

# Application Note

## Isolation of murein 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. human chondrocytes from cartilage. A balanced ratio of collagenase and other proteases guarantees a high yield of viable cells.

#### Specification

Collagenase activity:  $\geq 0.1$  U/mg (PZ Units acc. to Wünsch)

The activity of the Collagenase NB 4 Standard Grade is stated on the certificate of analysis which is attached to every consignment.

#### Storage conditions

Collagenase NB 4 Standard Grade is provided as a lyophilized powder and should be stored in a dry state at +2 to +8 °C.

Stock solutions can be filtered sterile and stored at -20°C for 1 year without loss of activity.

#### Clinical Applications

Collagenase NB 4 Standard Grade can be replaced by Collagenase NB 6 GMP Grade (Cat. No. 17458) which shows comparable enzymatic properties. Neutral Protease NB is available as GMP Grade as well (Cat. No. 30303).

#### Order Information

Enzyme	Cat. No.	Pack size
Collagenase NB 4 Standard Grade	17454.02	500 mg
Collagenase NB 4 Standard Grade	17454.01	1 g
Neutral Protease NB	30301.11	50 DMC U
Neutral Protease NB	30301.12	100 DMC U

### Isolation of chondrocytes from cartilage of newborn mouse

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	0.3 PZ U/ml
Isolation Conditions of Collagenase NB 4	30-45 min, 37 °C

The isolation process should be performed in sequential digestion steps, first Neutral Protease NB 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 batches, although SERVA guarantees a high lot-to-lot consistency.

#### SERVA Collagenase NB Qualities

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