

L-Amino Acid Assay Kit

L-Amino Acid Assay Kit (Colorimetric)

CATALOG #
AAA44645

PRODUCT SYNONYMS

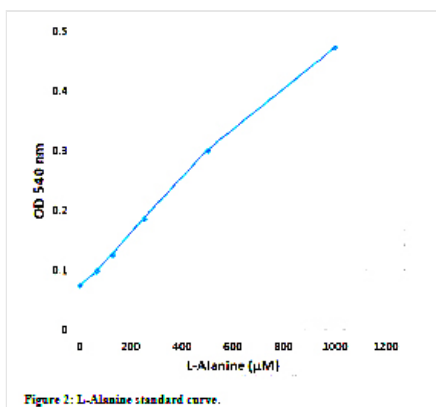
L-Amino Acid; L-Amino Acid Assay Kit (Colorimetric); L-Amino Acid assay kit

PRODUCT SPECIFICATIONS

Preparation and Storage

Upon receipt, store the L-Alanine Standard, Colorimetric Probe, and HRP at -20 degree C. The Colorimetric Probe is light sensitive and must be stored accordingly. Avoid multiple freeze/thaw cycles. Store the L-Amino Acid Oxidase at 4 degree C (DO NOT FREEZE). Store the 1X Assay Buffer at room temperature.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for L-Amino Acid assay kit	Principle of the Assay: L-Amino Acid Assay Kit measures L-Amino Acids within food or biological samples. An L-amino acid is oxidatively deaminated by L-Amino Acid oxidase into its corresponding alpha-keto acid plus ammonia and hydrogen peroxide. The hydrogen peroxide is then detected with a highly specific colorimetric probe. Horseradish peroxidase catalyzes the reaction between the probe and hydrogen peroxide, which bind in a 1:1 ratio. Samples and standards are read with a standard 96-well colorimetric plate reader. Samples are compared to a known concentration of L-Alanine standard within the 96-well microtiter plate format (Figure 1). Background/Introduction: Amino acids are organic compounds that contain amine (-NH₂) and carboxyl (-COOH) functional groups, as well as a side-chain (R group) which confers uniqueness to each amino acid. The main elements of an amino acid are carbon, hydrogen, oxygen, and nitrogen, although other elements can be found in some amino acids. About 500 amino acids are known, but only 20 are coded in the human genome. Amino acids are the monomers which are joined together to make short polymer chains called peptides or longer chains called proteins. Non-protein amino acids play important roles in the formation of biologically important molecules. For example, tryptophan is processed into the neurotransmitter serotonin, while tyrosine (and its precursor phenylalanine) are processed into neurotransmitters dopamine, epinephrine and norepinephrine. When consumed and absorbed by the human body, the standard amino acids are used to make proteins and other molecules or are oxidized to urea and carbon dioxide to be used as a form of energy. The oxidation pathway begins with transamidase removal of the amino group, and this group is then processed through the urea cycle. The other transamination product is a keto acid that is used for the citric acid cycle. Through the process of gluconeogenesis, some amino acids can also be converted into glucose. Out of the standard 20 amino acids, nine amino acids (His, Ile, Leu, Lys, Met, Phe, Thr, Trp and Val) are considered to be essential amino acids because the human body cannot make them from other molecules in enough amounts needed for normal growth, so they must be obtained from food sources. L-Amino Acid Assay Kit is a simple colorimetric assay that measures the total amount of free L-Amino Acids (except for Glycine) present in foods or biological samples in a 96-well microtiter plate format. Amino Acids in polypeptide chains (peptides and proteins) are not detected. Each kit provides sufficient reagents to perform up to 100 assays, including blanks, L-Alanine standards and unknown samples. Sample L-Amino Acid concentrations are determined by comparison with a known L-Alanine standard. The kit has a detection sensitivity limit of 62.5 uM L-Amino Acids.
Product Categories/Family for L-Amino Acid assay kit	Metabolism Research ; Cellular Metabolism ; Amino Acid Metabolism

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.

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Online datasheet: <https://stage.aaabiotech.com/assay-kits/l-amino-acid/44645>