

Formate Assay Kit

Formate Assay Kit (Colorimetric)

CATALOG #
AAA44678

PRODUCT SYNONYMS

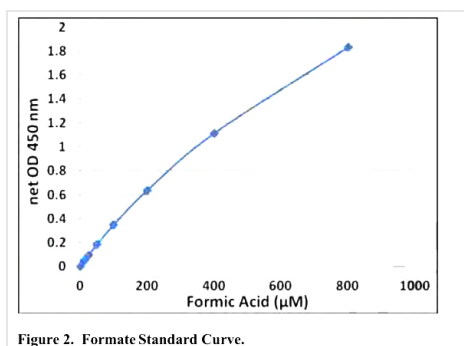
Formate; Formate Assay Kit (Colorimetric); Formate assay kit

PRODUCT SPECIFICATIONS

Preparation and Storage

Upon receipt, store the 5X Assay Buffer at room temperature. Store the 50X NAD⁺ and Formate Dehydrogenase at -80 degree C. Store all remaining components at -20 degree C. The 10X Colorimetric Probe is light sensitive and must be stored accordingly. Avoid multiple freeze/thaw cycles.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for Formate assay kit

Background: Formic acid is the simplest carboxylic acid with chemical formula CH₂O₂. It is often used as an antibacterial agent/preservative in livestock feed. In some countries it is applied to fresh hay in order to promote lactic acid fermentation and to lower butyric acid formation. Formic acid can block certain decay processes in feed which results in the feed retaining its nutritive value longer, and is therefore often employed to preserve cattle winter feed. It is sometimes added to poultry feed to kill E. coli bacteria. Formic acid is also used to tan leather, dye textiles, remove limescale, and clean toilet bowls. Beekeepers use formic acid to kill mites that can destroy bee colonies. In humans at low physiological concentrations, formic acid is metabolized easily and removed by the body (normal urine levels are about 280 µM). At higher doses, however, it can be toxic; in methanol poisoning it is the formic acid and formaldehyde metabolites rather than methanol that cause optic nerve damage resulting in blindness. Long term formic acid exposure in humans may cause kidney damage as well as the development of a skin allergy that appears when re-exposure to the chemical.

Principle of the Assay: The Formate Assay Kit is a sensitive, quantitative colorimetric assay for formate in a variety of sample types. The provided reagents are sufficient for the evaluation of 100 assays*. The unknown samples or formate standards are added to a 96 well plate followed by the Colorimetric Probe Mix containing WST-1, an electron mediator, and Formate Dehydrogenase (FDH). 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 formate in the unknown samples is determined by comparison with a predetermined formate standard curve. The kit has a detection sensitivity limit of 12.5 µM formate.

Product Categories/Family for Formate assay kit

[Metabolism Research](#); [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://www.aaabiotech.com/assay-kits/formate/44678>