

# Application Note

## Isolation of Human Mesenchymal Stem Cells with Collagenase NB 6 GMP Grade

### Product Information Collagenase NB 6 GMP Grade

**Collagenase NB 6 GMP Grade** is designed for dissociation of different tissues to isolate various cell types, e.g. human stem cells from Wharton's jelly. A balanced ratio of collagenase and other proteases guarantees a high yield of viable cells.

#### Specification

Collagenase activity:  $\geq 0.1$  U/mg (PZ\*)  
Endotoxins: Status  
Sterility: Must comply

\* PZ units acc. to Wunsch

The lot-specific activity is stated on the certificate of analysis which is attached to every consignment.

#### Storage Conditions

Collagenase NB 6 GMP Grade is provided as a lyophilized powder and should be stored in a dry environment at +2 to +8 °C. Stock solutions can be 0.2 µm filtered and stored at -20 °C for 1 year without loss of activity.

#### Clinical Applications

Collagenase NB 6 GMP Grade is sterile and produced acc. to GMP guidelines. Documents, e.g. on TSE safety and stability studies are available request. For research applications it can be replaced by Collagenase NB 4 Standard Grade (Cat. No. S1745401) which has comparable enzymatic properties but differs in manufacturing level.

#### Ordering Information

Enzyme	Cat. No.	Pack size
Collagenase NB 6 GMP Grade	N0002880	100 mg
Collagenase NB 6 GMP Grade	N0002779	1 g

For information and samples please contact the Nordmark Biochemicals Team

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### Isolation of Human Mesenchymal Stem Cells from Wharton's jelly

#### Recommended Starting Conditions

Concentration of Collagenase NB 6 GMP Grade	0.13 - 0.4 PZ U/ml**
Isolation terms	1 - 6 h, 37 °C

\*\* If required 1mg/ml hyaluronidase can be added. PZ units acc. to Wunsch

In general the required collagenase concentration depends on tissue type and origin as well as isolation procedure. Therefore, Collagenase NB concentrations stated above should be considered as starting points and progress of the digestion process should be monitored visually in order to determine the optimal conditions.

The digestion process can be stopped by adding EDTA, cooling down or diluting the digestion solution.

It is recommended to measure the concentration of the collagenase solution in PZ U/ml and not in mg/ml.

This ensures optimal reproducibility of isolations with collagenases from different lots, although Nordmark Biochemicals guarantees a high lot-to-lot consistency.

#### Collagenase NB products

- > High cell yields and viability
- > Reliable lot-to-lot consistency
- > GMP grades available

#### Ordering

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