

# MES Buffer

Product	Con.	Cat#	Size
MES Buffer	1M, pH 6.1	IBS-BM005	500ml
	0.1M	IBS-BM007	1L
	0.5M, pH 6.1	IBS-BM009	500ml
	30mM, pH 6.5	IBS-BM013	1L
	0.1M, pH 4.5	IBS-BM015	20ml

**Components :** MES Buffer

pH adjusted with Potassium hydroxide (KOH)

**Storage Conditions :** Cold

Stable for a minimum of 6 month from date of receipt at Cold Temperature

**Introduction :** MES is the common name for the compound 2-(N-morpholino)ethanesulfonic acid. Its chemical structure contains a morpholine ring. It has a molecular weight of 195.2 and the chemical formula is C<sub>6</sub>H<sub>13</sub>NO<sub>4</sub>S. Synonyms include: 2-morpholinoethanesulfonic acid; 2-(4-morpholino) ethanesulfonic acid; 2-(N- morpholino)ethanesulfonic acid; 2-(4-morpholino)ethanesulfonic acid; MES; MES hydrate; and morpholine-4-ethanesulfonic acid hydrate.

**Application :** MES is used as a buffering agent in biology and biochemistry. It was developed as one of Good's buffers in the 1960s, with pKa value of 6.15 at 20 °C. These buffers were developed with the following criteria in mind: midrange pKa, maximum water solubility and minimum solubility in all other solvents, minimal salt effects, minimal change in pKa with temperature, chemically and enzymatically stable, minimal absorption in visible or UV spectral range and reasonably easily synthesized. It is highly soluble in water. It is also useful as a non-coordinating buffer in chemistry involving metal ions, as many common buffers (e.g. phosphate and acetate) readily form coordination complexes. MES-Buffer has a pKa value near physiological pH, it is not absorbed through cell membranes, and it is essentially transparent to UV light. A biological buffer mainly used in plant cell cultures.