

## Ketterson / Nolan Research Group Collection

This document is part of a collection that serves two purposes. First it is a public archive for data and documents resulting from evolutionary, ecological, and behavioral research conducted by the Ketterson-Nolan research group. The focus of the research is an abundant North American songbird, the dark-eyed junco, *Junco hyemalis*, and the primary sources of support have been the National Science Foundation and Indiana University. The research was conducted in collaboration with numerous colleagues and students, and the objective of this site is to preserve not only the published products of the research, but also to document the organization and people that led to the published findings. Second it is a repository for the works of Val Nolan Jr., who studied songbirds in addition to the junco: in particular the prairie warbler, *Dendroica discolor*. This site was originally compiled and organized by Eric Snajdr, Nicole Gerlach, and Ellen Ketterson.

### Context Statement

This document was generated as part of a long-term biological research project on a songbird, the dark-eyed junco, conducted by the Ketterson/Nolan research group at Indiana University. For more information, please see IUScholarWorks (<https://scholarworks.iu.edu/dspace/handle/2022/7911>).

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## **Egg yolk**

To prepare frozen egg yolks for use in a variety of laboratory tests (ELISA, Hormone assay, Carotenoid HPLC)

For ELISA (IgG)

1. Remove a few whole frozen eggs from the freezer.
2. Once albumin has begun to thaw, crack egg and peel the shell and albumin away from the yolk
3. Place egg shell fragments in a labeled ziplock bag. Freeze. (For shell measurements).
4. Carefully, roll the yolk on a clean kim-wipe to remove any remaining albumin.
5. Weigh the whole egg yolk and record mass
6. Using a small spatula, carefully mix the homogenized the egg yolk
7. Weight out 0.2g of homogenized yolk
8. Add the 0.2g yolk to 800ul of PBS-T
9. Add 2 glass beads and vortex
10. Clean spatula with PBS between samples
11. Sample can be refrozen

For hormone assay

12. Weight 1.5ml tube
13. Add an additional 5-15mg of yolk for hormone assay
14. Suspend yolk sample in 500ul of dH2O
15. Add glass beads and vortex
16. Sample can be refrozen

For carotenoid and Vit E assay:

17. Place remaining egg yolk in another tube for carotenoid assay. (PBS optional).
- (Kevin McGraw at ASU will do carotenoid assays for \$5 a sample.)