



CCDB Price Schedule (February 1, 2016)

All prices are in Canadian dollars and apply to submissions involving 96-well plates of tissues. This price schedule is based on the use of standard CCDB protocols and applies to all researchers and organizations. Standard protocols may not be appropriate for all tissue types (e.g. older museum specimens or forensic samples) and additional charges may apply.

CCDB carries out the following steps:

- CCDB Admin: Plate reception, specimen data validation, billing.
- CCDB Analytical Lab: DNA extraction, PCR amplification of the barcode region(s), bidirectional amplicon sequencing (where applicable), trace file assembly, uploading trace files and sequences to BOLD.
- BOLD Systems: Data validation and storage.

Analytical Service	Full Cost-Recovery *	Barcode Library Contribution**
High-throughput barcode analysis ¹ (8x12 plate/box)		
Animal tissue (single pass only) ²	\$2,200.00	\$1,250.00
Animal tissue (failure-tracking, optional) ³	\$1,540.00	\$875.00
Animal tissue (first pass with failure-tracking) ²⁺³	\$3,750.00	\$2,125.00
Animal tissue (older and/or degraded material) ⁴	\$3,100.00	\$1,750.00
Plant tissue ⁵	\$3,300.00	\$1,800.00
Fungal tissue ⁶	\$2,640.00	\$1,500.00
Miscellaneous services (per 8x12 plate/box)		
Voucher recovery and return ⁷	\$300.00	\$300.00
Subsampling and tissue return ⁸	\$250.00	\$250.00
DNA repatriation ⁹	\$250.00	\$250.00
Ultrahigh-throughput barcode analysis (4 @8x12) ¹⁰	\$2,500.00	\$1,500.00



Price categories

- * Full cost-recovery rate will apply to all submissions unless the Provider qualifies for the discounted rate (see below).
- ** Barcode Library Contribution rate is available to Providers that align their research efforts with our mission to assemble a DNA barcode library for all eukaryotic species. Barcode Library Contribution rate applies only to submissions where all required data elements are uploaded to BOLD. To qualify, Providers must conform to the following metadata quality standards: collection location with GPS co-ordinates, voucher specimen images (representative images are not acceptable), museum voucher location and ID and full taxonomy to the level of species or operational taxonomic unit. The Provider also must agree to data sharing in compliance with best practices established under iBOL Data Release Policy Phase 1 (Phase 2 data release will commence upon data publication but within five years from the date the sequence has been generated).

Analytical Services

- ¹ Standard package to which additional services can be added. Please note that all submissions must follow the 96- well microplate guidelines available on our website. This high-throughput barcode analysis is available for animals (COI) ², plants (matK+rbcL) ⁵ and fungi (ITS) ⁶ and includes the following services: Metadata validation, DNA extraction, PCR amplification, bidirectional sequencing of barcode regions(s), sequence assembly and base calling, and sequence and trace file upload to the Barcode of Life Database (BOLD).
- ² Single pass barcode analysis of animal tissue is recommended for samples that are expected to yield high quality DNA. This service will involve single round of PCR with universal primers targeting full barcode region (658bp or similar length), followed by PCR check, and bidirectional sequencing. Quality of the provided



material will impact the results and for poorly preserved and/or old specimens with degraded DNA additional analysis may be recommended. Results are normally available within 1-3 weeks from the date the lab begins processing of samples. Lead time depends on the size of the queue and can be extended due to missing or incomplete specimen data and/or payment delays.

- ³ Some samples may fail to amplify and/or sequence due to random primer mismatches or degraded material. Revisiting failed samples with primer sets that target shorter overlapping fragments spanning the barcode region enables barcode recovery. This option delays processing time significantly as the analysis must be completed in multiple stages. Allow additional 2-4 weeks to complete processing of samples.
- ⁴ Recommended for submissions with mostly old specimens that are not likely to produce amplicons for full barcode region. This option allows use of failure-tracking option as the initial step resulting in reduced processing time. Results are normally available within 2-3 weeks from the date the lab begins processing of samples.
- ⁵ This offer applies to plant tissues submitted in 96-tube racks. This option includes analysis of two markers (barcode standard for plants) with bidirectional sequencing, sequence editing and submission of traces and consensus sequences to BOLD. Results are normally available within 2-4 weeks from the date the lab begins processing of samples.
- ⁶ This offer applies to fungal specimens submitted in 96-tube racks. This option includes analysis of single loci with bidirectional sequencing, sequence editing and submission of traces and consensus sequences to BOLD. Results are normally available within 1-3 weeks from the date the lab begins processing of samples.

Miscellaneous Services (Optional)

- ⁷ Voucher recovery and return: This service is recommended for submissions of very small or even tiny organisms (e.g. mites, ticks) where tissue sub-sampling is not feasible and whole organisms must be included in the initial stages of DNA extraction.



- ⁸ **Subsampling and tissue return:** All tissue sent for molecular analysis will be analyzed consumptively and no residual tissue will remain. This optional service overrides this policy. Tissue remains can be returned upon request.
- ⁹ **DNA Return:** Our policy is that all DNA extracts are retained for quality control purposes under the terms specified in the documents provided with the sample submission kit (BMTA/BMAA). This optional service overrides this policy.

Ultrahigh-throughput barcode analysis

- ¹⁰ We offer specialized 384-well analytical pipeline that was specifically designed for the analysis of arthropod samples collected in Malaise traps, but that can be employed to analyze terrestrial arthropods collected in other ways. This analysis involves DNA extraction, PCR amplification and unidirectional sequence analysis and automated trace file analysis at extremely competitive rates, but is only available on studies examining 5000 or more specimens.

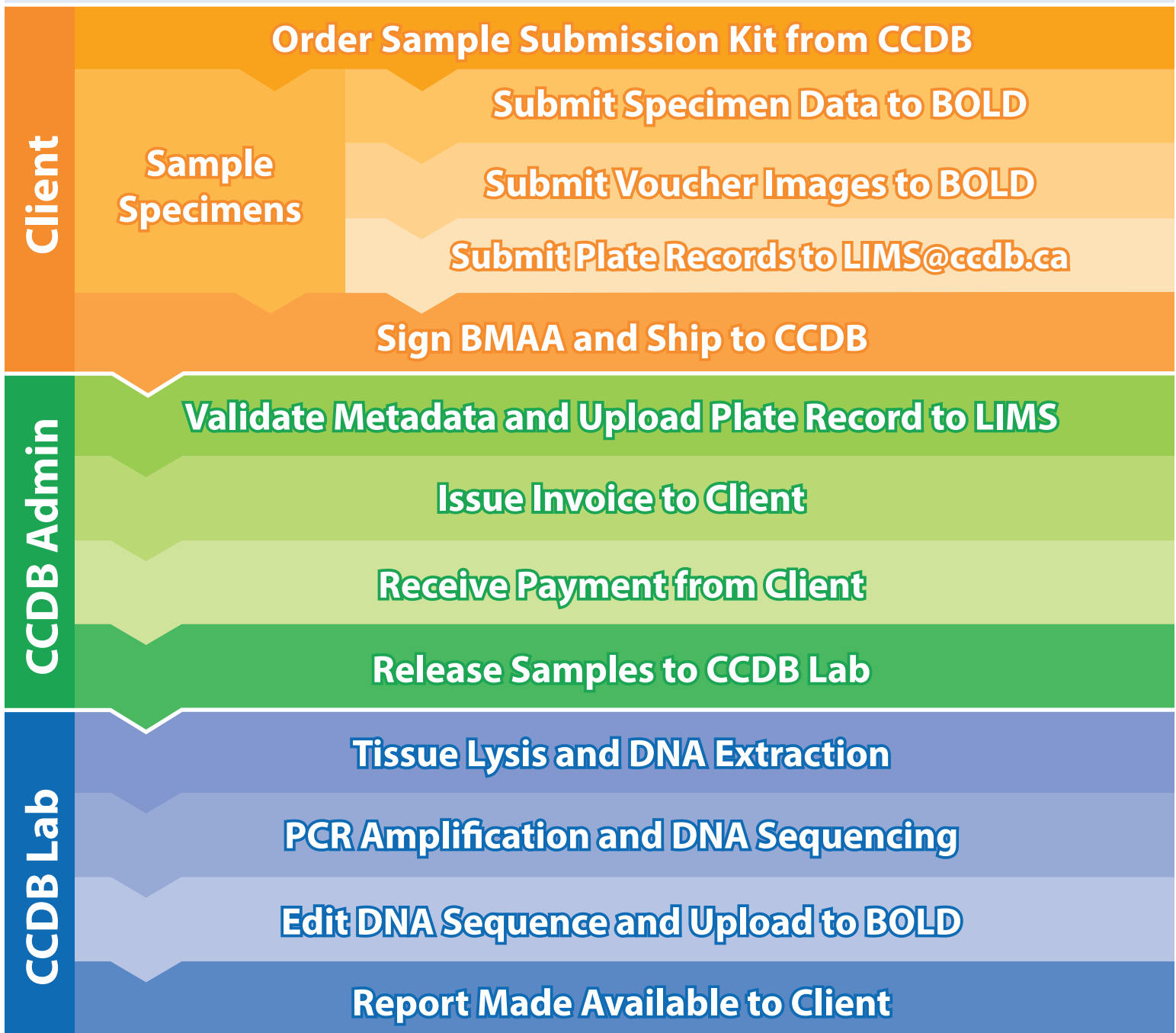
Contact us for a quote if your project will involve the analysis of more than 5000 specimens and will meet other criteria. applications@ccdb.ca

Special services (R&D, forensics, High Throughput Sequencing (HTS))

Contact us for a quote if your project requires R&D or HTS: applications@ccdb.ca

For all other inquiries: info@ccdb.ca

This workflow and the following documents are designed to assist in the preparation of materials **before** they are sent to the Canadian Centre for DNA Barcoding. To ensure that your submission is not delayed please follow all instructions and complete the checklist before shipping.



Mail completed checklist along with your samples and BMAA to this address:

Sample Submission Z5564
Centre for Biodiversity Genomics
Biodiversity Institute of Ontario
University of Guelph, 50 Stone Road East
Guelph, Ontario, Canada N1G 2W1
Phone: +1-519-824-4120 ext. 58259

Please send any questions, concerns, or comments to us at info@ccdb.ca

CCDB Sample Submission Checklist

- A unique SAMPLE ID has been assigned to each specimen
- Sampling performed as per applicable instructions
- Completed BOLD Specimen Data Template uploaded to BOLD
- CCDB Plate Record(s) submitted to LIMS@ccdb.ca
- Specimen voucher images (if required) uploaded to BOLD
- BMAA form signed and included with the shipment