



DETERMINATION OF **TURBIDITY** IN WATER BY NEPHELOMETRIC METHOD

INTRODUCTION

Lumex Instruments provides sensitive and selective nephelometric method for the measurement of turbidity in drinking, natural, ground, surface waters using the FLUORAT-02-5M analyzer.

MEASUREMENT RANGE

Measurement range, NTU*	Directives & standards for drinking water	MAC (MPL), NTU**
1–100	WHO Guidelines for drinking water quality (2011)	≤ 1
	Drinking Water Directive 98/83/EC	≤ 1
	US EPA National Secondary Drinking Water Regulations	≤ 5
	GB 5749-2006 Standards for drinking water quality	≤ 1
	GB 8531-2018 National food safety standard – Drinking natural mineral water	≤ 1
	GB/T 14848-2017 Standard for groundwater quality	≤ 3...10
	IS 10500:2012 Drinking water – Specification	≤ 1 (5)
	QCVN 01:2009/BYT National technical regulation on drinking water quality	≤ 2

* – Nephelometric Turbidity Unit (NTU)

** – maximum allowable concentration (MAC); maximum permissible level (MPL)

Samples with higher turbidity content should be diluted prior to analysis.

METHOD

The nephelometric method of turbidity determination is based on measurement of the intensity of light scattered at an angle of 90° by the particles present in water sample. The result appears on the PC-operated FLUORATE software as sample turbidity value in NTU.

It is advisable to carry out the measurement as soon as possible after the sample was collected in order to prevent setting of suspended matter. Store samples before analysis in a dark cool place or refrigerator to avoid precipitation or dissolution of suspended matter. Samples storage life is 24 hours.

HIGHLIGHTS OF THE NEPHELOMETRIC METHOD

- The color of the sample does not affect the measurement of turbidity.
- The interfering effects of air bubbles are eliminated during sample preparation.

EQUIPMENT AND REAGENTS

The following equipment and reagents are used for measuring:

- FLUORAT-02-5M analyzer with FLUORATE software
- Lumex Instruments optical filters*
- Turbidity standard solution (4,000 NTU) *
- Reagent water complying with grade 1 as defined in ISO 3696:1987
- Cellulose acetate membrane filters with 0.2 µm pore size*
- Filter case*
- Injection syringe, volume 20 ml*

* – included in Lumex Instruments “Turbidity” set, order code 300002629

The contents of this paper are subject to change without notice.

To get more specific information, please contact the representative by sales@lumexinstruments.com