

Glutamate Assay Kit

Glutamate Assay Kit (Colorimetric)

CATALOG #
AAA44650

PRODUCT SYNONYMS

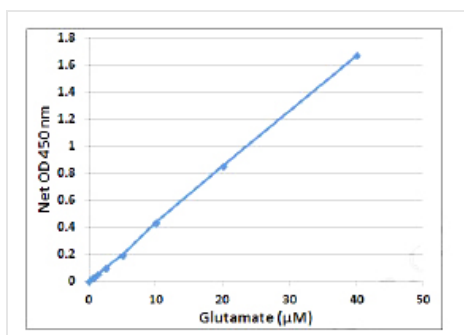
Glutamate; Glutamate Assay Kit (Colorimetric); Glutamate assay kit

PRODUCT SPECIFICATIONS

Preparation and Storage

Store the 10X Assay Buffer at room temperature. Store the 50X NAD⁺ at -80 degree C. Store all other components at -20 degree C. The Colorimetric Probe is light sensitive and must be protected accordingly. Avoid multiple freeze/thaw cycles.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for Glutamate assay kit

Principle of the Assay: The Glutamate Assay Kit is a sensitive, quantitative colorimetric assay for glutamate. The provided reagents are sufficient for the evaluation of 200 assays. The unknown samples or Glutamate standards are added to a 96 well plate followed by the Colorimetric Probe Mix containing WST-1, an electron mediator, and L-Glutamic Dehydrogenase (GDH). During a brief incubation the WST-1 is converted to the formazan form (Figure 1) and the absorbance of the plate is read at 450 nm. The content of Glutamate in the unknown samples is determined by comparison with a predetermined Glutamate standard curve.

Background: Glutamate is a non-essential amino acid that has a key metabolic role in processes such as the citric acid cycle and removal of excess nitrogen waste. In its monosodium form (MSG), glutamate is well known as a flavor enhancer. Glutamate has also been identified as one of the major excitatory neurotransmitters of the mammalian brain. Glutamate is involved in learning and memory, and long term potentiation occurs at glutaminergic synapses. In addition, glutamate helps to regulate growth cones and synaptogenesis. Postsynaptically, glutamate has been suggested to activate the NMDA, AMPA, and kainite receptors. Damage and/or death to nerve cells due to excessive glutamate release and deficits in uptake have been correlated with diseases such as amyotrophic lateral sclerosis, lathyrism, and Alzheimer's disease as well as stroke, autism, and some forms of intellectual disability.

Product Categories/Family for Glutamate assay kit

[Metabolism Research](#)

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

