



10X Buffer II, Combination Buffer

Cat #: 42-301

Content: 3 x 1.5 ml

Storage: -20°C.

Reagent for *in vitro* laboratory use only

General Description

Product includes 3 tubes of 1.5ml of Buffer II – 10X Combination Buffer.

Tris-HCl, pH 8.7; Balanced KCl/(NH₄)₂SO₄; 15mM MgCl₂, 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 – 3.5 µl	1.5–5 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. MgCl₂ concentration in a 50 µL reaction

In some applications, more than 1.5 mM MgCl₂ is needed for best results. Table 2 provides the volume of 50 mM MgCl₂ to add to the master mix if a higher MgCl₂ concentration is required.

Final MgCl ₂ conc. in reaction (mM)	1.5	2.0	2.5	3.0	3.5	4.0	5.0
Additional volume of 50 mM MgCl ₂	0.0	0.5	1.0	1.5	2.0	2.5	3.5