



# 10X Buffer I

## Ammonium Based, Tween and Mg Free

### Cat #: 42-302

Content: 3 x 1.5 ml

Separate Solution 50 mM MgCl<sub>2</sub> solution included

**Storage:** -20°C.

Reagent for *in vitro* laboratory use only

#### General Description

Product includes 3 tubes of 1.5ml of Buffer I – 10X Ammonium Reaction Buffer and 1 tube of 1.5ml 50mM MgCl<sub>2</sub>

Tris-HCl pH 8.5, (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, Mg<sup>2+</sup> Free, Tween Free

**Table 1. Reaction components (Master Mix and Template DNA) for a 50µl reaction**

Component	Vol./reaction	Final Conc.
10X Apex Buffer	5 µl	1X
dNTP mix (100 mM of each)	0.5 - 1 µl	----
MgCl <sub>2</sub> (50 mM)	0.5 – 5 µl	0.5–5 mM
Primer A	Variable	0.1–1.0 µM
Primer B	Variable	0.1–1.0 µM
Apex DNA Polymerase	0.5 - 1 µl	2.5 - 5 units
PCR Grade Water	Variable	----
Template DNA	Variable	Variable
<b>TOTAL volume</b>	50 µl	----

**Table 2. MgCl<sub>2</sub> concentration in a 50 µL reaction**

In some applications, more than 1.5 mM MgCl<sub>2</sub> is needed for best results. Table 2 provides the volume of 50 mM MgCl<sub>2</sub> to add to the master mix if a higher MgCl<sub>2</sub> concentration is required.

Final MgCl <sub>2</sub> conc. in reaction (mM)	0.5	1.0	1.5	2.0	2.5	3.0	3.5
Additional volume of 50 mM MgCl <sub>2</sub>	0.5	1.0	1.5	2.0	2.5	3.0	3.5