10X Buffer I
Ammonium Based, Mg Free
Cat #: 42-300

Content: 3 x 1.5 ml

Separate Solution 50 mM $MgCl_2$ 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 $MgCl_2$

750mM Tris-HCl, pH 8.5; 200mM $(NH_4)_2SO_4$; 1% Tween® 20.

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	- - - -
$MgCl_2$ (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
TOTAL volume	50 µl	- - - -

Table 2. $MgCl_2$ concentration in a 50 µL reaction

In some applications, more than 1.5 mM $MgCl_2$ is needed for best results. Table 2 provides the volume of 50 mM $MgCl_2$ to add to the master mix if a higher $MgCl_2$ concentration is required.

Final $MgCl_2$ conc. in reaction (mM)	0.5	1.0	1.5	2.0	2.5	3.0	3.5
Additional volume of 50 mM $MgCl_2$	0.5	1.0	1.5	2.0	2.5	3.0	3.5