

FST 310: Cereal, Root and Tuber Technology (3 Units)

Processing and utilization of major cereals. Milling of grains, particle size analysis, utilization of products and by-products. Baking processes, rheological properties of dough and ingredients. Protein-enriched cereal products. National considerations for the conservation, processing and preservation of roots and stem tubers and their products. Harvesting storage and processing of roots and tubers. Nutritional enrichment of root and tuber food products.

Practical: Particle size analysis of flour and interpretation using calculation and graphs. Analysis of different flour for ash, insoluble ash, and protein. Damaged starch determination. Functional properties of flour. Chemical analysis of amylose/amylopectin. Extraction and determination of gluten using formulation and bolograph. Bread baking and quality assessment. Determination of bromate in bread/flour. Determination of HCN in cassava and sorghum products: Gari, Lafun, Fufu. etc. Production of biscuits cracker/cookies using composite flour/quality assessment of biscuit.