

- While the focus of the laboratory will remain on providing services to agriculture industry, it should be quite alert to the increasing concern on environmental pollution with excess nitrates, heavy metals and toxic organic compounds
- The laboratory will help to increase crop productivity by optimizing plant nutrient levels; maximum yields per hectare can be expected. This is essential for tea growers to remain competitive and consumers to access to affordable agricultural products.
- And the laboratory will increase marketability and profitability of the products by growers and processors. The laboratory in the long run looks to ensure customer confidence in product assurance by avoiding pesticide residues and contamination of agricultural products.



TEA RESEARCH
INSTITUTE OF TANZANIA



For more details contact us through:

*TEA RESEARCH INSTITUTE OF TANZANIA
P.O Box 2177
Dar es Salaam, Tanzania
Phone:: 255 (0) 22 2122033
Mobile: 255 754 777404
Fax:: 255 (0) 22 2113838
Website: <http://www.trit.or.tz>
Email: ekimambo@trit.or.tz; trit@bol.co.tz; info@trit.or.tz*

**SOILS AND PLANT ANALYSIS
LABORATORY**



The TRIT soil, plant and water analysis Laboratory was established at Ngwazi Tea Research Station in Mufindi, to meet the needs on soil, plant and water analyses of the Tea Industry and also to support other sectors across the agricultural sector in the United Republic of Tanzania and in neighboring countries. The aim is to offer a variety of services to meet the requirements of tea growers and agricultural community in Tanzania and beyond. It was felt that our stakeholders regard these services to be of top priority.

Objectives:

The main objectives of the TRIT Soil, Plant and Water Laboratory are to;

- Expand the use of soil, plant water and other analyses and diagnostic techniques that improve the nutrient management in crop production and the environment.
- Promote research essential to continued development of effective analytical methods, calibration and interpretation of soil, plant water and other analyses and facilitate the interchange and expanded use of this information.
- Provide guidance in the development and dissemination of interpretation and application of soil, plant, water and other analyses for the purpose of efficient resource management and environmental protection in the Tanzanian agricultural industry

Mission

TRIT Laboratory offers tea growers and other agriculturalists, environmentalists, non-governmental organizations (NGO), companies and individuals, reliable, high-quality, and cost-effective laboratory services for various purposes. Our services will include soil testing, plant/tissue analysis, water as well as fertilizer analyses

Our Services

Below is a summary of information and services offered by the TRIT laboratory:

- **Soil Physical Analysis**, which consists of Soil moisture content, Particle size distribution, Soil compaction, Soil water and Field water capacity.



- **Soil Chemical Analysis:** Consists of pH, Electrical Conductivity, Organic Matter, Calcium Carbonate, Cations Exchange Capacity or CEC, Exchangeable Bases, Analysis of Fertilizers, Lime and Gypsum
- **Soil Nutrients and Anion Analysis:** Consists of Total Nitrogen, Phosphorus, Potassium, Sodium, Calcium, Magnesium, Carbonates and Bicarbonates, Chlorides and Sulphates, Micronutrients-including Iron, Manganese, Zinc, Copper, Boron and Molybdenum.
- **Plant Analysis** Consist of Nitrogen, Phosphorus, Potassium, Calcium, Magnesium, Sulphur, Aluminium and numerous micro nutrients after dry ashing or wet digestion.
- **Soil and Water analysis** for environment pollution consists of Heavy metals, Nitrites and Nitrates, hardness, Total Dissolved solids (TDS) for Irrigation and domestic Water Quality.
- **Quality Parameters of made tea and Maximum Residual Limits (MRL)** of pesticides for agricultural products.
- **Special Determinations** on the request of our clients.

Analysis Period:

The laboratory is more focused on the needs of the tea industry, while striving to accommodate the needs of other agricultural stakeholders by cutting down turnaround time for submitted samples and at the same time increasing reliability of analytical results. The laboratory uses very modern laboratory equipment and has incorporated in its workings the use of referral or standard samples to minimize analytical errors.

Preparation of Analytical Results:

Analytical results are prepared just after all requested parameters are analysed. Currently the laboratory uses both Microsoft word and excels software packages for analytical data preparation.

Submission of Analytical Results to Client/

Customer: Analytical results are interpreted and recommendations made for the client. A complete advisory report is sent to the clients.

Storage of Remained Samples:

The laboratory will store remaining samples for a maximum of 6 months before they are disposed.

Analysis Costs:

We charge very affordable and competitive analysis costs to our clients.

Advantages of Soil/Plant Analytical services:

- The soil, plant and water analyses from the laboratory together with a sound and complete advisory package will lead to an efficient nutrient management system, which is essential for the long term sustainability and profitability of the tea industry and the agricultural sector in Tanzania.
- It will minimize wastage and pollution effects from excessive use of fertilizers, which can result in both underground and surface contamination.

