

ScienceBridge Tech Site Standard Operating Procedure

Title: Protein Purification Kit Quality Control		
Original Issue Date: 05/02/14	Revision Date: 05/08/25	Pages: 3
Originally prepared by: Austin Farrar	Revised by: Na Nguyen, Robin Luo	Approved by: Lisa Yoneda

Scope	For use by biotechnology students at the ScienceBridge tech sites when quality checking the ScienceBridge Protein Purification kits for shipment.			
Objective	This SOP sets the procedural specifications for quality checking the Protein Purification kits.			
Materials		1 kit	5 kits	Outer Pacakging
	1. Assembled Protein Purification Kit box	1	5	10
	2. Microcentrifuge tube bags (sandwich-sized)	1	5	10
	30 Microcentrifuge tubes, 2.0mL, round bottom, clear			
	10 Pink 1.5mL microcentrifuge tubes (empty)	1	5	10
Materials	3. Wet bags			
	a. 10 Yellow 1.5mL microcentrifuge tubes labeled EB , containing 1mL Elution buffer			
	b. 15 Orange 1.5mL microcentrifuge tubes labeled TE , containing 1mL TE buffer			
	4. transfer loops (bag of 10)	1	5	10
	5. Transfer pipets (bag of 40)			
Equipment	6. pre-bundled columns wrapped in bubble wrap (10 Pasteur pipets with cotton installed)			
	1.			
	1. QC Tracking Sheet	1	1	20+
	2. QC Sticker Qualification	1	5	20+
	3. Communication Logs			
Equipment	4. Gloves	1	2	4
	5. Pen sharpie	1	2	4
	6.			

Supplemental Aids	QA Protein Purification Cold Solution Training Video			
Safety	• Ensure all liquid-filled tubes are sealed. • Handle glass Pasteur pipets with care; they break easily. • Wear gloves, lab coat, and eye protection.			
Quantity	1 per kit ordered			
Protocol	Part I: Kit Box Retrieval 1. Locate "Ready for QC" kits in room 224A 2. Bring kits to a clean table. 3. Verify teacher name and labels with QC sheet. 4. Unpack kit contents for inspection. Part II: QCing the Room Temperature Bag 1. Open room temp bag labeled "Purification". 2. Confirm the following contents: • 30 clear 2.0 mL tubes: intact, capped • 10 pink 1.5 mL tubes: intact, capped • 1 bag with 40 transfer pipets: no cracks or creases • 1 bag of transfer loops (do not open unless issues) 3. Repack bag, remove air, seal in kit Part III: QCing the Wet Bag 1. Inspect tubes: All filled with 1 mL of solution • 10 yellow 1.5 mL tubes (EB buffer): same volume, sealed • 15 orange 1.5 mL tubes (TE buffer): same volume, sealed 2. Seal bag with signed QC sticker.			
Documentation	All work and any variance from the protocol must be documented • Check off each step on QC Tracking Sheet. • Report unresolved issues. • Log updates in Communication Log. • Update Teacher Tracking Log. •			
Storage	Always start with the oldest dates on supplies and complete partially finished or open bags first. Product Storage • QC-passed kit bags → Place in the "Protein Purification Kits Ready for Delivery" box (top of freezer, room 224C). • QC-failed kit bags → Place in the "QC in Progress" box (room 224C). • QC-passed plasmids → Store in the "Ready for Delivery" box (top shelf of freezer).			

	Supplies Storage Locations • Extra supplies: Store in the "Protein Purification QC/OF Supplies" box (room 224C). • Full bags of supplies: Store in "Protein Purification/Bacterial Protein Purification Supply Cabinet" in boxes labeled "Ready for Bagging".
Quality Control	• If a kit does not pass QC: • Document the issue on the QC Tracking Sheet. • If issue is minor and very fixable i.e adding another pipet, please fix it. NO MATTER what, still update communication logs and notify them the isuse. • DO NOT PROCEED with delivery or further processing until the issue is resolved and the kit is re-verified. • •
When	Complete for each kit on your QC Tracking sheet and each kit in the "Ready for QC" box in room 224C.
Tech Site Kit: Group	<i>Protein Purification:</i> Quality Assurance