



INJOTECH INDIA PVT. LTD.

INJOTECH INDIA PRIVATE LIMITED

NDE for Quality and Safety



What is NDE?

- Non-Destructive Examination involves determining the properties and integrity of items, without sacrificing their usefulness.
- NDE can also be used for determining integrity of cultural items, along with figuring out the properties and constituents of various items such as textiles, papyruses, sculptures, statues and so on.



Why carry out NDE?

- Quality assurance
- Obtain empirical data and hard evidence
- Make informed decisions



Primary Advantages of NDE

- Immediate results – within a few seconds
- Reliable – inspections at locations/spots demarcated by clients
- Accuracy and Repeatability – multiple readings possible, enabling averaging
- Portability – carry equipment to site instead of sending samples to lab
- Planning and strategy – results useful for further analyses, calculations and budgeting
- Provides hard evidence and empirical data – useful for process improvement



Other Advantages of NDE

- Issues identified
- Harmless to humans if carried out properly
- Utility of items not compromised
- Offers reassurance
- Provides reliability
- Cost effective



NDE in Agriculture and Animal Nutrition

Agriculture forms the backbone of every economy. From the seeds to the final produce, each step in the process is extremely important. NDE can be effectively used in agriculture and its various sectors for research and quality management purposes.

Various instances where NDE can effectively be used include, but are not limited to:

Radiographic Testing of seeds for determination of quality

Radiographic Testing during hybridization studies

Material analyses of metals and metallic origin components

Material analyses of soils and various constituent elements and minerals

Determination of water retention capacity of soils

Determination of water contamination and oil contamination

NDE in Nature Conservation

Nature, and natural resources, are an integral part of life. Everything in and around life depends upon, evolves with, and is impacted by nature. Likewise, human actions and activities have their own impact on nature and natural resources. Such impacts could include pollution, change in properties and so on.

Certain applications of NDE in nature conservation include, but are not limited to:

Analyses of soils

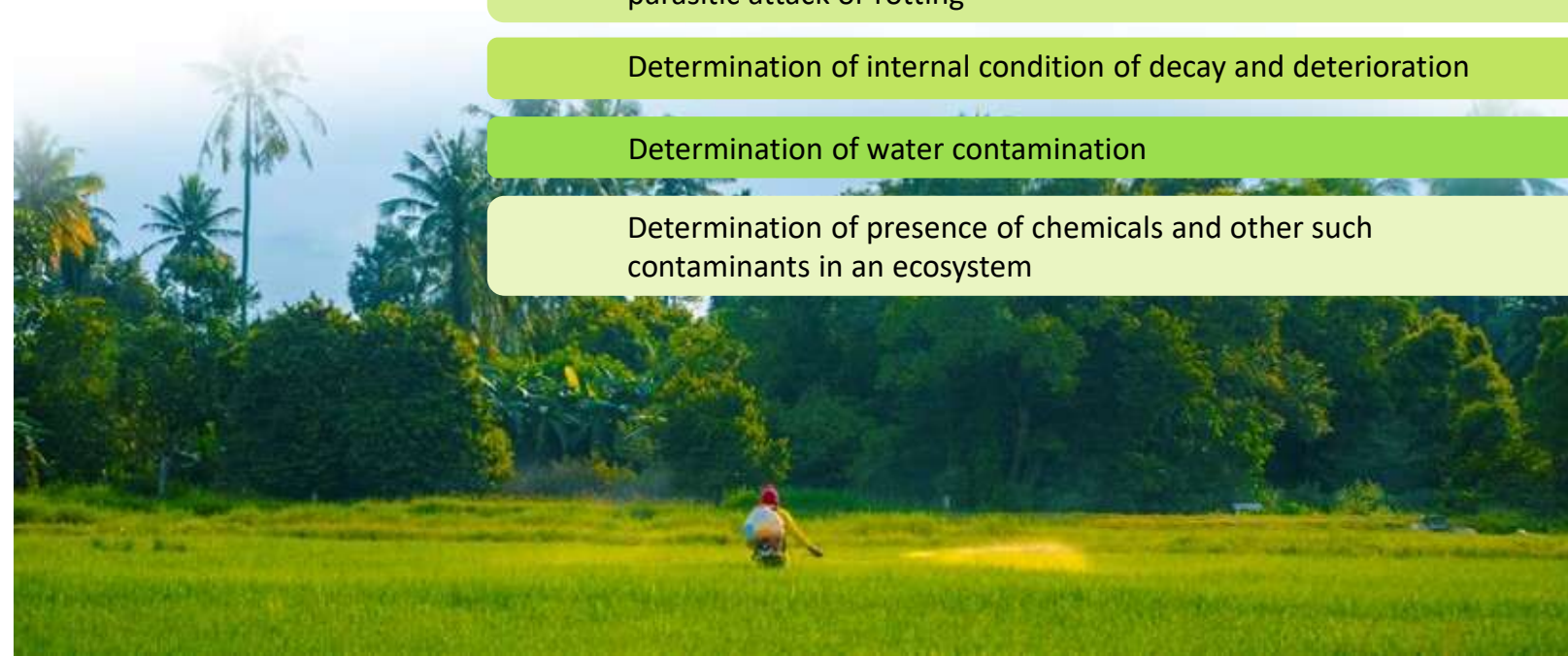
Analyses of plants and their conditions

Radiographic Testing of plants and trees for determination of parasitic attack or rotting

Determination of internal condition of decay and deterioration

Determination of water contamination

Determination of presence of chemicals and other such contaminants in an ecosystem



Certain Applicable NDE Methods and Techniques

- Radiographic Testing using low-power and high-power X-Rays and Gamma Rays for internal condition monitoring and assessment
- Positive Material Identification for metals
- Positive Material Identification using X-Ray Fluorescence for soils and minerals
- Soil Property Determination including NPK, EC, pH, temperature and humidity
- Raman Spectroscopy for property and fingerprint determination

Use of over 30 available NDE techniques for research purposes

IT IPL is also involved in determination of new applications of existing technology, including upgradation of technology, to meet client needs



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Website : <https://www.injotech.co.in>

Email : info@injotech.co.in

+91(20) 2995 0810 , +91 78880 49672



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