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Preparation of Stock Solutions

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Most Biolog products are sold in micromol quantities in order to assist customers with the preparation of stock solutions. In contrast to often troublesome calculations regarding molecular weight, salt form, water content and purity percentages, simply add certain volumes of solvent (mostly water or buffer) and end up already with stock solutions of defined concentrations.

The following table shows how to dissolve the content of a vial with water or buffer in order to obtain defined stock solutions. Please note, however, that the individual solubility of the substance you are working with may be limited, so that not all concentrations listed here can be achieved. Please check our product information material for relevant solubility information.

Concentration of stock solution	**Content of vial**							
	0.1 µmol	**0.5 µmol**	**1 µmol**	**5 µmol**	**10 µmol**	**25 µmol**	**50 µmol**	**100 µmol**
	⇓	⇓	⇓	⇓	⇓	⇓	⇓	⇓
	Water or buffer volumes to be added to achieve stock concentrations on the left							
	⇓	⇓	⇓	⇓	⇓	⇓	⇓	⇓
100 mM (1×10^{-1} M)	1 µl	5 µl	10 µl	50 µl	100 µl	250 µl	500 µl	1 ml
50 mM (5×10^{-2} M)	2 µl	10 µl	20 µl	100 µl	200 µl	500 µl	1 ml	2 ml
20 mM (2×10^{-2} M)	5 µl	25 µl	50 µl	250 µl	500 µl	1.25 ml	2.5 ml	5 ml
10 mM (1×10^{-2}M)	10 µl	50 µl	100 µl	500 µl	1 ml	2.5 ml	5 ml	10 ml
5 mM (5×10^{-3} M)	20 µl	100 µl	200 µl	1 ml	2 ml	5 ml	10 ml	20 ml
1 mM (1×10^{-3}M)	100 µl	500 µl	1 ml	5 ml	10 ml	25 ml	50 ml	100 ml
500 µM (5×10^{-4}M)	200 µl	1 ml	2 ml	10 ml	20 ml	50 ml	100 ml	200 ml

If a typical dilution series (1 mM, 100 µM, 10 µM, 1 µM ...) is prepared, respective final end volumes will be 90% of the starting stock solution. For example: The content of a 10 µmol vial that has been dissolved in 10 ml of water to result in a 1 mM stock solution, yields 9 ml of each concentration level after dilution.

For further information or assistance, please do not hesitate to contact us.

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