

ScienceBridge Tech Site Standard Operating Procedure

Title: Quality Control of Ocean Acidification Mussel Shell Bags			
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Scope	For use by biotechnology students at Mira Mesa High School when doing Quality Control of the Ocean Acidification Shells Bags for Kits.			
Objective	This SOP sets the procedural specifications for completing Quality Control of the Ocean Acidification Kits Shells Bags in order to be sure kits are ready for teacher pick-up of the kits.			
Materials		1 kit	Packaged Quantity (5groups)	Final Packaging
	1. Passed QC Label	1		1-2
	2. Teacher Kit Gallon Bag	10	1	1-2
	a. Bubble Wrap square	2	1	1-10
	b. Group Bag	10	5	1-50
	i. 4 Shell halves	40	20	4-200
	3. "Fragile" Sticker	1	1	1-2
Equipment	1. Ultra Fine Sharpie	1		1
	2. QA Teacher Tracking Sheet	1		
Supplemental Aids				
Safety	Broken shells can be sharp.			
Quantity	Complete for every bag in the "Ready for QC" box in room 224A. Double check that the # of bags for each teacher matches the number ordered.			
Protocol	Notes: Finish entire kit bags for one teacher before moving on to another kit. Always QC kits for the soonest delivery date, before QCing kits for future orders. Teacher Bag: - Each teacher should have 1 or 2 Gallon bags labeled "Shells NOT Pre-treated" with their teacher label. - Number of bags is determined if their order was filled with only muscle shells (1 bag) or mixture of muscle shells and clam shells (2 bags). The shell types should NOT be mixed together and labeled clearly on the bag. - Teacher can order up to 10 groups (sandwich bags)/ kit ordered. - In each Gallon bag, the sandwich bags containing shells should be bubble wrapped in groups of 5. Count to see if the number of packages matches the number ordered.			

	d. Unfold and pull out each sandwich bag in a bubble wrapped package. Each sandwich bag contains 4 shells halves (don't have to be separated into halves). i. 4 shell halves per bag. 2 labeled, 2 unlabeled ii. 4 shells approximately the same size iii. 2 shells labeled 1. #H (# = bag#) 2. #L (# = bag#) 3. labels readable (fix with sharpie if needed) iv. All shells intact (cracked okay- fractured into pieces not) v. Mass to 4th decimal point is labeled on the bag for both the H & L Shells vi. Make sure all air is removed from the sandwich bags when resealing. vii. All bags have different numbers 1-99. viii. Carefully rewrap 5 sandwich bags of shells together in 1 bubble wrap. Use clear tape to seal neatly. ix. Repeat for each set of 5 sandwich bags. e. Place all bubbled wrapped shells bags in the original labeled gallon bag. Remove all air when sealing. Wrap the empty extra part of the gallon bag around the two bubble wrapped shells and seal in place with a "fragile" sticker as well as a QC sticker. 2. Record on QA Order Tracking Sheet and online shared spreadsheet. 3. Place QC'd bags in the "Ready for Delivery" Box in room 224A.
Documentation	All work and any variance from the protocol must be documented • Record any problems that cannot be resolved during the period on the QA Order Tracking Sheet. • Record progress on QC for all the kits ordered by 1 teacher in the communication log.
Storage	Product Storage • Kits that have passed QC are placed in the "Ocean Acidification Ready for delivery" box in room 224A. • Kits that are still in QC process are placed in the "QC in progress" box in room 224A. Supplies Storage Locations • Most extra supplies may be found in the QC/OF Ocean Acidification Supply Box in room 224A. • Extra supplies may be stored in the QC/OF Ocean Acidification supply box in room 224A. • If there are not enough supplies in the supply box, kit supplies may be found in the Ocean Acidification cabinet. In most cases take one bag from the "Ready for bagging" boxes and put any extras/leftovers in the QC/OF Ocean Acidification Supply Box in room 224A.
Quality Control	• Set aside shell sandwich bags that do not pass QC and give to Lab management. Get replacement shell sandwich bags from Lab Management.

	• Discard broken/shattered shells in glass waste.
When	Complete for every Ocean Acidification Shells bag in the "Ready for QC" box in room 224A.
Tech Site Kit: <i>Group</i>	Ocean Acidification : <i>Quality Assurance</i>