

ClearBand Potassium Acetate

3M, pH 5.5 - Troubleshooting Guide

Ready-to-use Solution | 100 mL

Cat No: PA100

Use this guide for common handling and application issues encountered with ClearBand Potassium Acetate, 3M pH 5.5. The product is supplied as a ready-to-use, 0.22 µm filter-sterilized solution for nucleic acid purification/precipitation and for precipitation of dodecyl sulfate (DS) and DS-bound proteins.

Before You Start - Quick Checks

1. Use the solution as supplied; do not dilute or adjust the pH unless specifically required by a validated downstream protocol.
2. Store the product at 2-8°C as specified in the datasheet.
3. Before use, inspect the solution for unexpected cloudiness, persistent crystals, particles, or visible contamination.
4. For precipitation workflows, keep sample volumes, reagent ratios, mixing, incubation, and centrifugation conditions consistent with the validated protocol.

Problem	Most likely cause	Recommended action
Low or inconsistent nucleic acid recovery	Inconsistent reagent-to-sample ratio, incomplete precipitation, variable sample composition, or deviation from the downstream purification protocol.	Use the same reagent-to-sample ratio and workflow conditions for all samples. Follow the validated precipitation/purification protocol for mixing, incubation, centrifugation, and recovery steps. If performance remains poor, repeat with a fresh aliquot of the potassium acetate solution.
Poor removal of DS or DS-bound proteins	Insufficient precipitation, incomplete mixing, or transfer of precipitated material into the recovered fraction.	Confirm that the downstream protocol is designed for potassium acetate-mediated DS/protein precipitation. Mix as specified, allow the precipitation step to proceed fully, and carefully separate the clarified fraction from precipitated material.
Unexpected carryover or poor downstream purity	Disturbance of precipitated material during recovery, incomplete separation, or excess carryover from the precipitation step.	After precipitation and separation, avoid disturbing or transferring visible precipitate. Recover only the fraction specified by the downstream protocol and keep transfer volumes consistent between samples.
Solution appears cloudy or contains crystals/particles	Temperature-related precipitation, contamination, or introduction of foreign material during handling.	Allow the bottle to reach room temperature and mix gently, then inspect again. If visible material does not redissolve or contamination is suspected, do not use the affected solution and contact EcoTech Biotechnology technical support.
Unexpected results in a pH-sensitive workflow	The ready-to-use solution was diluted, mixed with another reagent, contaminated, or its formulation was otherwise altered.	Use ClearBand Potassium Acetate, 3M pH 5.5 as supplied. Do not adjust pH or add other reagents unless this is explicitly required and validated for the application. Use a fresh aliquot if the solution may have been altered.
Variable results between experiments	Differences in sample composition, handling, reagent ratio, precipitation conditions, or storage history.	Standardize sample input, reagent ratio, handling, and downstream processing. Keep the stock at 2-8°C and use clean working aliquots to minimize variability and contamination risk.
Suspected contamination of the stock solution	Repeated opening, contact with non-clean pipettes, or returning removed solution to the original bottle.	Use clean tips and containers, keep the cap closed when not in use, and never return removed solution to the stock bottle. If contamination is suspected, replace the working solution with a fresh uncontaminated aliquot or bottle.

Still having trouble? Use a fresh aliquot and confirm storage at 2-8°C. Verify that the solution has not been diluted, pH-adjusted, contaminated, or mixed with another reagent, and review the validated downstream precipitation protocol. If the problem persists, contact EcoTech Biotechnology technical support with the application, sample type, reagent-to-sample ratio, storage history, and observed result.