

Egg Submission and Testing Guidelines

Fire Contaminant Testing

Due to increase in urban wildfire, there is concern about backyard chickens ingesting contaminants from the ground and transmitting these to their eggs. Various heavy metals (including lead) are found in old paint (before 1978), old plumbing (before 1986), electronics, batteries (including old lead-acid car batteries) and many other things found around the home. Thus we recommend testing eggs for heavy metals (especially lead) so that you can make an informed decision about the safety of your eggs. For guidance, the FDA recommends that children do not consume more than three micrograms of lead per day.

Instructions for submitting eggs

Packaging eggs:

1. Ship 2-6 eggs (6 eggs max) from your flock.



2. Wrap eggs in tissue to individually cushion eggs, then place eggs inside an egg carton.



3. Wrap the carton with bubble wrap and/or ship in a box with crumpled paper, shredded paper, or packing peanuts.





4. Include *this form* <see requested egg study info.docx or request egg study info – spanish.docx> or a sheet with the information requested in the section below
5. Seal box securely with tape

Click [here](#) for free shipping supplies.

Please include the following information with your shipment:

- Address where hens reside (Street name, City, Zip -- we do not need the number of the address)
- County where the hens reside
- Number of hens in flock
- Date eggs were collected
- Length of time you have owned the chickens
- Age of chickens
- Year the coop the chickens live in was built
- Year your house was built (Note: our goal with this information is to determine if the chickens may have any contamination from lead paint used before 1978)

Ship eggs to:

<Insert the lab address here>

If you live in or near <insert your county/region here>, you may also choose to drop your eggs off in person directly to <insert local contact info if you want this option>

If you would like assistance with shipping costs, please contact <insert contact info if your budget includes support for shipping samples>. We can generate a FedEx shipping label for you and email it to

you to print and stick on your package.

If you have any other questions or comments, please contact <insert main study contact info here>

Notes on testing (remove this section if sent to participants): The test we recommend for lead and other heavy metals is called ICP-MS (Inductively Coupled Plasma – Mass Spectroscopy) – please make sure the lab to which you are submitting can perform this test on eggs. We recommend that test as it can detect very low levels of intoxicants – for lead, we recommend that the Reporting Limit (which is generally much higher than the Detection Limit – so don't get those confused) be no more than 0.01ug/g of egg for lead. Even though lead and other intoxicants tend to concentrate in the yolk, we do recommend that the lab homogenize (mix) the white (albumin) and the yolk before testing and test them together. The reason is that it's much easier to know the weight of an average egg than an average yolk, so it's much easier to estimate total exposure if the entire egg is analyzed. However, if a participant only eats egg-whites, for example, this is no longer true.

As for the appropriate lab, we recommend googling for your **state veterinary diagnostic lab** (enter exactly that phrase in google, adding your state to the search). In California, that's CAHFS (California Animal Health and Food Safety) – every state has a similar lab, and you can contact them for more guidance on testing and submission protocols.

We do recommend pooling eggs for multiple reasons: 1) it reduces the variability in test results and likely gives a more accurate risk assessment for daily intake, and 2) it's less cost prohibitive than testing several eggs individually (at CAHFS, testing heavy metals by ICP-MS is currently \$60)