BioAssay Systems offers high quality assay kits, analytical services, assay design and development services

### Blood/Urinary Chemistry
- Acetylcholine
- Alanine transaminase
- Albumin
- Alkaline phosphatase
- Ammonia (NH₃/NO₃⁻)
- Amylase
- Arginase
- Aspartate transaminase
- Bilirubin
- Calcium (Ca²⁺)
- Chloride (Cl⁻)
- Choline
- Coenzyme A (CoA)
- Copper (Cu²⁺/Cu⁺)
- Creatine
- Creatine kinase
- Creatinine
- Ethanol
- Formaldehyde
- Free fatty acid
- Fructose
- Glucose,
- Glutamate
- Glutathione
- Glycerol
- HDL, LDL
- Heme, Hemoglobin
- Iron (Fe²⁺/Fe³⁺)
- Ketone body
- Lactate
- Lactate dehydrogenase
- Lactose
- Lipase
- Magnesium
- Phosphate
- Phospholipid
- Sialic acid
- Sucrose
- Sulfate
- Triglyceride
- Urea
- Uric acid
- Zinc

### Enzyme Activity
- Acetylcholinesterase
- Alanine transaminase
- Alkaline phosphatase
- Amylase, Arginase
- Aspartate transaminase
- ATPase, GTPase
- Catalase
- Creatine kinase
- α/β-Glucosidase
- Glutathione peroxidase
- Invertase
- Kinases
- Lactate dehydrogenase
- Lipase
- Monoamine oxidase
- Neuraminidase
- Nitric oxide synthase
- Phosphatase
- Phospholipase D
- Protein kinase
- Sucrase
- Urease

### Oxidative Stress
- Antioxidant
- Ascorbic acid
- Glutathione
- Glutathione peroxidase
- Nitric oxide
- Nitric oxide synthase
- Peroxidase
- Peroxide
- TBARS

### Energy Metabolism
- Adipolysis
- ADP, ATP
- Ascorbic acid
- Cholesterol
- Coenzyme A (CoA)
- Creatine
- DNA
- Ethanol
- Free fatty acid
- Fructose
- Galactose
- Glucose
- α/β-Glucosidase
- Glutathione peroxidase
- Invertase
- Kinases
- Lactate dehydrogenase
- Lipase
- Monoamine oxidase
- Neuraminidase
- Nitric oxide synthase
- Phosphatase
- Phospholipase D
- Protein kinase
- Sucrase
- Urease

### Cations and Anions
- Ammonium (NH₄⁺)
- Calcium (Ca⁺²)
- Chloride (Cl⁻)
- Copper (Cu²⁺/Cu⁺)
- Iron (Fe²⁺/Fe³⁺)
- Phosphate (PO₄³⁻)
- Magnesium (Mg²⁺)
- Sulfate (SO₄²⁻)
- Zinc (Zn²⁺)

### HTS Reagents
- Antioxidant
- ATPase
- GTPase
- Catalase
- Cell viability
- Cytotoxicity
- α/β-Glucosidase
- Luciferase reporter gene
- Neuraminidase
- Phosphate
- Protein kinase

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We specialize in biochemical & cell-based assays …

**QuantiChrom™ Hemoglobin Assay Kit (DIHB-250)**

Colorimetric Determination of Total Hemoglobin at 400 nm Quantitation of blood hemoglobin has been a key diagnostic parameter for various diseases such as anemia, polythemia and dehydration. BioAssay Systems’ hemoglobin assay kit is based on an improved Triton/NaOH method, in which the hemoglobin is converted into a uniform colored end product. The intensity of color is directly proportional to hemoglobin concentration in the sample. The optimized formulation exhibits high sensitivity and substantially reduces interference by substances in the raw samples.

**PUBLICATIONS**
3. Kasiappan R, et al (2009). Loss of p53 and MCT-1 indicate acute hepatic insufficiency or may result from over-vigorous parenteral fluid therapy. BioAssay Systems’ nitric oxide assay kit is designed to measure NO 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 520 nm, is directly proportional to total urea concentration in the sample. The optimized formulation substantially reduces interference by substances in the raw samples.

**PUBLICATIONS**

**EnzyChrom™ L-Lactate Assay Kit (ECL-100)**

Colorimetric Determination of L-Lactate at 565 nm LACTATE is generated by lactate dehydrogenase (LDH) under hypoxic or anaerobic conditions. Monitoring lactate levels is, therefore, a good indicator of the balance between tissue oxygen demand and utilization and is useful when studying cellular and animal physiology. BioAssay Systems’ lactate assay kit is based on lactate dehydrogenate catalyzed oxidation of lactate, 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 directly proportionate to the lactate concentration in the sample. This room temperature assay involves adding a single working reagent to the sample, and reading the optical density at time zero and at 20 min. Assay detects as low as 50 μM L-lactate in serum, plasma, and cell media samples.

**PUBLICATIONS**

**QuantiChrom™ Lipase Assay Kit (DLP-100)**

Colorimetric Determination of Lipase Activity at 412 nm Human pancreatic lipase and its related protein 2 are the main lipases secreted by the pancreas. In acute pancreatitis, lipase levels can rise to 5 to 10-fold within 24 to 48 hours. Increased activities have also been associated with pancreatic duct obstruction, pancreatic cancer, kidney disease, salivary gland inflammation, and other pancreatic diseases. Decreased levels may indicate permanent damage to lipase-producing cells in the pancreas. BioAssay Systems’ lipase assay is based on an improved dimercapto-propyl tributrate method, in which SH groups formed from lipase cleavage of dimercapto-propyl tributrate react with 5,5’-dithiobis (2-nitrobenzoic acid) to form a yellow colored product. The color intensity, measured at 412 nm, is proportionate to the enzyme activity in the sample.

**PUBLICATIONS**

**SuperLight™ Luciferase Reporter Gene Assays**

Bioluminescent Assay for Luciferase Reporter Expression This bioluminescent reporter gene assay is extremely sensitive and is especially suitable for quantifying luciferase expression in recombinant cells. This ultra-sensitive, homogeneous cell-based assay only requires adding a single reagent to the cells and measuring the light intensity after a short incubation step (2 minutes). Assays can be performed in tubes, cuvettes or multi-well plates. All kit components are compatible with culture media and with all liquid handling systems. With an extended luminescence emission kinetics (half-life 40 min), the SuperLight™ luciferase assays are especially suitable for high-throughput screening in 96-well, 384-well and 1536-well plates. In addition, the reagent provided in the kits has been formulated for maximum sensitivity, reproducibility and long shelf-life. Applications for this kit include gene regulation studies and high-throughput screening of gene modulators.

**PUBLICATIONS**

**QuantiChrom™ Nitric Oxide Oxide Assay Kit (D2NO-100)**

Quantitative Colorimetric Determination of Nitric Oxide NITRIC OXIDE is a reactive radical that plays an important role in many key physiological functions. Nitric oxide, an oxidation product of arginine by nitric oxide synthase, is involved in host defense and development and activation of regulatory proteins. BioAssay Systems’ nitric oxide assay kit is designed to accurately measure nitric oxide production following reduction of nitrite to nitrite using an improved Griess reaction. The procedure is simple and the time required for sample pretreatment and assay is reduced to only 40 min. Linear detection range 0.6-200 nM nitric oxide in 96-well plate assay. This improved assay can be used to determine nitric oxide in plasma, serum, urine, tissue and cellular extracts.

**PUBLICATIONS**