



EnzyChrom™ Ethanol Assay Kit

Alcoholic drinks are among the daily consumed beverages. Studies have shown heavy alcohol consumption may lead to various forms of liver diseases and to increased mortality rates. Quantitative determination of alcohol (ethanol, C₂H₅OH) has applications in basic research, drug discovery, clinic studies and in the alcoholic industry.

Simple, direct and automation-ready procedures for measuring ethanol concentration are very desirable. BioAssay Systems' EnzyChrom™ ethanol assay kit is based on alcohol dehydrogenase catalyzed oxidation of ethanol, in which the formed NADH is coupled to the formazan (MTT)/phenazine methosulfate (PMS) Reagent. The intensity of the product color, measured at 565 nm, is proportionate to the ethanol concentration in the sample.

KEY FEATURES

Sensitive and accurate. Detection limit 0.0003 vol % (50 μM or 3 ppm), linearity up to 0.1% ethanol in 96-well plate assay.

Convenient. The procedure involves adding a single working reagent, and reading the optical density at time zero and at 5 min at room temperature. No 37°C heater is needed.

High-throughput. Can be readily automated as a high-throughput 96-well plate assay for thousands of samples per day.

APPLICATIONS

Direct Assays: ethanol in serum, plasma, urine and saliva samples.

Pharmacology: effects of drugs on alcohol metabolism.

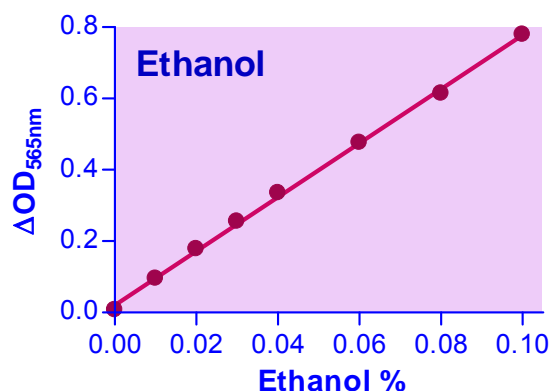
PRODUCT INFORMATION:

EnzyChrom™ Ethanol Assay Kit

ECET-100

Each kit is sufficient for 100 assays in 96-well plate. Kit includes:

- 1 x 10 mL Assay Buffer
- 1 x 1 mL NAD Solution
- 1 x 2 mL PMS Solution
- 1 x 2 mL MTT Solution
- 1 x 120 μL Enzyme
- 1 x 2 mL 10% Ethanol Standard



Standard Curve in 96-well plate assay

REFERENCES:

- [1]. Dey A, Cederbaum AI (2006). Alcohol and oxidative liver injury. *Hepatology*. 43: S63-74.
- [2]. Dubowski KM (1980). Alcohol determination in the clinical laboratory. *Am J Clin Pathol*. 74: 747-750.
- [3]. Lim HH, Buttery JE. (1977). Determination of ethanol in serum by an enzymatic PMS-INT colorimetric method. *Clin Chim Acta*. 75(1): 9-12.