

## GTS Analytical Service Overview

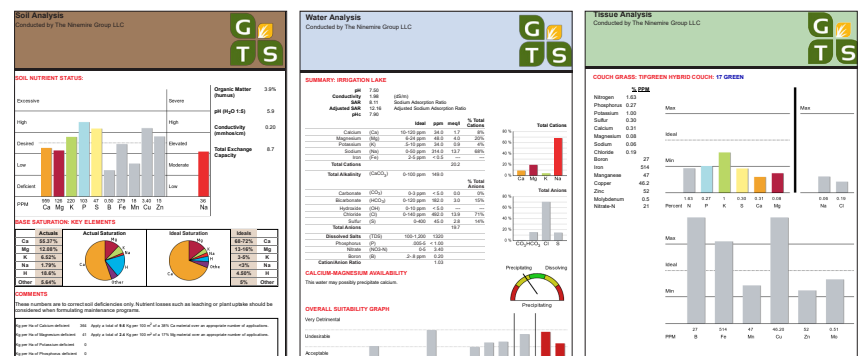


Your analytical reports available online

## GTSAnalytical.com

By utilising the latest technology in analytical testing, nutrition agronomy and information technology, the GTS Analytical Service:

- Uses appropriate methods of analysis for turfgrass soils to provide the most reliable and accurate results achievable
- Produces recommendations that are based on scientific principles and the most extensive database compiled on turfgrass soils
- Makes analysis reports available online to clients through an interactive website.
- Provides the quickest analysis turnaround time in the industry.



Service	Description
<b>Soil Analysis</b>	A Soil Analysis determines the level of specific soil nutritional components that are required to be assessed for maintaining turfgrass. This includes the pH, CEC, the organic matter percent, the major cations and anions, and the essential minor nutrients. Obtaining tangible information from the analytical data will ensure maximum value is gained from the soil analysis results. Results are interpreted and made available online through the GTS Analytical Website. Timeframe: Approximately 5 days.
<b>Leaf Tissue Analysis</b>	A Leaf Tissue Analysis assesses what nutrients are actually taken up by the turfgrass and that exist within the plant itself. This ensures there are no plant deficiencies and is often used as a tool to assess fertiliser programs. Results are interpreted and made available online through the GTS Analytical Website. Timeframe: Approximately 5 days.
<b>Water Analysis</b>	A Water Analysis determines the levels of various salts within the irrigation water and considers their impact on the soil. The quality of water used for irrigation can dramatically affect turfgrass health and performance, as well as the characteristics of the soil. If a soil is irrigated with a given water quality over an extended period of time, the soil will assume the characteristics of that irrigation source. If the water quality is poor, soil structure, nutrient availability (therefore fertiliser efficiency) and ultimately turf quality will be affected. Results are interpreted and made available online through the GTS Analytical Website. Timeframe: Approximately 5 days.

## An agronomic approach to turfgrass management

The services of GTS are founded upon our extensive experience working in the turfgrass industry, specifically in the field of soil and irrigation water analysis and turfgrass nutrition. This local and international experience allows us to provide appropriate advice that is tailored to the specific needs of managers of professional turfgrass.

GTS provides a comprehensive assessment of the base soil nutritional conditions and influencing factors that are present. From this assessment, appropriate remedial and plant nutrition programs are devised. GTS also specialises in root zone specifications to provide optimal growing conditions during construction of turfgrass soil profiles.

The nutritional agronomic service offered by GTS is based around an analytical package that is unique in the Australian market. This includes Soil, Irrigation Water, Saturated Soil, Tissue, and Physical Analysis. It is the combination of these analytical tests rather than the reliance on just one type of test that provides the intelligence to adequately assess the soil nutritional conditions and solve nutrition related issues.



## Diagnostic Services

GTS can conduct assessments of biotic factors such as plant pathogens, parasitic nematodes and mites that negatively impact on turfgrass health. Clients can select a specific diagnostic test to be carried out or GTS can conduct a complete Turf Health Analysis to encompass all potential biotic factors limiting turfgrass performance.

Service	Description
<b>Microscopic Disease Diagnosis</b>	Microscopic examination of both foliage and root material, detecting pathogens present. A detailed report is provided analysing turf health and photos of pathogens are provided to show signs of activity. Recommendations for treatment are also provided. Timeframe: 2-3 days turn around.
<b>Complex Disease Diagnosis</b>	This service uses either eDNA extraction and sequencing from infected plant tissue & / or a plating out service to efficiently diagnose problematic plant pathogens. Recommendations for treatment are also provided. Timeframe: 4 weeks turn around.
<b>Nematode Extraction</b>	Laboratory Nematode Extraction service identifying the presence of 14 nematode species. Detailed report provided using photos as documentary evidence of overall root health. Timeframe: 7 day turn around.
<b>Turfgrass Root Health Assessment</b>	Detailed report analysing turf health parameters such as root length, root colour, thatch depth and functionality. The report also identifies plant pathogens and nematode species present, whilst providing recommendations on control of issues identified. Timeframe: 7 day turn around.
<b>Wintergrass Herbicide Resistance Testing</b>	Service that screens and identifies herbicide efficacy on <i>Poa annua</i> growing in a specific situation. Can opt for either pre and post emergent screen of 5 commonly used herbicides. Service can be done year round with access to growth chambers. Timeframe: 6 -12 week turn around.
<b>Insect Identification</b>	Identification of insects, including mite species. The report uses photos as documentary evidence of activity Timeframe: 7-14 day turn around.