

# Application Note

## Isolation of Murine Chondrocytes with Collagenase NB 4 Standard Grade

### Product Information Collagenase NB 4 Standard Grade

**Collagenase NB 4 Standard Grade** is designed for dissociation of different tissues to isolate various cell types, e.g. chondrocytes from murine cartilage.

A balanced ratio of collagenase and other proteases guarantees a high yield of viable cells.

### Specification

Collagenase NB 4 Standard Grade:  
Collagenase activity:  $\geq 0.1$  U/mg (PZ\*)

\*PZ units acc. to Wunsch

Neutral Protease NB:  
Neutral protease activity:  $\geq 0.5$  U/mg (DMC)

The lot-specific activities are stated on the certificates of analysis which are attached to every delivery.

### Storage Conditions

Collagenase NB 4 Standard Grade and Neutral Protease NB are provided as lyophilized powders and should be stored in a dry environment at +2 to +8 °C.

Stock solutions can be 0.2  $\mu$ m filtered and stored at -20°C for 1 year without loss of activity.

### Ordering Information

Enzyme	Cat. No.	Pack size
Collagenase NB 4 Standard Grade	S1745402	500 mg
Collagenase NB 4 Standard Grade	S1745401	1 g
Collagenase NB 4 Standard Grade	S1745403	5 g
Neutral Protease NB	S3030111	50 DMC U
Neutral Protease NB	S3030112	100 DMC U

For information and samples please contact the Nordmark Biochemicals Team

Phone: +49 4122 712 560 | Fax: +49 4122 712 286  
E-Mail: collagenase@nordmark-biochemicals.com  
Pinnauallee 4 | 25436 Uetersen | Germany  
www.nordmark-biochemicals.com

### Isolation of Chondrocytes from Cartilage of Newborn Mouse

#### Recommended Starting Conditions

Concentration of Neutral Protease NB	0.5 – 1 DMC U/ml
Isolation conditions of Neutral Protease	15 – 20 min, 37 °C
Concentration of Collagenase NB 4 Standard Grade	0.3 PZ U/ml*
Isolation conditions of Collagenase NB 4 Standard Grade	30 – 45 min, 37 °C

\*PZ units acc. to Wunsch

The isolation should be performed in sequential digestion steps, first Neutral Protease NB and second Collagenase NB 4 Standard Grade. 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 guarantees a high lot-to-lot consistency.

### Collagenase NB products

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

### Ordering

**Nordmark Biochemicals**  
Phone: +49 4122 712 560  
Fax: +49 4122 712 286  
E-Mail: order@nordmark-biochemicals.com

