

# ScienceBridgeTech Site Standard Operating Procedure

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| Title: Packaging Bubbles bags for Ocean Acidification kits |                            |                             |
| Original Issue Date: 8/13/10                               | Revision Date: 9/16/13     | Pages: 2                    |
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| Scope         | For use by biotechnology students at the ScienceBridge tech sites when packaging Bubbles bags for the ScienceBridge Ocean Acidification kits.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |       |         |          |
| Objective     | This SOP sets the procedural specifications for packaging the materials needed for the Bubbles protocol in the Ocean Acidification kits.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |       |         |          |
| Materials     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1 kit | 50 kits | 100 kits |
|               | 1. 50mL conical tubes labeled <b>Bubbles</b> , containing aquarium salt                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2     | 100     | 200      |
|               | 2. Drinking straws (individually wrapped)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 10    | 500     | 1000     |
|               | 3. Disposable transfer pipets                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 11    | 55      | 110      |
|               | 4. Clear 1.5mL microcentrifuge tubes labeled <b>IND</b> , with 1mL universal indicator solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 21    | 1050    | 2100     |
|               | 5. Universal indicator color charts, pre-bundled in packs of 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 10    | 500     | 1000     |
|               | 6. Gallon-sized bags                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1     | 50      | 100      |
| Equipment     | 1. Sharpie                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1     | 2       | 4        |
| Protocol      | <p><b>Note: Unfinished Bubbles bags may be in the "Bubbles Bags In Production Box". Always finish these before making new bags. No more than 20 bags should be made unless told otherwise.</b></p> <ol style="list-style-type: none"> <li>1. Label 20 one gallon bags "Bubbles" on the white section of the bag.</li> <li>2. Add 2 <b>Bubbles</b> tubes to each bag, check to make sure that the cap is securely closed, the volume of both tubes is the same, and the salt is not clumped.</li> <li>3. Count out and add 10 individually wrapped drinking straws to each bag.</li> <li>4. Count out and add 11 disposable transfer pipets to each bag.</li> <li>5. Count out and add 21 <b>IND</b> tubes to each bag checking that all the volumes are the same.</li> <li>6. Obtain 20 bundles of 10 <b>universal indicator</b> color charts. Check that there are 10 color charts in one bundle; then add one bundle of 10 to each bag.</li> <li>7. <b>QC: Recheck every 5<sup>th</sup> bag. Be sure to recount each item in the bag to make sure that it is correct.</b></li> <li>8. Place completed and QC'd bags into "Bubble Bags Ready for Kits" box.</li> </ol> |       |         |          |
| Documentation | Record who worked on this, how many were supposed to be completed, numbers completed, and explanation for any difference in the OA production line log.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |         |          |

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| Storage              | <p><b>All Supplies should be stored in the Ocean Acidification Cabinet</b></p> <p><b>Product Storage</b></p> <ul style="list-style-type: none"> <li>• If the bag is completed and QC'd, then place into "Bubbles Bag Ready for Kits" box.</li> <li>• If the bag is incomplete or not QC'd then place into "Bubbles Bag in Production" box.</li> <li>• 1 bag of each supply type needed may be stored in the "Bubbles Bag in Production" box.</li> </ul> <p><b>Supplies Storage Locations</b></p> <ul style="list-style-type: none"> <li>• "Bubbles Salt Ready for Bagged" box.</li> <li>• "IND tubes Ready for Bagging" box.</li> <li>• "Universal Indicator Color Charts Ready for Bagging" box</li> <li>• Tubes and drinking straws are in "OA supplies" box</li> </ul> |
| Safety               | Take care to ensure that tubes do not open during handling.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Quantity             | <i>Make 20 bags, unless otherwise told.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Quality Control      | <ul style="list-style-type: none"> <li>• Avoid getting the salt wet, as moisture will promote clumping and will alter the weight</li> <li>• Make sure every tube is closed <b>securely</b> to avoid spillage and water damage.</li> <li>• <b><i>Fails QC: Recheck all bags in each failed group. Fix the contents of any bags with problems.</i></b></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           |
| Tech Site Group/ Kit | <i>Ocean Acidification, Production Line</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| When                 | <i>If less than 10 completed bags are stored in "Bubbles Bag Ready for Kits" box</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |