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Turbidity and Urine Turbidity: A Mini Review

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Abstract

Turbidity, the measurement for impurity and the opposite phenomenon of clarity, is described as the reduced transparency of a liquid caused by the existence of undissolved matter in the form of suspended particles. The permissible volume of light through the liquid, or light that is not dispersed or absorbed but emitted through the liquid and propagated toward the observer, provides a foundation for the analysis of various subject matters, such as liquid mass concentration and impurity identification. The turbidity of urine is increased by the presence of cellular debris, cast, and, in some cases, crystal and other debris in the urine. Blood (both red and white blood cells), hemoglobin, cholesterol, albumin, leukocyte esterase, nitrites, ketones, bilirubin, and urobilinogen are all substances that are not expected to be found in urine, the presence of which can increase urine turbidity. Owing to

the principle of turbidimetry, it is not the detection of turbidity that is the cause of the turbid state of urine but the presence of suspended particles and a rough estimate of the number of suspended particles in urine. This research exposes the different methods of obtaining the turbidity of a liquid sample and the working principles of turbidimetry and nephelometry.

Keywords

- **Turbidity**
- **Nephelometry**
- **Light intensity**
- **Light scatter**

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