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(Prices valid until further notice)

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PALYNOLOGY RESEARCH FACILITY

The Palynology Laboratory at Texas A&M University contains 1,500 square feet of space. The laboratory consists of a core of two, sterile wet labs and a complex of offices and research rooms. Each lab is sealed from all outside contamination, each has a large fume hood with hot and cold distilled water outlets, all are equipped with acid-resistant plumbing and flume scrubbers to remove toxic, airborne chemicals, and each lab has safety eye washes and showers. Lab areas are equipped with large sinks, vortex stirrers, large and small centrifuges, hot plates, metric balances, and large counter top work spaces. We also have sonicators, which we use when needed for processing in both labs.

Included in the lab complex are four offices with internet computer lines and telephone outlets. We also have a fireproof chemical storage room, a sediment core and pollen sampling and storage room, two areas with microscopes for counting, and a large open work area equipped with desk-top computers and printers. In addition, one of the microscope rooms has built-in sand-filled counters for stability and microscopic photographic work. The labs are equipped with 10 Nikon standard light microscopes (with photographic cameras), one new Olympus compound microscope with DIC phase and computer-imaging capture in TIFF files.

We also have Wild and Nikon dissecting microscopes. Several of those microscopes are equipped with Nikon COOLPIX 950 digital cameras.

We also have a modern pollen reference collection containing 20,000+ slides.

Our primary research focuses on analyzing pollen in honey, forensic samples, soil and lake sediments, and from archaeological sites.

We request that you send us complete instructions on what you wish done, your complete mailing address, and your email address (if you have one).

SOIL PROCESSING AND ANALYSES

Pollen extraction of pollen from sediments \$60/sample

We normally will use **10 grams of soil** (sediment) and normally will **add about 20,000 tracer spores** (*Lycopodium* spores) to each sample so that the pollen analyst can calculate pollen concentration values. We usually also stain our pollen samples with safranin and send them in a sealed vial in glycerin. If you want any special types of

processing or want us to omit any of the above, please indicate that in your instructions when you mail samples. We also recommend that you **put each sample in a sealed Ziploc bag** so that no dirt will be lost from any sample and so loose dirt will not contaminate other samples you send.

We usually do not add tracer spores to pollen wash samples since it would be impossible to calculate the pollen concentration value.

If you wish a **complete pollen analysis** as well as pollen extraction, please call us for prices and availability of personnel who could conduct those analyses.

HONEY PROCESSING AND ANALYSES

Pollen extraction and analysis of pollen from pollen pellets or honey.....\$75/sample or \$100/sample
(Honey from North America including Mexico \$75/sample. Honey from other world areas \$100/sample)

For pollen pellets we recommend you send about 1-2 grams of pellets, which we can homogenize into one sample and then extract a sub-sample for analysis, or we can examine groups of pollen pellets all of which look identical within a mixed sample in terms of color and texture. Please specify which you prefer. We generally examine 200-300 pollen grains per sample and we have published data to verify why this is adequate. You may request a copy of our report if you wish.

We recommend that you ship pollen pellets with dry ice and use overnight delivery to ensure that the pellets do not become spoiled with fungal or bacterial growths.

**IF YOU ARE LOOKING FOR AVACODO POLLEN IN YOUR HONEY, YOU MUST TELL US IN ADVANCE
 BECAUSE WE HAVE TO USE A DIFFERENT TYPE OF PROCESSING TO BE ABLE TO FIND AND
 ANALYZE AVACODO HONEY SAMPLES.**

Under most circumstances, we can complete your analysis within 10 days of receipt of sample. However, I have leukemia which often requires chemotherapy and thus it can delay my analysis time.

There are approximately 350,000 potential plants from which bees can collect either honey or pollen; therefore, the challenge to identify the pollen is significant. We have good reference materials from some areas of the world but for other areas trying to identify the pollen in honey is a significant challenge and requires a great deal of added time. Therefore, for those samples we charge a higher rate than for honey from areas where we have a lot of experience.

Domestic honey (continental US), honey from Canada, Mexico\$75/sample

**Honey from South America, Asia, Africa, Australia, Hawaii, Middle East, NZ, and Oceania
\$100/sample**

Pollen extraction only from pollen pellets or honey (no analysis)\$40/sample

We recommend that you send honey samples that have **come directly from the hive and have not been highly strained or filtered because those processes MAY remove some or all of the pollen** and might make our accurate analysis impossible. Minimal straining and filtering to remove bee and wax fragments are OK, but some forms of filtering may remove part or all of the pollen. We have published an article on how to filter honey and can send it to you if you wish to receive it. **Be sure to include any important information about the origin of the honey sample and also your email address so we can send you the results quickly.**

The analysis will include extraction of pollen from the honey, pollen concentration values, and a complete analysis report of the recovered pollen data and a list and percentages of the primary pollen and nectar sources. When appropriate we will also include probable geographical region where the honey was probably produced. **We do not have the equipment to test for pesticides, antibiotics, or sugar isotopes.**

We generally examine 200-300 pollen grains per sample. When appropriate, we will provide verification documents for export, and interpretations based on pollen coefficient values for the primary taxa present. We use 10 grams of honey from each sample because this is the international standard for testing, but we prefer to have additional honey available should one of our samples become ruined and needs to be processed again. **Therefore, we suggest sending no less than 30-50 grams of honey per sample. Please be sure to pack your samples securely so they will not break and put them in a plastic Ziploc bag in case any were to leak!**

You can send us a check, or we can bill you when the analysis is finished, whichever you prefer.