



QuantiChrom™ Urea Assay Kit

Urea is primarily produced in the liver and secreted by the kidneys. Urea is the major end product of protein catabolism in animals. It is the primary vehicle for removal of toxic ammonia from the body. Urea determination is very useful for the medical clinician to assess kidney function of patients. In general, increased urea levels are associated with nephritis, renal ischemia, urinary tract obstruction, and certain extrarenal diseases, e.g., congestive heart failure, liver diseases and diabetes. Decreased levels indicate acute hepatic insufficiency or may result from over-vigorous parenteral fluid therapy.

Simple, direct and automation-ready procedures for measuring urea concentration in biological samples are becoming popular in research and drug discovery. BioAssay Systems' Urea Assay Kit is designed to measure urea directly in biological samples without any pretreatment. The improved Jung method utilizes a chromogenic reagent that forms a colored complex specifically with urea. The intensity of the color, measured at 520nm, is directly proportional to the urea concentration in the sample. The optimized formulation substantially reduces interference by substances in the raw samples.

APPLICATIONS:

Direct Assays: urea in serum, plasma, urine, milk, etc.

Drug Discovery/Pharmacology: effects of drugs on urea metabolism.

Environment: urea determination in soil and waste water.

KEY FEATURES:

Sensitive and accurate: use as little as 5 μ L samples. Linear detection range 6 μ g/dL (1 μ M) to 100 mg/dL (17mM) urea in 96-well plate assay.

Simple and high-throughput: the procedure involves addition of a single working reagent and incubation for 30 min. Can be readily automated as a high-throughput assay in 96-well plates for thousands of samples per day.

Improved stability: the optimized formulation has greatly enhanced the reagent and signal stability.

Low interference: no pretreatments are needed. Assays can be directly performed on raw biological samples i.e., in the presence of lipid and protein.

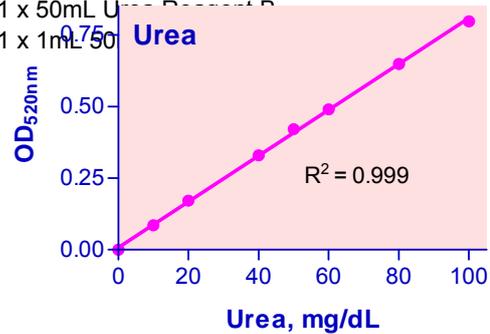
Versatility: assays can be executed in a cuvet or 96-well plate with a spectrophotometer or microplate reader.

QuantiChrom™ Urea Assay Kit

DIUR-500

Each kit is sufficient for 500 assays in 96-well plate. Kit includes:

- 1 x 50mL Urea Reagent A
- 1 x 50mL Urea Reagent B
- 1 x 1mL 500 μ M Urea Standard



Standard Curve in 96-well plate in assay

REFERENCES:

- [1]. Jung D, Biggs H, Erikson J, Ledyard PU (1975). New Colorimetric reaction for end-point, continuous-flow, and kinetic measurement of urea. Clin Chem. 21(8):1136-1140.
- [2]. Jansen AP, Peters KA, Zelders T (1970). Modifications and improvements of a continuous flow system for colorimetric analysis. Clin Chim Acta. 27(1):125-132.
- [3]. Levinson SS (1978). Kinetic centrifugal analyzer and manual determination of serum urea nitrogen, with use of o-phthaldialdehyde reagent. Clin Chem. 24(12):2199-2202.