5.0 (>99.999, <3 ppm H ₂ O)	Carbagas

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 sample amount between 4000 mg to 6000 mg is used.

Results

Sample	Mean / [ppm]	RSD / [%]
Sample 1	6.7 (n = 5)	8.5
Sample 2	2.9 (n = 10)	8.3