

## PRIMATE MICROBIOME PROJECT

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La Jolla, CA 92093*



[www.primatemicrobiome.org](http://www.primatemicrobiome.org)

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### **Collecting Fecal Samples:**

Collect fecal material immediately upon defecation using a sterile tool (e.g. plastic spoon wiped with ethanol) to move the fecal material into a plastic collection tube (ideally also sterile). We recommend collecting more material than we need for DNA extraction in case you want to do other analyses. DNA extraction requires 0.2-0.3g. Although the standard for microbiome studies is freezing samples immediately, we also recommend preserving the samples. Studies are currently underway to determine the best preservative in terms of representing the original fecal microbial community and withstanding temperature fluctuations. Presently, we suggest adding either 96% ethanol or RNALater in a 2:1 ratio (so sample is submerged). However, if possible, collect samples using both methods (i.e., 1 raw fecal sample and 1 fecal sample in a preservative). Also, please try to avoid freeze-thaw cycles with the samples. If you cannot ship with dry ice, keep them at 4C until shipping for up to 6 weeks.

### **Preparing Samples for Shipping:**

Please send 0.5g of sample after discarding any excess liquid preservative. Please ensure your samples are clearly marked and that you include a paper list of the sample names with the shipment in addition to sending us an electronic list. We strongly encourage you to label your samples with unique keys since we will be receiving samples from many people, and a simple numbering system does not allow us to distinguish between samples sets. We suggest including descriptors for the host species, field site, individual, and sample number, like this example:

PV for *Propithecus verreauxi*

K for Kirindy (the field site, in case you have other PV samples as well)

Running number for individual, 01 – 51

.X for sample number

*Example: PVK01.1*

### **Shipping Material:**

To ship samples from the host country to the United States, there are several permits required. Generally, an export permit of some type is required by the host country. We are not experts on the permit requirements of every primate host country. It is your responsibility to determine which export permits you might need. However, we are happy to offer guidance when we can. We

recommend that you talk with the environmental agency that granted your collection permits, the local secretary of agriculture, as well as CITES.

To import samples into the United States, generally only a CDC permit is required. Non-human fecal samples do not fall under the jurisdiction of USDA APHIS, Fish and Wildlife, or CITES for import. We can help you obtain a CDC permit if you will be shipping directly to our facility in Minnesota. Otherwise, feel free to use your own existing permit. Also, there are a few species that do require a CITES permit to import fecal samples. Please ensure your samples do not fall under this category.

When shipping, please use a Category B shipper (e.g. SaftPak) to avoid problems with carriers or customs. Most American universities have online training guides for packing and marking these shippers. Please let us know if you do not have access to this information and need it. Use dry ice if possible. Otherwise, use frozen gel packs or ship at room temperature. Raw fecal samples must remain frozen throughout the shipping process and therefore either frozen gel packs or dry ice must be used. Carrier rules vary by country. In some places you can ship samples at designated commercial carrier sites (e.g. DHL, FedEx, UPS). In others, you must ship samples as cargo on an airline via a carrier. And some airlines may allow you to check properly packed samples. Please give yourself enough time in the field to determine which option is optimal in your host country.

In the shipment, include any export permits, the CDC permit, a written statement that other import permits are not necessary (APHIS, FWS, CITES) as well as a detailed description of the shipment in both English and the official language of the host country (number of samples, amount of fecal material and preservative in each tube, host species, statement that samples are not infectious, etc.). We recommend putting a copy of this inside the shipment as well as providing the carrier with additional copies that will be affixed outside the package.

Shipping within the United States does not require permits. However, you must still use a Category B shipper.

The address where we receive samples at Minnesota is:

James E. Collins  
University of Minnesota Vet. Diag. Lab.  
1333 Gortner Avenue  
St. Paul, MN 55108  
TEL: 612-625-8787  
FAX: 612-624-8707

**Timeline:**

It is our goal to have sequence data produced and returned within 6-8 weeks of receiving samples. However, please realize that this depends heavily on how busy the sequencing center is, something we cannot control. We will keep you updated as your sample data become available.