# Total Collagen Assay Kit (Perchlorate-Free)

**Cat. No.** Kit-0995 **Lot. No.** (See product label)

## SPECIFICATION

| Product Overview | |
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| **Description** | Collagen is the most abundant protein in mammals, accounting for nearly 30% of body protein content. Collagen is an extracellular scaffolding protein found in skin, tendons, bone, cartilage, ligaments and muscles, amongst other tissues. There are more than twenty different characterized types of collagen, but the fibrilous types I, II and III comprise more than 90% of the total collagen in mammals. Collagen has a triple helical structure, consisting of three 'preprocollagen' strands with a repeating Gly-X-Hyp tripeptide sequence, where X is any amino acid and Hyp is hydroxyproline, a post-translationally modified amino acid formed from proline by the enzyme prolyl-4-hydroxylase. In animals, hydroxyproline is found almost entirely in collagen (which contains approximately 12-14% hydroxyproline by mass) and contributes to its structural rigidity and high tensile strength. Hydroxyproline is thus a direct measure of the amount of collagen present in tissues. Many diseases are believed to affect collagen turnover, including tumor invasion and metastasis, rheumatoid arthritis, cardiopulmonary fibrosis and muscular dystrophy. Total Collagen Assay Kit II (Perchlorate-Free) is a quick and convenient protocol for detection of small amounts of collagen in a variety of biological samples. The assay is based upon hydrolysis of samples to yield free Hyp, which is oxidized and reacted to give a brightly-colored chromophore with an absorbance peak at 560 nm. The assay employs a proprietary acidic developer solution to accurately measure collagen in hydrolysates without the use of hazardous perchloric acid, obviating the need for any special handling and waste-disposal protocols. The assay can detect a minimum of 0.5 µg collagen per well in a 96-well format and generates colorimetric results that are virtually identical to |

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| | those of the classical perchloric acid-based method. |
| **Applications** | Measurement of collagen in various sample types. |
| **Storage** | -20°C |
| **Shipping** | Gel Pack |
| **Size** | 100 Reactions |
| **Kit Components** | Oxidation Buffer; Chloramine T Concentrate; Developer Solution; DMAB Concentrate (in DMSO); Collagen I Standard (3 mg/ml); Microplate Sealing Film |
| **Target Species** | Mammalian tissues, protein/peptide hydrolysates, serum, urine |
| **Detection method** | Detection method- Absorbance (OD = 560 nm). |
| **Compatible Sample Types** | Mammalian tissues, protein/peptide hydrolysates, serum, Urine |
| **Features & Benefits** | Simple, fast and convenient assay; Can detect as low as 0.5 µg of collagen in a variety of samples; Simpleprocedure; takes less than ~60 minutes; Faster than Perchlorate-Based Assay; PCA-free |

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