PLANTAIN AND BANANA SAMPLING PROTOCOL

FIELD PROCEDURE

1. Familiarize the field team with the **Precautionary Notes on Avoiding Contamination.**
2. Harvest three mature fruit from three hands situated top, middle and bottom of the bunch 3–4 months after flowering (when the distal end of the fruit or leaves is dry or upon full, robust fruit formation).

IN THE LABORATORY

3. Peel the plantain or banana using a clean, well-made stainless steel knife.
4. Cut the plantain or banana longitudinally and then cross-wise, and discard two diametrically opposite quarters. Combine the two remaining parts as the representative sample. (Refer to *Collecting a Representative Sample* and Figure 1 in **Precautionary Notes on Avoiding Contamination** for an example of how this is done). Combine the samples from each bunch (six quarters in total).
6. Place the collected pieces of the fruit in clean, acid-washed, properly labeled plastic Petri dishes, and dry the sample in a clean, contaminant-free (uncorroded) oven at 60°C for 3 days.
7. Grind dried fruit to fineness in a noncontaminating mill.
8. Package the ground samples in clean, new, properly labeled, paper #1 coin envelopes, and store them in a clean, dry, insect-free location until ready for analysis.

For more information, contact:

Dr. Abdou Tenkouano, HarvestPlus Banana Crop Leader (a.tenkouano@cgiar.org)
or
Dr. James Stangoulis (james.stangoulis@flinders.edu.au)

This sampling protocol was adapted from the following paper:

Mark W. Davey, Ellen Stals, Gérard Ngoh-Newilah, Kodjo Tomekpe, Charlotte Lusty, Richard Markham, Rony Swennen and Johan Keulemans (2007). Sampling Strategies and Variability in Fruit Pulp Micronutrient Contents of West and Central African Bananas and Plantains (Musa Species). Journal of Agricultural and Food Chemistry 55 (7), 2633 -2644.