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## **ENSURING THE RELIABILITY OF TURBIDIMETRIC ANALYSIS RESULTS FOR SULFATE IONS IN FLUORINE-CONTAINING GASES THROUGH CALIBRATION CURVE CONTROL**

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The reliability of the calibration curve is carried out each time before analyzing a series of samples. The control measures involve the use of reference samples employed for establishing the calibration curve.

If the stability condition is not met for one calibration sample, the sample must be re-measured to exclude any result containing a gross error. If the condition is still not met upon re-measurement, the causes of the error should be identified and corrected, the measurement is repeated using other reference samples specified in the analytical procedure. If the calibration sample again fails to meet the condition, a new calibration curve must be established [1].

The reliability of the calibration curve is affected by the following key factors:

- analysis time,
- improper sampling,
- non-compliance with sample storage conditions and timelines,
- pH deviations,
- presence of interfering substances,
- sample heterogeneity,
- equipment malfunction,
- operator errors,
- incorrect data processing.

To maintain the stability of the calibration curve, regular quality control, timely equipment maintenance, the use of high-quality standards, and strict adherence to measurement protocols are required.

### **REFERENCE**

1. GOST R 8.563-96 State System for Ensuring the Uniformity of Measurements. Methods of Measurement Performance: date of introduction 1996-05-23 / All-Russian Scientific Research Institute of Metrological Service and Ural Scientific Research Institute of Metrology. – Official edition. – Moscow: Standardinform, 2008. – 39 p. (in Russian).