

5x Sequencing Buffer User Manual

Product catalog numbers:

Catalog number	Product Name	Unit Size
7006112	5x Sequencing Buffer	112ml
7006028	5x Sequencing Buffer	28ml
7005010	5x Sequencing Buffer	1ml
7005200	5x Sequencing Buffer	1ml*20

Product description:

5x Sequencing Reaction Buffer provides the right buffer components and concentration for cycling sequencing reactions. This buffer works together with the reaction premix and can also be used with BigDye® reaction premix without changing the SOP for sequencing reactions.

5x Sequencing Reaction Buffer is a modified version based on 5x Sequencing Reaction Buffer. The new version of the 5x Buffer provides more robust performance by slowing down the signal decay over the run and thus enhances the sequencing reading accuracy after 650 bases. In addition, we observe that the new v3 version of 5x sequencing Buffer allows reading through some secondary structure sequences without significant signal drop, eliminating the need for a dGTP cycle sequencing kit. We recommend users validate the new v3 buffer before switching.

Product storage:

Products are shipped with blue ice and should be stored at -20°C after arrival. Try to minimize freeze-thaw cycles.

Sequencing reaction setup:

Customers use different reaction volumes and dye reaction premix amount for their sequencing reactions. Here, we use 20 µl total reaction volume and 4 µl Dye reaction premix as an example:

In a PCR tube, add:

4 µl	Reaction Mix
2 µl	5x Sequencing Buffer or v3 5x Sequencing Buffer
X µl	Primer (3.2 pmol)
X µl	DNA templates (amount varies based on the templates)
To 20 µl total	Nuclease-free water

Set up the program on a PCR instrument to run the cycle sequencing reaction.

Note:

1. Use Reaction Premix and 5x Sequencing Reaction Buffer/ v3 5x Sequencing Reaction Buffer as in your standard SOP.
2. Any modification in your SOP using these reagents should be optimized first for successful performance.