

PRODUCT INFORMATION

Neutral Protease NB High Active Grade

General Neutral protease from *Clostridium histolyticum* is a proteolytic enzyme and therefore can be used for isolation of various cell types by tissue dissociation.

Description Neutral Protease NB High Active Grade is chromatographically purified and contains an increased proteolytic activity. It is largely free from collagenolytic activity (PZ U) and the endotoxin level is very low.

Specification Neutral protease activity ≥ 4.00 U/mg (DMC)
Endotoxin ≤ 50.0 EU/mg

Application Neutral Protease NB High Active Grade is, mostly in combination with Collagenase NB 1 Premium Grade (Cat. No. S1745503) or another Collagenase NB product, suitable for cell isolation from various tissue types.

If a GMP conforming product is required, please contact Nordmark Biochemicals under collagenase@nordmark-biochemicals.com.

Storage conditions Neutral Protease NB High Active Grade 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.

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Instructions for use:

General Neutral Protease NB High Active Grade is, in combination with Collagenase NB 1 Premium Grade, especially suited for isolation of islets of Langerhans from human pancreas, and also for cell isolation from several other human or animal tissues.

Tissue dissociation Recommended starting concentrations for isolation of islets of Langerhans from human pancreas:

Collagenase NB 1 Premium Grade: 15 – 20 PZ U/g tissue
Neutral Protease NB High Active Grade: 0.8 – 1.5 DMC U/g tissue

In general, the appropriate neutral protease concentration depends on tissue type and origin as well as on the isolation procedure.

Neutral protease activity is at an optimum at 37 °C.

Stock solution A stock solution of Neutral Protease NB High Active Grade is prepared by dissolving the enzyme in an appropriate volume of water. The enzyme solution must be constantly stored on ice.

Since neutral protease depends on calcium, absolutely no calcium chelating agents (e.g. EDTA) should be present at all.

Reconstituted Neutral Protease NB High Active Grade can be 0.22 µm filtered with filters with low protein-binding properties (e.g. cellulose acetate, PVDF, or PES).

Working solution To prepare a working solution, the stock solution is diluted with water to achieve the required neutral protease concentration. The working solution must be constantly stored on ice until use.

If Neutral Protease NB High Active Grade solution is mixed with Collagenase NB solution, the blend should be used immediately.

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

Inhibitors of neutral protease include chelating agents like EDTA.

Important Neutral Protease NB High Active Grade is not intended for direct application in humans.