



## PRODUCT INFORMATION

### Collagenase NB 8 Broad Range

**Cat. No. 17456**

<b>General</b>	Collagenases from <i>Clostridium histolyticum</i> are proteolytic enzymes that cleave peptide bonds in the triple helical collagen molecule of human or animal tissue <i>in situ</i> . For this reason collagenases are widely used for isolation of various cell types by tissue dissociation.
<b>Description</b>	Collagenase NB 8 Broad Range is chromatographically purified; therefore it contains a high collagenolytic activity. The additional enzymatic activities like clostripain, trypsin-like activity and neutral protease, as well as the endotoxin level are reduced.
<b>Specification</b>	Collagenase activity $\geq 0.90$ U/mg (PZ acc. to Wunsch) Neutral protease activity $\leq 0.20$ U/mg (DMC) Trypsin-like activity $\leq 0.50$ U/mg (BAEE) Endotoxin $\leq 100.0$ EU/mg
<b>Application</b>	Collagenase NB 8 Broad Range is suitable for dissociation of a broad variety of tissue types.  If a GMP conforming product is required, please contact SERVA.
<b>Storage conditions</b>	Collagenase NB 8 Broad Range is provided as a lyophilized powder. It should be stored at +2 to +8 °C in a dry environment. Under these conditions the product is stable until the minimum shelf life stated on the certificate of analysis if repeated opening and closing of the vial is avoided.
<b>Documents</b>	For each lot a specific certificate of analysis is provided. A certificate of origin is available.

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### Instructions for use:

<b>General</b>	Collagenase NB 8 Broad Range is suitable for isolation of a broad variety of cells from human or animal tissues. Tissue types include musculature, bone, tumors, and rodent pancreas.
<b>Tissue dissociation</b>	<p>Recommended starting concentrations for selected applications:</p> <p>Musculature (human, rodent): 0.4 – 0.8 PZ U/ml</p> <p>Pancreas (rodent): 1.5 – 1.7 PZ U/ml</p> <p>In general, the appropriate collagenase concentration depends on tissue type and origin as well as on the isolation procedure. Further protocol information for dissociation of several tissue types is available at <a href="http://www.serva.de">www.serva.de</a>.</p> <p>Collagenase activity is at an optimum at 37 °C and pH 7.4.</p>
<b>Stock solution</b>	<p>Collagenase NB 8 Broad Range dissolves at a concentration of up to 50 mg/ml in all buffers which are commonly used for cell isolation. The enzyme solution must be constantly stored on ice.</p> <p>Since collagenase and some of the secondary proteases depend on calcium, it is recommended to use a buffer with <math>\geq 2</math> mM <math>\text{Ca}^{2+}</math>. Absolutely no calcium chelating agents (e.g. EDTA) should be present at all.</p> <p>For 0.22 <math>\mu\text{m}</math> filtration filters with low protein-binding properties (e.g. cellulose acetate, PVDF, or PES) are recommended.</p>
<b>Working solution</b>	To prepare a working solution, the stock solution is diluted with buffer to achieve the required collagenase concentration. The working solution must be constantly stored on ice until use.
<b>Inactivation and inhibitors</b>	<p>The dissociation process can be reduced, e.g. by cooling down or dilution of the enzyme solution.</p> <p>Collagenase is reversibly inactivated at high pH values and irreversibly inactivated at low pH values. Inhibitors of collagenase include cysteine or chelating agents like EDTA.</p>
<b>Important note</b>	Collagenase NB 8 Broad Range is not intended for direct application in humans.