

# PRODUCT INFORMATION

## Collagenase NB 8 Broad Range

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**General** Collagenases from *Clostridium histolyticum* are proteolytic enzymes that cleave peptide bonds in the triple helical collagen molecule of human or animal tissue *in situ*.

For this reason collagenases are widely used for isolation of various cell types by tissue dissociation.

**Description** 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.

**Specification**

Collagenase activity	≥ 0.90 U/mg (PZ acc. to Wunsch)
Neutral protease activity	≤ 0.20 U/mg (DMC)
Trypsin-like activity	≤ 0.50 U/mg (BAEE)
Endotoxin	≤ 100.0 EU/mg

**Application** Collagenase NB 8 Broad Range is suitable for dissociation of a broad variety of tissue types.

**Storage conditions** 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.

**Documents** For each lot a specific certificate of analysis is provided. A certificate of origin is available.

**Product size**

Product	Cat.No.	Size (g)
Collagenase NB 8 Broad Range	S1745601	0.25
	S1745602	1

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### Instructions for use:

**General** 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.

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**Tissue dissociation** Recommended starting concentrations for selected applications:  
Musculature (human, rodent): 0.4 – 0.8 PZ U/ml  
Pancreas (rodent): 1.5 – 1.7 PZ U/ml

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 [www.nordmark-biochemicals.com](http://www.nordmark-biochemicals.com).

Collagenase activity is at an optimum at 37 °C and pH 7.4.

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**Stock solution** 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.

Since collagenase and some of the secondary proteases depend on calcium, it is recommended to use a buffer with  $\geq 2$  mM  $\text{Ca}^{2+}$ . Absolutely no calcium chelating agents (e.g. EDTA) should be present at all.

For 0.22  $\mu\text{m}$  filtration filters with low protein-binding properties (e.g. cellulose acetate, PVDF, or PES) are recommended.

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**Working solution** 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.

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**Inactivation and inhibitors** The dissociation process can be reduced, e.g. by cooling down or dilution of the enzyme solution. 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.

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**Important note** Collagenase NB 8 Broad Range is not intended for direct application in humans.