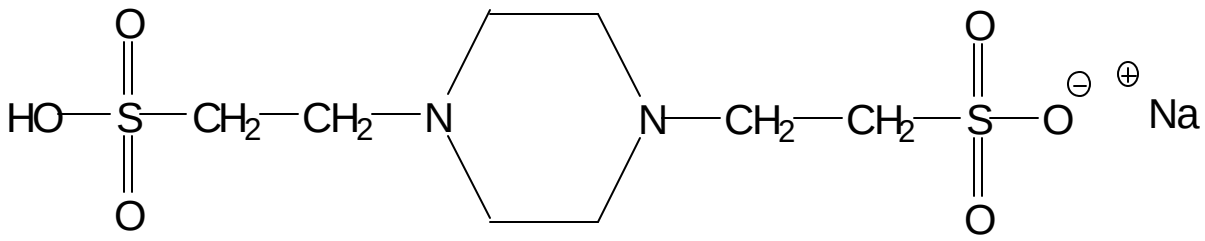
上海伊卡生物技术有限公司

PIPES MONOSODIUM SALT
Prod. No. P0217



CAS NUMBER: 10010-67-0
SYNONYMS: piperazine-N,N'-bis(ethanesulfonic acid) monosodium salt; 1,4-piperazinediethanesulfonic acid monosodium salt

PHYSICAL DESCRIPTION:

Appearance: white powder
Molecular formula: $C_8H_{17}N_2O_6S_2Na$
Molecular weight: 324.3
(pK_{a1} <3, but not usually reported)[1]; pK_{a2} = 6.8 at 25°C[1,2]
Effective buffering range: 6.1 - 7.5 (at 25°C)
$\Delta pK/\Delta T$ = - 0.0085[3]
No reported metal binding[1]

STORAGE / STABILITY AS SUPPLIED:

PIPES monosodium salt is expected to be stable for years at room temperature.

SOLUBILITY / STABILITY OF SOLUTIONS:

PIPES itself is not very soluble in water (only 1 g per L at 100°C)[1], but its salts are very soluble in water at the pH normally used as a buffer. PIPES monosodium gives a clear, colorless solution at 0.05 M in water (the resulting solution has a pH of approximately 4.5-4.7). However, 10 g will dissolve in 40 mL of 0.1 N NaOH.[2]

If solutions are to be sterilized, filtration is generally recommended for ethanesulfonic acid buffers, but PIPES buffers have been successfully autoclaved.[2]