June, 2016

PACKAGE INSERT
Collagenase Gold
Catalog Numbers: 011-1060, 011-1160

Product Description
Collagenase Gold is an aseptically filled, lyophilized preparation of enriched *Clostridium histolyticum* collagenase. Approximately 85-90% of the *C. histolyticum* protein in this preparation is collagenase. Collagenase is obtained from culture supernatants of *C. histolyticum* that contain porcine gelatin and pancreatic enzymes sterilized prior to bacterial fermentation. Collagenase Gold is labelled with a number that reflects the minimal amount of total collagenase FALGPA activity[1] per bottle. Each bottle also contains a minimally hygroscopic, polypeptide excipient that enables the user to weigh out the amount of product required for use and also protects the product from enzyme degradation during storage. The products are sold as 100 mg (Collagenase Gold 80, #011-1160) or 1g (Collagenase Gold 800, #011-1060) pack sizes where the mass represents the dry weight of the protein.

Collagenase Gold is prepared for research use only.

Storage and Stability
Collagenase Gold is stable for at least two years from date of manufacture if stored as a lyophilized powder at Ò4°C.

Activity Assessment
Each lot of product is characterized for collagenase activity using the FALGPA peptide substrate[1]. The clostripain and trypsin-like activities are determined on the specific lot of enriched collagenase used to prepare the Gold products [2]. The amount of these activities is calculated based on the amount of collagenase dispensed into each product.

Enzyme Preparation
Collagenase Gold is supplied as a lyophilized cake in sealed amber bottles. If only a portion of the enzyme is used for the application, equilibrate the bottle to room temperature prior to opening. Use a clean spatula to break up the lyophilized cake. Weigh out the required amount of enzyme powder and re-seal the bottle and store at Ò4°C. Dissolve the powder in the appropriate amount of buffer for use in the application.

If the entire amount of enzyme is used for an application, reconstitute the 100 mg bottle with 2 mL or the 1 g bottle with 20 mL of buffer (suggest HBSS or a similar non-phosphate buffer) for a minimum of 15 minutes to ensure complete dissolution of the enzyme. ***Occasionally invert the bottle to aid in the dissolution process. The enzyme solution should not be vortexed or swirled excessively as enzyme denaturation may occur.*** The enzyme is lyophilized in a buffer containing calcium so the initial reconstitution has sufficient calcium for enzyme stability. ***However, for optimal stability the final working buffer for tissue dissociation should have at least 0.1 mM Ca^{2+} and contain no cation chelating agents.*** Once completely in solution, dilute appropriately with buffer as required by the application.

The enzyme solution can be sterile filtered through 0.2 εm cellulose acetate or PES filter membranes without compromising enzyme potency. Surfactant free cellulose acetate (SFCA) and PES filters from several major vendors were tested and no measurable loss of CDA was observed.

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Resources

VitaCyte has details on the significance of enzyme activities and the assays used in the manufacturing and quality control of products on the website, www.vitacyte.com. Additional details about enzyme activity or questions regarding your specific isolation are available by contacting VitaCyte directly. Additional reagents can be ordered by sending an e-mail to orders@vitacyte.com or by phone at (317) 917-3457.

Reference List

1. Van Wart HE and Steinbrink DR. *Analytical Biochemistry* 113 (1981); 356-65.
2. Mitchell WM and Harrington WF. *Methods in Enzymology* 19 (1970) 635-642.

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