



Mar 18,
2019

Working

Two-step protocol: Preparation and extrusion of phospholipid liposomes [↗](#)

Version 3

[James Collins](#)¹, James R. Collins², Krista Longnecker², Helen F. Fredricks², Benjamin A. S. Van Mooy²

¹Oregon Department of Environmental Quality, ²Woods Hole Oceanographic Institution

[dx.doi.org/10.17504/protocols.io.zbef2je](https://doi.org/10.17504/protocols.io.zbef2je)

Van Mooy Lab



James Collins

Oregon Department of Environmental Quality



ABSTRACT

The protocols in this collection were original created by [Krista Longnecker](#) and [Jamie Collins](#) for creating liposomes to be used in lipid photo-oxidation experiments. The results of these experiments are detailed in:

Collins, J. R., H. F. Fredricks, J. S. Bowman, C. P. Ward, C. Moreno, K. Longnecker, A. Marchetti, C. M. Hansel, H. W. Ducklow, and B. A. S. Van Mooy. 2018. The molecular products and biogeochemical significance of lipid photooxidation in West Antarctic surface waters. *Geochimica et Cosmochimica Acta* **232**:244–264; doi:[10.1016/j.gca.2018.04.030](https://doi.org/10.1016/j.gca.2018.04.030)

and in Chapter 4 of:

Collins, J. R. 2017. The remineralization of marine organic matter by diverse biological and abiotic processes. Ph.D. thesis. Cambridge, Massachusetts: Massachusetts Institute of Technology, 300 pp; doi:[10.1575/1912/8721](https://doi.org/10.1575/1912/8721)

EXTERNAL LINK

<https://doi.org/10.1016/j.gca.2018.04.030>

THIS PROTOCOL ACCOMPANIES THE FOLLOWING PUBLICATION

Collins, J. R., H. F. Fredricks, J. S. Bowman, C. P. Ward, C. Moreno, K. Longnecker, A. Marchetti, C. M. Hansel, H. W. Ducklow, and B. A. S. Van Mooy. 2018. The molecular products and biogeochemical significance of lipid photooxidation in West Antarctic surface waters. *Geochimica et Cosmochimica Acta* **232**:244–264; doi:[10.1016/j.gca.2018.04.030](https://doi.org/10.1016/j.gca.2018.04.030)

PROTOCOL STATUS

Working

We use this protocol in our group and it is working

SAFETY WARNINGS

Collection protocols



Part 1: Preparation of lipid films for phospholipid liposomes

by James Collins,
Oregon Department of Environmental Quality

RUN



Part 2: Extrusion and suspension of phospholipid liposomes from lipid films

by James Collins,
Oregon Department of Environmental Quality

RUN



This is an open access protocol distributed under the terms of the [Creative Commons Attribution License](https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited