

## Specification

### Lysozyme *BioChemica*

**A3711**

<b>Physical Description:</b>	Solid
<b>Product Code:</b>	A3711
<b>Product Name:</b>	Lysozyme <i>BioChemica</i>
<b>Short Description:</b>	additional product description: Hydrochloride form salt-free, albumin-free, freeze-dried
<b>Specifications:</b>	Activity (pH 6.2): min. 20000 U/mg
<b>WGK:</b>	1
<b>Storage:</b>	-20°C
<b>Shipment:</b>	RT
<b>Origin:</b>	from chicken egg white
<b>M:</b>	approx. 14400 g/mol
<b>CAS:</b>	9001-63-2
<b>EINECS:</b>	232-620-4
<b>CS:</b>	35079090
<b>Comment</b>	<p>Lysozyme (Muramidase) preferentially hydrolyses the <math>\beta</math>-1,4-glycosidic binding between N-Acetyl muraminic acid and N-Acetyl glucosamine, a component of the proteoglycan-cell wall of certain microorganisms. The enzyme is present in many organisms. In molecular biology, the enzyme from chicken white egg is used to lyse <i>E. coli</i> for the isolation of plasmid-DNA (ref. 1 miniprep\; Suppl. 15; pp. 1.6.4-7). The working concentration is 200 <math>\mu</math>g/300 <math>\mu</math>l. To increase the plasmid yield (approx. 5 - 10 %) in the so-called 'maxiprep', lysozyme may be added (ref. 1 maxiprep\; Suppl. 41; pp. 1.7.2-4). Another application is the lysis of bacteria for the preparation of bacterial RNA (ref. 1 Suppl. 15; pp. 4.4.4-5). In this case the working concentration is 40 <math>\mu</math>g/ml (stock solution 50 mg/ml). <b>Form:</b> The protein itself is Lysozyme chloride - the chloride is part of the protein structure. There is no free sodium chloride in the preparation. The maximum chloride content is 4 %. <b>Stability:</b> The lyophilized powder of lysozyme is stable for many years at +4°C. In solution, the stability at pH values from 4 to 5 at +4°C is several weeks and at room temperature several days. The pH-optimum is at 9.2, the isoelectric point at 11.0. Lysozyme will be inhibited by surfactants like SDS or alcohols and fatty acids, imidazole and indol-derivatives. Stock solutions in 10 mM Tris · HCl (pH 8.0) are prepared with a concentration of 10, 25 or 50 mg/ml, usually just before use.</p>

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### **Bibliography**

(1) Ausubel, F.A., Brent, R., Kingston, R.E., Moore, D.D., Seidman, J.G., Smith, J.A. & Struhl, K. (eds.) 2001. *Current Protocols in Molecular Biology*. John Wiley & Sons, New York. (2) Sambrook, J. & Russell, D.W. (2001) *Molecular Cloning*: A Laboratory Manual, 3rd Edition. pp. A1.8\+4.51. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY.

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