


Specification

**3-Isobutyl-1-Methylxanthine *BioChemica***

**A0695**

<b>Physical Description:</b>	Solid
<b>Product Code:</b>	A0695
<b>Product Name:</b>	3-Isobutyl-1-Methylxanthine <i>BioChemica</i>
<b>Specifications:</b>	Assay (HPLC): min. 98 %
<b>Hazard pictograms</b>	
<b>WGK:</b>	1
<b>Storage:</b>	2-8°C
<b>Signal Word:</b>	Attention
<b>GHS Symbols:</b>	GHS07
<b>H Phrases:</b>	H302
<b>P Phrases:</b>	P301+P312 P330
<b>Molecular Formula:</b>	C <sub>10</sub> H <sub>14</sub> N <sub>4</sub> O <sub>2</sub>
<b>M:</b>	222.25 g/mol
<b>CAS:</b>	28822-58-4
<b>EINECS:</b>	249-259-3
<b>CS:</b>	29335995

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**Comment**

IBMX is an inhibitor of cAMP phosphodiesterase. Inhibition of this enzyme leads to an increase of the intracellular cAMP concentration. A good inhibitory effect is achieved at concentrations of 0.8 mM (1) or 1 mM (2) IBMX may be dissolved in 20 mM Tris · HCl (pH 7.8), 3 mM MgCl<sub>2</sub>, 10 mM NaF buffer (2). Otherwise, IBMX is soluble in ethanol, DMSO and diluted, alkaline aqueous solutions (e. g. 0.1N NaOH), in water is hardly soluble. A 100 mM solution in water is prepared by dissolving 250 mg IBMX in 9 ml water and 5 to 10 µl of 10 N NaOH. After adjusting the volume to 11 ml, filter-sterilize and store aliquots at -20°C up to 2 months. Since IBMX is rather unstable in solution, it is recommended to prepare fresh solutions for each experiment.

**Bibliography**

(1)Ashcroft, S.J.H. *et al.* (1972) *FEBS Lett.* **20**, 263-266Cyclic nucleotide phosphodiesterase activity in normal mouse pancreatic islets. (2)Kalderon, A.E. *et al.* (1980) *Histochemistry* **65**, 277-289Localisation of 3',5'-cyclic adenosine monophosphate phosphodiesterase (cAMP-PDEase) activity in isolated bovine thyroid plasma membranes. (3)Bonifacino, J.S., Dasso, M., Harford, J.B., Lippincott-Schwartz, J. & Yamada, K.M. (eds.) (1998) *Current Protocols in Cell Biology*. page 23.4.11 (Suppl. 34) by John Wiley & Sons, Inc.

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