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| **International Institute of Tropical Agriculture**Standard Operating Procedure(NextGen Cassava) |
| **Title:** Starch extraction | **Version: 1** |
| **Author:** | **Date reviewed:** |
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1. All the storage roots of the selected plots are harvested in the field
2. The harvested storage roots from each plot are kept in a sampling bag and label properly
3. The bags are transported to the laboratory
4. Six healthy roots of different size (small, middle, big) are selected. Ensure of root homogeneity. Rooted, disease or bruised roots should not be selected.
5. The fresh storage roots are washed, peeled and shredded
6. The proximal and distal part of the roots are removed
7. Use a hand grater to shred the top, middle, and bottom sides of each of the selected roots. Ensure that rotted, stalks and fibrous roots are not used
8. Fill a watering can with 3 liters of running water that will be used for starch extraction of individual sample
9. A total of 100 g of the mixed shreds are ground with 200 ml of running water. The blending is performed for 1 min with 2 second break in between
10. The slurry is filtered using a sieve of 180μm mesh
11. Repeat the filtering as before, until residues turn pale white
12. Add the remaining water to the precipitates
13. Allow the filtrate to stand at room temperature for 3 hours to allow the starch to settle down
14. The supernatant is decanted and discarded
15. Air-dry the sediment (starch) for 72 hours at room temperature and further oven dry at 40°C for 24 hours.
16. Weigh the dry sediment to get the percentage of starch
17. All dried starch samples are carefully kept in sealed, dried containers for further use.