



# Quality control of polyols

Fast results on hydroxyl value with NIR pre-calibrations

## HIGHLIGHTS

- Compliant with ASTM D6342-12 and ISO 15603:2011
- Based on real product spectra
- Can be used by non-specialists

# Pre-calibrations expedite and simplify quality control of polyols

Metrohm offers a turnkey solution for the determination of the hydroxyl value in polyols according to ASTM D6342-12 and ISO 15603:2011. The measurement device consists of a DS2500 Near-infrared Analyzer with a pre-calibration model based on a large collection of real product spectra. This solution enables polyol producers and polyol processors, such as polyurethane manufacturers, to save time and reduce the cost of their analyses while improving the quality of their product.

Polyols are widely used in the chemical and polyurethane producing industry. A key quality parameter of polyols is the hydroxyl number, which is typically checked on a batch by batch basis. This parameter are still often determined in a laboratory by time consuming wet chemical measurements such as ASTM D4274-14.

Near Infrared Spectroscopy (NIRS) on the other hand requires neither chemicals nor sample preparation, it can even be used by non-chemists and provides results in less than a minute. The combined benefits of this technology make NIRS the ideal solution for a large number of daily QA/QC measurements or ad-hoc at-line analysis.



## Reliable results from day one

The robust pre-calibration model allows precise and accurate determination of different parameters with excellent reproducibility. The Metrohm solution can be used directly as a starter model without any method development.

## Straightforward and intuitive operation

The pre-calibration model is operated by the intuitive Vision Air software. Vision Air is tailored to the needs of different users: shift workers can only start a measurement and get clear pass/fail results. Authorized users get full control of the instrument, can create SOPs and can easily review and filter data.



#### EASY TO USE

- Ready-to-use solution
- Results at the push of a button
- No expertise required



#### COST-MINIMIZING

- No solvents, no reagents
- No waste disposal



#### FAST

- No sample preparation
- Analysis results within 30 seconds
- More than 15 minutes' time saving compared to reference methods



#### CLEAN

- Non-destructive, chemical-free method
- Minimum of impact on health and environment

### AVAILABLE POLYOL PRE-CALIBRATION

Type	Parameters	Range	SECV	R <sup>2</sup>
Polyols	Hydroxyl value	16 – 1180 mg KOH/g	13.9 mg KOH/g	0.994

#### Trust in our Expertise

Pre-calibrations are calibration models based on numerous real product spectra. By using these solutions, you can benefit immediately from the experience Metrohm has gained with those applications.

#### Customized service and support

Metrohm supports users by updating the polyol pre-calibration on demand with customer specific samples. This improves the performance of the method and/or extends it to additional quality parameters e.g. acid value and moisture.

## ORDERING INFORMATION

Pre-calibration	
<b>6.6072.301</b>	<b>Pre-calibration for the analysis of polyols</b>

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Requires hardware	
2.929.0010	DS2500 Liquid Analyzer
6.7492.020	DS2500 Holder 8 mm disposable vials

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Requires software	
6.6072.201	Vision Air

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Recommended standard	
6.7494.000	DS2500 Liquid Wavelength Standard

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Accessories	
6.7402.000	Disposable Vials 8mm, 250 Pcs

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## COMPLETE PACKAGE: METROHM POLYOL ANALYZER

<b>2.929.1000</b>	<b>DS2500 Polyol Analyzer (comprised of):</b>
2.929.0010	DS2500 Liquid Analyzer
6.7492.020	DS2500 Holder 8mm disposable vials
6.7402.000	Disposable Vials 8mm, 250 Pcs
6.6072.208	Vision Air Complete
6.6072.301	Pre-calibration for polyols

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