

## OxiSelect Ascorbic Acid Assay Kit

OxiSelect Ascorbic Acid Assay Kit (FRASC)

CATALOG #  
**AAA44566**

### PRODUCT SYNONYMS

OxiSelect Ascorbic Acid; OxiSelect Ascorbic Acid Assay Kit (FRASC); OxiSelect Ascorbic Acid assay kit

### PRODUCT SPECIFICATIONS

#### Preparation and Storage

Upon receipt, prepare single use aliquots and store the Ascorbate Oxidase at -80 degree C. Store the remaining kit components at 4 degree C.

### IMAGES

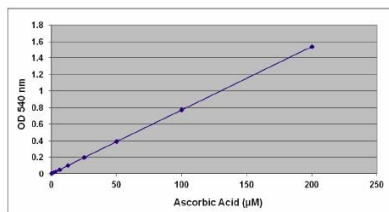
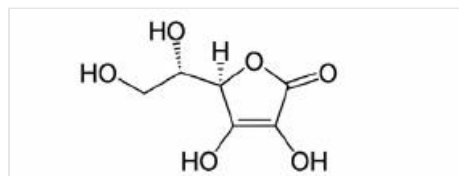


Figure 2. Ascorbic Acid Standard Curve.

Application Data



Application Data

ADDITIONAL INFORMATION

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| Related Product Information for<br>OxiSelect Ascorbic Acid assay kit | <p>Principle of the assay: The OxiSelect Ascorbic Acid Assay Kit is a quantitative assay for measuring the ascorbic acid concentration within a sample. Ferric iron chloride is initially reduced by electron-donating antioxidants present within the sample to its ferrous form. The ferrous iron is chelated to a colorimetric probe to form a product that can be measured at 540-600 nm. Ascorbic acid reacts very quickly with the probe and iron complex, with the assay being complete within a few minutes. Ascorbate oxidase, added to one of two parallel sample wells, selectively and specifically destroys ascorbic acid. The background value generated is subtracted from wells untreated with the enzyme to determine the ascorbic acid concentration.</p> <p><b>Background:</b> Ascorbic acid is a vital water-soluble antioxidant found in living organisms. Commonly known as Vitamin C, the L-enantiomer is the only form found in nature and the form necessary for normal physiological reactions. Ascorbic acid is a weak sugar acid structurally related to glucose. The anion of ascorbic acid, ascorbate acts as a reducing agent, donating electrons to various enzymatic and some non-enzymatic reactions necessary in all animals and plants. Its reducing power makes it a powerful antioxidant, rapidly scavenging many reactive oxygen species (ROS). Although many organisms can produce the vitamin internally, humans cannot and must receive it through diet intake. Scurvy results when there is a deficiency in dietary intake of the vitamin. Ascorbic Acid is critical for a variety of functions related to tissue growth and wound healing, neurotransmitter formation, blood cholesterol levels, as well as free radical neutralization. OxiSelect Ascorbic Acid Assay Kit is a quantitative assay for measuring ascorbic acid within various samples such as serum, plasma, urine, saliva, tears, tissues homogenates, cell extracts, and purified food or drug extracts. The assay is based on the Ferric Reducing/Antioxidant Ascorbic Acid (FRASC) chemistry driven by the electron donating reducing power of antioxidants. The kit employs ascorbate oxidase, which allows the user to differentiate the ascorbic acid content from other antioxidants present within their sample. Ascorbic acid levels in a sample are determined by measuring the difference in optical density between two sample wells, one with and one without the enzyme. The FRASC assay is analytically sensitive to 1 µM; therefore, the kit offers a practical analytical method for assessing age, disease, diet, or other physiological changes to antioxidant status. Each kit provides sufficient reagents to perform up to 200 assays*, including standard curve and unknown samples.</p> |
| References                                                           | <ol style="list-style-type: none"><li>1. Benzie, I.F.F., et. al. Redox Report (1997) 3: 233-238.</li><li>2. Jenab, M., et. al. Cancer Epidemiol. Bio. Prev. (2005) 14(7): 1837-1840.</li><li>3. Karlsen, A., et al. Eur. J. Clin. Nut. (2007) 61: 1233-1236.</li><li>4. Siu, P. M., et. al. Exp Physiol. (2011) 96.9: 889-906.</li></ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

**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/oxiselect-ascorbic-acid/44566>