

EcoZyme Proteinase K, powder

Troubleshooting Guide

100 mg, 500 mg

Cat No: EZPK100, EZPK500

Use this guide for common preparation and protein-digestion problems encountered with EcoZyme Proteinase K powder. The datasheet describes the powder as a stable, highly reactive nonspecific serine protease for protein digestion and nucleic-acid preparation workflows.

Before You Start - Quick Checks

1. Store the powder at -20°C.
2. The datasheet does not specify a universal reconstitution concentration or buffer for the powder; use the validated protocol for the intended workflow.
3. For supported digestion conditions, the datasheet states use at 56°C for up to 4 hours or at 37°C for overnight incubations.
4. Proteinase K is used for general protein digestion and can inactivate RNases and DNases during nucleic-acid preparation.
5. Record the reconstitution concentration and volume to ensure reproducible dosing between experiments.

Problem	Most likely cause	Recommended action
Protein digestion is incomplete	The prepared enzyme concentration, dose, incubation time, or temperature may be insufficient.	Verify the reconstitution calculation and use a validated enzyme amount. Incubate within the supported conditions of up to 4 hours at 56°C or overnight at 37°C.
Reconstituted enzyme concentration is uncertain	The powder mass, reconstitution volume, or preparation record may be inaccurate.	Recalculate the concentration from the weighed/supplied mass and the reconstitution volume, and document the preparation.
Powder does not dissolve uniformly	The reconstitution procedure may be incomplete.	Use the buffer and preparation method validated for the intended workflow and ensure complete dissolution before aliquoting or use.
Digestion varies between aliquots	The reconstituted stock may not have been homogeneous before aliquoting.	Ensure complete dissolution and uniform mixing before preparing aliquots.
Low performance after storage	The powder or prepared stock may not have been stored under validated conditions.	Store the powder at -20°C and follow the validated storage conditions for the reconstituted stock.
Residual protein remains after treatment	Proteinase K exposure may be insufficient for the sample load.	Increase exposure only within the validated workflow and supported temperature/time range.
High-molecular-weight nucleic acid preparation is inconsistent	Protein digestion or nuclease inactivation may be incomplete.	Verify enzyme preparation, sample-to-enzyme dosing, and sufficient incubation before nucleic-acid purification.
Results differ from ready-to-use Proteinase K solution	The powder preparation may not match the concentration or formulation of the premade solution.	Do not assume equivalence between powder and premade solution formulations; validate concentration and dosing separately.
Unexpected downstream inhibition	Reconstitution components or excess enzyme preparation may carry into downstream steps.	Use a validated preparation buffer and complete the intended downstream purification or cleanup step.

Still having trouble? Confirm the powder was stored at -20°C, recheck the reconstitution calculation, and verify complete dissolution. Because the datasheet does not specify a single reconstitution buffer or concentration for the powder, use and document a validated preparation method for the intended application.