

Annual Report 2011



Industrial Technology Institute

Your Partner in Technological and Industrial Growth

Contents

[ITI Quality Policy](#)
[Act & Legislation](#)
[Mandate](#)
[Vision](#)
[Mission](#)
[Board of Management and Committees](#)
[Organization Structure](#)
[Senior Management](#)
[Chairman's Message](#)
[Executive Report](#)
[Performance Highlights](#)
[Quality Infrastructure](#)
[Accelerating Industrial Technology Development](#)
[Benchmarking for Competitiveness](#)
[Monitoring and Mitigating Pollution](#)
[Technology for Human welfare and Socio-economic Upliftment](#)
[Training Programs & Workshops](#)
[Capacity Building](#)
[New Initiatives](#)
[Corporate Awareness](#)
[Information for Industry](#)
[Awards and Recognition](#)
[Corporate Social Responsibility](#)
[Social, Welfare and Religious Activities](#)
[Publications, Presentations and Patents](#)
[Human Resources](#)
[Executive Staff](#)
[Financial Report 2011](#)
[Auditor's Report](#)
[AG's Report Reply](#)

ITI Quality Policy

“The management of the Industrial Technology Institute is unreservedly committed to maintain the ISO 17025 Quality Management System for the Testing and Calibration services and ISO 9000 Quality Management System for the entire Institute, in keeping with the National Quality Policy, thus providing customers with services of the highest professional standards.

All ITI staff has been made fully aware of the Quality Systems operated within the Institute and are therefore committed to provide services in keeping with the International Standards.

The entire staff of the Institute endeavors to achieve the highest level of customer satisfaction and continual improvement of services by meeting the requirements of the Quality Systems as per ISO 17025 for the Technical Services & ISO 9000 for Quality Management”

Act & Legislation

The Industrial Technology Institute (ITI) is a statutory board, which came into existence on 01 April 1998 by virtue of the Science and Technology Development Act No. 11 of 1994. ITI is the successor to the Ceylon Institute of Scientific and Industrial Research (CISIR), which was established in 1955. The ITI that operates as a market-oriented partner to its clients and stakeholders is a wholly owned Institute of the Sri Lankan Government with its own Board of Management and functions within the purview of the Ministry of Technology and Research.

Mandate

The Science and Technology Development Act No. 11 of 1994 that came into effect on 01 April 1998 describes our mandate as follows:

"The Technology Institute shall be demand driven. The object of the Technology Institute shall be to elevate the level of technology in Sri Lanka to the level required for rapid industrialization."

Vision

To be centre of excellence in Scientific and Industrial Research for national development

Mission

To conduct innovative R&D and provide internationally competitive technical services to accelerate industrial development for the benefit of the people of Sri Lanka

Board of Management and Committees

Chairman

Prof. Vijaya Kumar

Members

Dr. A.M. Mubarak
Director/CEO, ITI

Mr. Nihal Abeysekera
Chairman, Japan Lanka Industrial Development Centre

Mr. J.A.G. Anandarajah
Managing Director, Dipped Products PLC

Dr. Anura Ekanayake (*till 10/05/2011*)
Chairman, Ceylon Chamber of Commerce

Prof. B.S.B. Karunaratne
Director, Postgraduate Institute of Science, Peradeniya

Dr. C.T.S.B. Perera
Managing Director, Samson's Rajarata Tiles (Pvt) Ltd.,

Mr. E.A. Rathnaseela
*Director, Department of National Planning
Ministry of Finance and Planning*

Dr. K.P.A. Senaratne

Ms. Renuka Jayatilleke, Attorney-at-law
Institute Secretary and Secretary to the Board of Management

Audit Committee

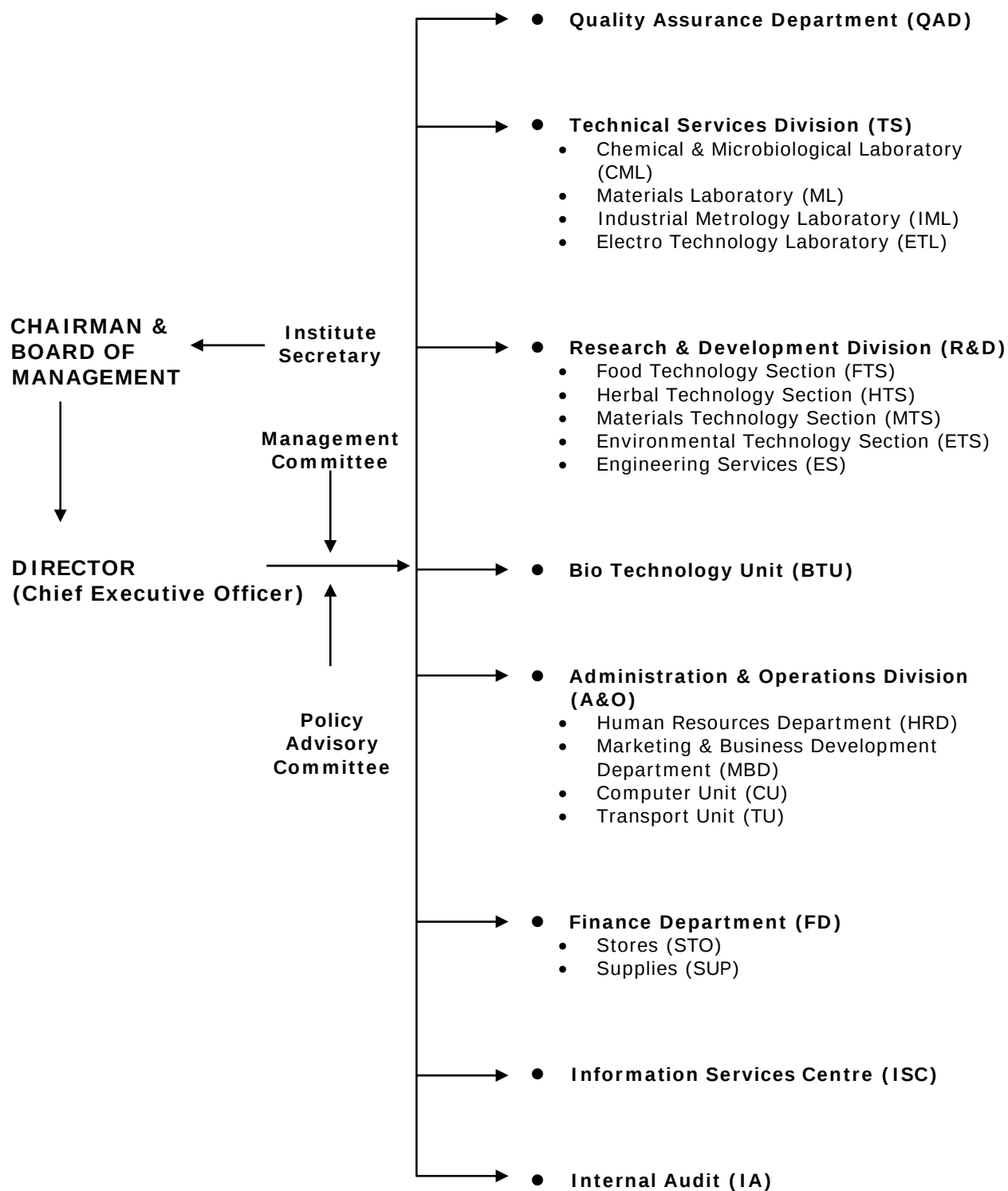
Mr. E.A. Rathnaseela
Chairman/ Board Member/Treasury Representative

Dr. C.T.S.B. Perera
Board Member

Dr. K.P.A. Senaratne
Board Member

Ms. Renuka Jayatilleke
Institute Secretary & Secretary of the Audit Committee

Organization Structure



Senior Management

DIRECTOR

Dr. A.M. Mubarak

ADDITIONAL DIRECTOR, RESEARCH & DEVELOPMENT

Dr. Shanthi Wilson

ADDITIONAL DIRECTOR, TECHNICAL SERVICES

Mr. A.S. Pannila

ADDITIONAL DIRECTOR, ADMINISTRATION & OPERATION

Mr. D.C.A. Sattrukalsinghe

RESEARCH & DEVELOPMENT

Dr. M.J. Goonaratne

Senior Deputy Director, Food Technology Section

Mr. H.N. Gunadasa

Senior Deputy Director, Environmental Technology Section

Dr. G.A.S. Premakumara

Senior Deputy Director, Herbal Technology Section

Mr. A. S. Arachchie

Officer-In-Charge, Engineering Services

Dr. S.G. Senaratne

Officer-In-Charge, Bio Technology Unit

Dr. I.R.M. Kottegoda

Officer-In-Charge, Materials Technology Section

INFORMATION SERVICES CENTRE

Ms. Suranee Samarasekera

Senior Deputy Director, Information Services Centre

INTERNAL AUDIT

Mr. K.A.S.P. Kaluarachchi

Chief Internal Auditor

FINANCE DEPARTMENT

Mr. Johnson Solomon

Senior Deputy Director, Finance Department

TECHNICAL SERVICES

Mr. J.M.S. Jayatileke

Senior Deputy Director, Materials Laboratory

Mr. J.K.A.B. Wijegunasekara

Senior Deputy Director, Chemical & Microbiological Laboratory

Senior Deputy Director, Industrial Metrology Laboratory
(Vacant)

Mr. R.M. Weerasinghe

Officer-In-Charge, Electro Technology Laboratory

QUALITY ASSURANCE DEPARTMENT

Ms. M.K.D.R. Dayaratne

Officer-In-Charge, Quality Assurance Department

ADMINISTRATION & OPERATION

Senior Deputy Director, Human Resources Department

(Vacant)

Senior Deputy Director, Marketing & Business Development

(Vacant)

INSTITUTE SECRETARY

Mrs. A M K R Jayatilake

Chairman's Message

The Institute's earnings increased by almost 10 % in 2011 to Rs. 158.5 m compared with Rs. 144.3 m in 2010, with operating income at Rs. 148.7 m showing an increase of 7.4 % over that of 2010. The Technical Services Division continued to be the biggest earner with its income increasing by 7.6 % to Rs. 110.8 m compared with Rs. 102.9 m the previous year. Income from Contract Projects decreased from Rs. 5.9 m to Rs. 4.5 m, while earnings from Technology Transfer rose from Rs 1.5 m to Rs. 1.7 m. The ratio of earnings to recurrent expenditure continued to increase to reach the highest ever value of 0.61 in 2011. Personnel emoluments increased by 4.2% in 2011 and total recurrent expenditure by 3.5% reflecting inflationary trends in the economy. Although the expenditure per employee increased by 5.4%, I am happy to report that the earnings per employee increased by 12.9%, reflecting increases in productivity. If the Central Bank deflator of 7.3% for 2010 and 7.8 % for 2011 is used to compare incomes for the past three years, there was an increase of 1.8% in real incomes this year, compared with a decreased of 3.8% in 2010.

Although the administration block at the new site for ITI at Malambe was completed, it has still not been possible to move into the new building. Negotiations with the Urban Development Authority (UDA) to obtain access to the road leading from Chandrika Kumaranatunga Mawatha and thereby access to Utilities and IT infrastructure continue. The UDA has to acquire a small portion of land to provide access to the site and some more land to widen the approach road and the process has taken much longer than had been envisaged. The construction of the Agro-Food Technology block proceeds satisfactorily and will be completed in 2012. The Institute has not so far been able to obtain external funding for the Advanced Materials block although government funding has been approved for Phase II of the Administration block. The use of generated income to complete the shell of the additional floors of the Agro-Food Technology building has been approved and it is hoped that it would be able to continue on to this stage without a gap as soon as the main floors of the Agro-Food Technology block are completed.

Although the anomalies in the new salary scheme proposed by the Salaries and Cadre Commission have been sorted out, final approval has to await the finalization of the Schemes of Recruitment which is hoped to be completed in 2011.

The institute is still unable to attract and retain quality staff largely because our salaries and terms of employment are not competitive. While we are aiming to employ graduates with the same qualifications as University lecturers for research, our salaries are very much less, we are unable to offer a proper postgraduate training scheme because of government regulations and also saddled with the government rule of retirement at 60 years unlike the 65 years in University service making us lose our most productive staff at the peak of their abilities. A window of opportunity was provided when the Cabinet of Ministers in approving the extension of the services of the Director by one year, suggested that we incorporate the University retirement age into our Scheme of Recruitment to retain quality scientists. This is a position which I have publicly maintained at many a forum including Parliamentary committee meetings. We are using this suggestion by the Cabinet to initially change the Scheme of Recruitment for the Director and hopefully for all productive research staff.

Our inability to provide a suitable postgraduate training scheme with training abroad for our researchers is a serious problem which the Institute can no longer ignore. The Institute will gain by formulating a scheme similar to that of the University system, where confirmation in employment requires completion of a postgraduate degree within a time frame although government regulations do not presently permit it. The research allowance scheme introduced by Government with the aim of providing incentives for research has helped and will help to some extent to improve salaries of our researchers.

The Institute continued with its performance incentive scheme and incentive scheme for scientists. Employee relationships have been good.

ITI continues to play a major role in assisting Sri Lankan industry by providing a wide range of internationally and locally accredited laboratory services with over 13,497 testing services carried out in 2011 for both the government and the private sector, an increase of over 20% over the previous year.

Work on the European Commission funded SWITCH-Asia EEPEX Project to enhance environment performance in Sri Lankan exports was suspended due to administrative problems with the EU and although detailed assessments had been carried for many industries, we do not know whether the project can be continued. The Institute continues to be the technical partner for another SWITCH-Asia Project and to provide facilities for the Centre for Technical Excellence in Ceramics (CENTEC).

The Institute supported local industry by providing a wide range of calibration services to industry. It also maintained its international stature by providing such services to laboratories overseas and by conducting training programmes on quality management in microbiological analysis for foreign scientists.

ITI continued to carry out research on critical problems facing the country and on problems faced by industry. Although the technology for production of a local strain of *Bacillus thuringiensis israeliensis* (Bti) to control dengue mosquito larvae had been developed and transferred to industry, full registration and approval to market the product through retail outlets have not yet been given by the Registrar of Pesticides with only a restricted approval given for sale solely to the Ministry of Health. This has affected not only the dengue control programme but also ITI's strategy to motivate industry to work with ITI. A local variety of Bt, *Bacillus thuringiensis kurstaki* (Btk) has been developed for control of vegetable pests and its technology transfer is awaited. A Ready to Serve (RTS) drink developed from *Garcinia* was transferred to industry. Among several other products developed by ITI were an automated street lamp system, eco-friendly absorbent material from banana fibres for personal care products and a test kit for detecting adulteration of treacle and palm sugar with cane sugar. Several new methods for detection and analyses of scientific parameters were developed

Director/Chief Executive Officer, Dr. Azeez Mubarak provided commendable leadership to the Institute and it was as always a pleasure to work with him. I wish to thank him, the management and staff of the Institute for their efforts in helping to maintain ITI's position as the premier industrial research institute in Sri Lanka and in advancing the Institute's links with local industry.

Vijaya Kumar (Prof.)

Chairman

Executive Report

The institute performed creditably during the year under review, and some of the significant research and technical services carried out during this period are highlighted.

R&D FOR ELEVATING THE LEVEL OF TECHNOLOGY IN INDUSTRY

Technology Transfer: An agreement was signed with Ceylon Biscuits Ltd., for the exclusive transfer of know how for the production of biscuits incorporated with Kothalahimbutu having proven anti-diabetic properties. Irregular supply of plant materials due to supply and transport restrictions is one of the major bottlenecks faced by this industry. Organised cultivation of this valuable medicinal plant is vital for the growth of this industry.

Process know-how for the production of Ready To Serve (RTS) Garcenia (Goraka) drink was transferred to Natural Access (Pvt) Ltd. Technology developed for minimizing symptoms of internal browning in Mauritius variety (Murisu) of pineapple during refrigerated storage is being transferred to clients to increase their competitiveness in the export market.

During the year ITI successfully completed two turnkey Wastewater Treatment Plants for a vehicle service station and a glazed floor tile manufacturing industry. Similarly several custom made air pollution control systems were designed for a range of industries -vehicle service stations, rubber vulcanizing units, polythene and plastic pack manufacturing plants, paint & wood coat manufacturing plant, pesticide powder packing plant, lead oxide manufacturing plant etc., during the year.

Industry Driven R&D: ITI has developed a new Ashwagandha variety with non-fibrous roots and chemical constitution, very similar to that of the imported variety. A significant reduction of imports by the medicinal plant industry is expected with this intervention.

A BT based bio-control agent- *Bacillus thuringiensis kurstaki* (Btk) has been developed to effectively control Lepidopteron pest attack on *Cruciferous* vegetables.

A database on L-theanine levels in Sri Lankan tea has been compiled jointly with TRI as this unique non-protein amino acid exhibits a wide range of health impacting properties such as relaxation-inducing effect, improved memory and learning ability and blood pressure lowering effect.

A novel synthetic process is being developed to produce graphene from local graphite. Studies are also in progress to produce composites based on graphite for use in electronic applications such as in lithium ion batteries and solar cells.

An automatic street lamp controlling system based on timer technology designed by ITI has shown promising results during pilot trials conducted for CMC at Independence Square and at Vidya Mawatha. ITI has also developed a street lamp controlling system using a predefined audio tone beamed from a radio broadcasting station.

Accession had been granted in the Gene Bank (USA) with the Key word "BARCODE" for the *Cinnamomum zeylanicum* based on the DNA bar coding data generated by ITI. Establishing the genetic authenticity of Ceylon cinnamon over its competitors including 'Chinese Cassia' will help branding Ceylon Cinnamon in the international market.

Improving Small and Micro enterprises through Science and Technology: ITI continued to support the government in its quest to uplift the rural economy by actively participating in the Vidatha and Divi Neguma Programmes. During the year several officers from the Vidatha Centres were trained as master trainers on a range of technologies - ornamental products, liquid soap, postharvest handling of fresh produce using an edible wax and herbal tea. Under the 'Divi Neguma' Programme nearly 200 persons were trained at programmes held in Colombo, Anuradhapura, Jaffna, Kegalle, Gampaha, Monaragala and Puttalam on technology related to Food and Beverages, Chemicals, Minerals, Kithul and Palmyrah Products.

PROVISION OF INTERNATIONALLY COMPETITIVE TECHNOLOGICAL SERVICES

Improving the competitiveness of industry: As one of the leading accredited testing and calibration laboratories in the country, ITI has provided around 13000 testing and calibration services to more than 2000 clients including regulatory bodies such as CEA, BOI, Registrar of Pesticides, Dept of Fisheries, Fertiliser Secretariat, Customs and Tea Board. In addition training in Laboratory QMS, Industrial metrology, Food safety (HACCP), ISO 17025, ISO 15819 (Medical testing) were also provided to industry and research institutions.

ITI continued to maintain ISO/IEC 17025-accreditation status from both SWEDAC and SLAB for a wide range of testing and calibration services. Accreditation status for noise measurement from SLAB is also being maintained. The Information Services Centre and the R&D laboratories continued to maintain their ISO 9001-2008 certification status.

The use of plastic nuts and bolts for applications that are exposed to water and other corrosive environments is increasingly becoming popular and a new test method was therefore developed to measure the shearing strength of plastic products using double side shearing techniques. This has helped the National Water Supply and Drainage Board to access quality plastic nuts & bolts for their applications. Similarly, based on industry demand new attachments to the Universal Testing Machine were fabricated to perform ASTM tests to determine rubber to metal adhesion strength.

During the year more than 100 environmental consultancies were undertaken to minimize air, water, solid waste, and noise pollution caused by industries. Services included design, review, and/or performance assessment of pollution control systems, dispersion modelling, improvement of ventilation systems, performance evaluation of combustion systems, noise modelling and abatement etc. A wide range of industries namely - vehicle service stations, rubber vulcanizing units, polythene and plastic pack manufacturing plants, paint and wood coat manufacturing, lead oxide manufacturing, MDF board manufacturing, rice mills, tyre buffing, pesticide packing, biomass boilers, charcoal briquetting, metal smelting, ready mix asphalt plants, cinnamon leaf boilers, poultry waste rendering plant etc., obtained our services during the year.

Under the EU sponsored Switch Asia EEPEX project, a noise model was developed for the Bandaranayake International Airport to identify areas affected by aircraft noise in the vicinity of the airport. These noise maps will be useful for effective management of noise levels in the airport.

With UNIDO sponsorship 12 Medical Laboratory Technicians attached to the Colombo Municipal Council were trained in microbiology testing and helped CMC to assure safe and hygienic food to the consumers in the city. ITI continued its overseas business operations in quality related activities and during the year Qureshi Research International Pvt Ltd., in Pakistan was provided

with calibration services while several scientists from Cambodia and Maldives were trained in laboratory QMS and microbiological testing.

ITI provided calibration services to several medical laboratories of leading hospitals and thereby contributing to the much-needed accuracy of medical reports provided to patients in the country.

Three proficiency-testing studies (PTS), microbiological testing of water and tea, and histamine in fish, were organized for the local testing laboratories during the year. These services have helped laboratories to carry out an independent assessment of their performance at a reasonable cost. Performances of ITI testing services are also independently assessed by regularly taking part in third party PT studies in chemical, microbiological and materials analysis and calibrations.

ENHANCING COMMUNITY WELLBEING – HEALTH, NUTRITION AND ENVIRONMENT

With accumulated knowledge in a wide range of fields, ITI continues to play a key role in many national issues dealing with consumer safety and welfare.

The presence of high levels of arsenic in rice became a major national issue after a local group claimed a high amount of As in rice, particularly rice grown in the Rajarata area. The Group also attributed arsenic as the main cause for the kidney disease prevailing in that region, which resulted in a significant reduction in the consumption of rice in the country. ITI analysed several rice samples submitted by the Bathalagoda Rice Research and Development Institute and showed that local rice samples had arsenic within the accepted norms, and restored confidence in the minds of the public.

Similarly, based on the report issued by the same Group, which claimed high amount of arsenic and mercury in pesticides, Customs detained several of these consignments. This created a shortage of pesticides affecting the entire agricultural sector. ITI was again requested to re-test these insecticide samples, which was done jointly with the Kelaniya Group and the results showed the presence of arsenic in only in a few samples and also at parts per million levels. It was also highlighted that apart for a few pesticides, no regulatory limits have been stipulated for arsenic and mercury levels in pesticides by CODEX. Based on the reports, Customs in consultation with the Registrar of Pesticides, released the detained consignments and the supply situation was brought to normal.

ITI supported a major drinking water reservoir project across the “Per Aru” in the Vavuniya district undertaken by SMEC International Pvt Ltd., by providing measurement data on noise, vibration and air quality for the Environmental Impact Assessment (EIA) study.

Being the only accredited facility for noise measurement in the country, ITI is called upon to submit independent assessment reports for court cases dealing with noise pollution.

A VIBRANT R&D SYSTEM AT ITI

Modern R&D Complex for ITI at Malabe IT Park: Cabinet increased the allocation for the construction of the Public facility and the Auditorium of the Malabe Complex from Rs. 245 million to 315 million in order to meet cost escalations. The construction of the basement, first and second floors of the biotechnology complex under the 2KR Agro-Food Technology is nearing completion with most of the civil construction works completed. Action has also been initiated to commence the upper three floors of the Biotechnology complex using ITI generated funds. A revised project

proposal for the construction of the Advanced Materials Complex has been submitted to the NPD seeking Donor Funds.

Increased R&D capacity: In order to cater to the increasing research demand from industry and trade for biological screening, facilities are being established for GMO testing, DNA Bar-coding, Vibrio testing and High-throughput Micro plate antimicrobial assays.

Realising the importance of post-graduate research degrees in enhancing research capacity, ITI continues to encourage its scientists and engineers to obtain post-graduate degrees in relevant areas. During the year three researchers were awarded PhD degrees from local universities, two officers completed their foreign M.Phil degrees and two registered for PhDs. Further, four PhDs and two Masters degrees will be completed in the next year. PG degrees cover a wide range of fields such as Food Technology including Post harvest technology, Industrial Microbiology, Medicinal plants and Materials Technology.

Publications, Patents, Awards & Recognitions: There was a significant increase in the number of refereed publications totaling 13 research papers this year. Patent was granted for one of our innovations while three more applications have been filed locally.

Human Resources: Mr. AS Pannila was appointed as the Additional Director (Technical Services) as Mr. HPNJ Gunasekera retired from service after a longstanding career at ITI. Mr. DLA Sattrakalsinghe was appointed as the Additional Director (Administration & Operation), but several Sectional Head posts -Industrial Metrology Laboratory, Quality Assurance Department, Materials Technology Section, Biotechnology Unit and Engineering Services - still remain vacant.

During the year, four Research Scientists/Engineers were recruited while seven resigned and one retired from the institute. Recruitment/retention of quality graduates is increasingly becoming difficult, as our remuneration package cannot match what is offered to scientists/engineers by universities and public corporations. Three years ago, 14% of the institute research staff had PhDs and 40% had Masters Degree. Percentage of scientists and engineers with PhDs and Masters Degrees remain low due to limited opportunities for quality PG research degrees and shortage of supervisors to guide young graduates in newer areas of science.- A few foreign fellowships offered through External Resources Department are totally inadequate to cater to a cadre of about 40 junior scientists and engineers. It has to be stressed that a critical mass of quality researchers is essential if we are to nurture and sustain high quality research at ITI and without adequate long-term foreign degrees in critical areas, ITI will be lagging in latest advances that are vital for the future growth of the country.

Employee Relations and Welfare measures:

Several training programmes on ICT skills, Business English and Secretarial practices were organised during the year to enhance the capabilities of our staff.

Two Internet cafes were set up within the premises to provide opportunities for our staff to develop ICT skills. National Health Week was commemorated on 5th and 7th of October 2011 by organizing talks on a range of topics such as 'Health & Physical Wellness', 'Nutrition for Good Health', 'Health FIRST' etc., with a view of promoting greater awareness among our staff. The Welfare and Recreation Club organized the traditional New Year Celebration jointly with the Buddhist Society. Our men's cricket team played three cricket matches with the UDA, Peoples

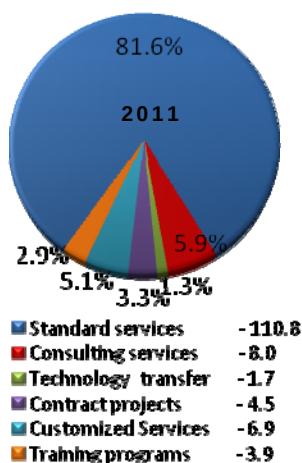
Bank and ETF. The Seva Vanitha Unit continued to provide schoolbooks for children of deserving employees and promotional sales during Christmas and Avurudu. They also arranged an eye clinic through the National Eye Hospital at concessionary rates for our staff. To celebrate 2600 Sri Sambuddha Jayanthi the Buddhist Society organized for the first time an Osu Pan dansela. They also donated books and cash awards to our employee's students who have excelled in studies. A Vesak lantern competition was organized for the fourth consecutive year. The Christian Society continued with their traditional annual Christmas party with carol singing and distribution of gifts to the children of ITI staff.

Financial performance: The state grant for recurrent expenditure was reduced while the capital grant was increased from last year's budget. While the recurrent grant showed a marginal reduction from 165 mln to Rs. 162 Mn, the capital grant increased from Rs. 120 Mn to Rs. 141 Mn, Institute income showed a significant increase of 10 % from Rs. 144.3 Mn in 2010 to Rs. 158.5 Mn in 2011, while the recurrent expenditure increased by 2% from 254.8 Mn to 261 Mn. The income/recurrent expenditure ratio showed an upward trend from 57% to 61%. Testing and calibration services contributed 7.6% (Rs. 110.8 Mn) of the generated income while income from contracts and consulting services showed an increase from 10.4 Mn in 2010 to 12.5 Mn this year. Revenue from technology transfer showed a marginal increase from last year's figure of Rs. 1.5 Mn to 1.7 Mn. Income generated per employee increased significantly from Rs. 426,900/ to Rs. 481,800 while the expenditure per employee also increased from Rs. 753,800/ to Rs. 793,500/= The performance-based incentives were paid to the staff for the 8th consecutive year as the institute achieved the overall income target set for the year.

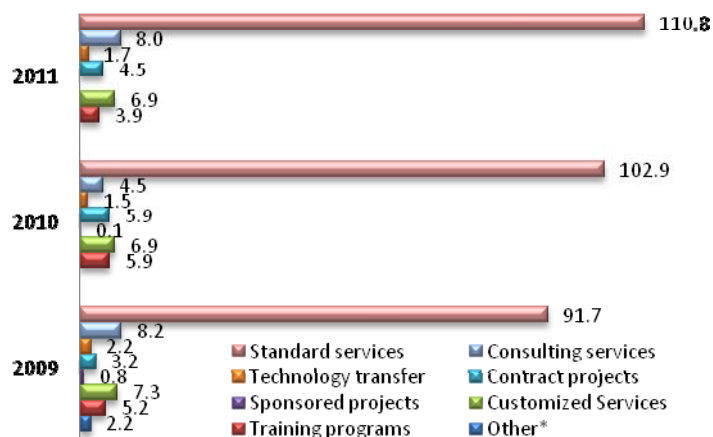
High percentage of generated income of the institute still comes from testing and calibration services while income from technology transfer and R&D remains only around 5%. This reflects the low demand that exist for R&D services in the country. Although double tax deduction was introduced to promote outsourcing R&D by the private sector, it did not have a significant impact in increasing demand for R&D. Possible reasons for the low level of commercialization of research are; Most of the industries, particularly the SMEs are low tech and majority of them are averse to taking risks and expect immediate return on investment. Lack of concessionary loans and other financing mechanisms to support hi-tech investment is also an important impediment faced by the SMEs.

With Sri Lanka aspiring to become a regional knowledge hub by 2016, it is imperative that Institutions like ITI are strengthened to play a meaningful role in the growth of hi-tech industries in the coming years.

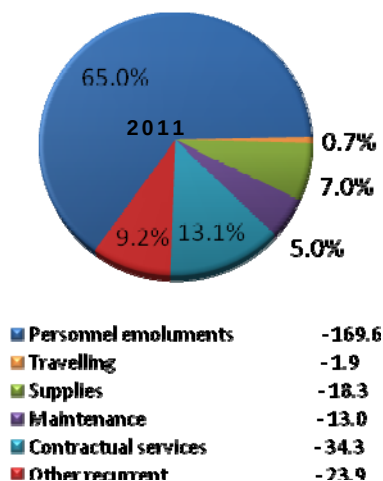
Income – Business Activities (Rs. Mn)



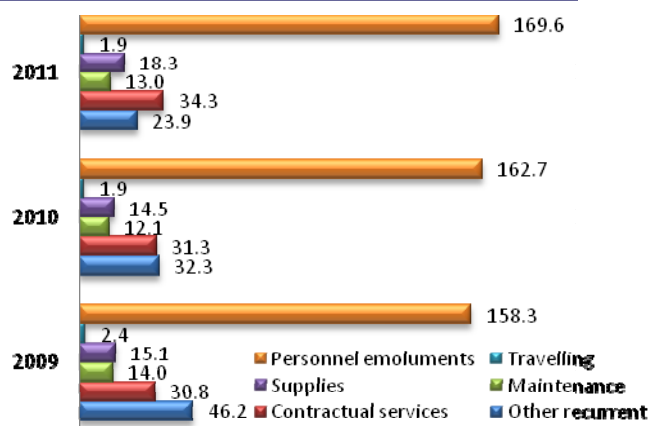
Income on Business Activities – Trend (Rs. Mn)



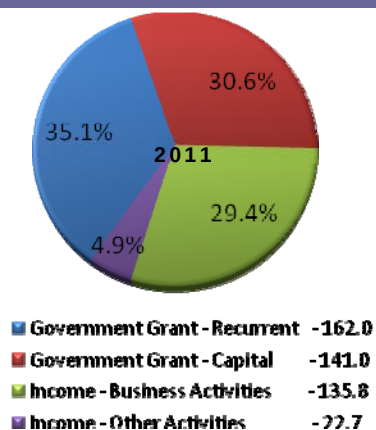
Recurrent Expenditure (Rs. Mn)



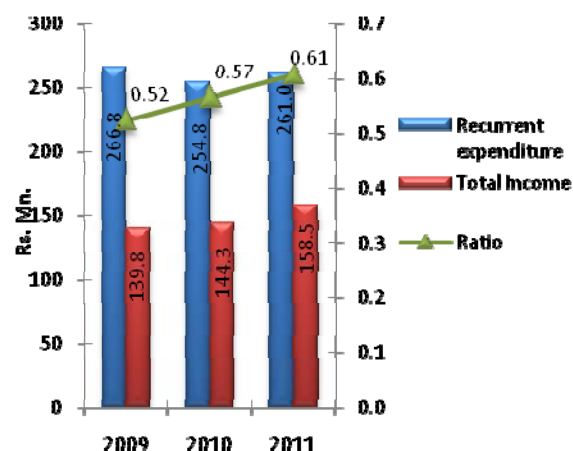
Recurrent Expenditure – Trend (Rs. Mn)

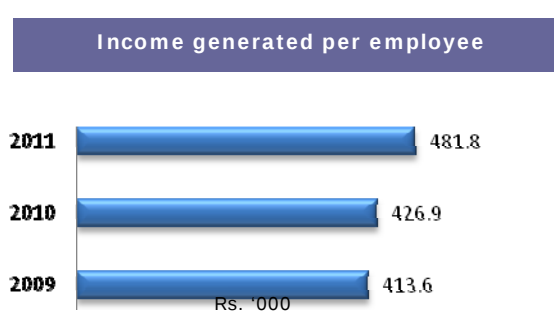
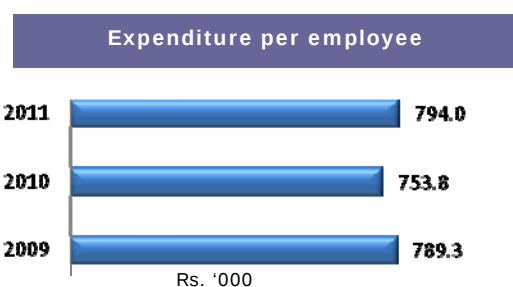


Operating Revenue (Rs. Mn)



Total Income vs. Recurrent Expenditure





Acknowledgements

Grateful thanks to the Chairman and the Board of Management for their expert guidance and direction and making my tasks easier in managing the institute. Appreciation is also due to the Management for their collective support in taking the institute forward during difficult times. The entire staff of the institute gave their wholehearted cooperation during the year to achieve the targets and made 2011 another successful year and I wish to extend a sincere gratitude to all of them.

The ITI wishes to express its appreciation to all of its customers for the confidence placed on the institute and we look forward to strengthening the relationship and widening the client base in the coming years. Financial assistance from the following Ministries, national and international organizations are gratefully acknowledged.

Ministry of Technology & Research, Ministry of Traditional Industries and Small Enterprise Development, Ministry of Industry & Commerce, National Science Foundation (NSF), National Research Council (NRC), European Union (EU), United Nation Industrial Development Organisation (UNIDO), Japan International Cooperation Agency (JICA), World Associations of Industrial Technology Research Organisations (WAITRO), Common Funds for Commodities (CFC), International Agency for Atomic Energy (IAEA), International Centre for Bamboo and Rattan (ICBR), HORTCRSP, NAM Centre, Department of Science & Technology (DST), Government of India and SAARC.

A.M. Mubarak
Director/CEO

20th March 2012

Performance Highlights

- **Technology Transfers**
 - **“Massak NP” Natural Pesticide**



“Massak NP”, a product based on essential oils extracted from edible Sri Lankan grown aromatic plants was transferred to Hector Pietersz & Co (Pvt) Ltd. It is effective for a vast range of disastrous agricultural pests such as caterpillars, spider mites, aphids, snails, mealy bugs, black-ants and termites. In addition, it acts as a repellent material for houseflies, mosquitoes and other household insects.

- **Kotalahimbutu Biscuits**

The technology for an anti-diabetic biscuit using kotalahimbutu was transferred to Ceylon Biscuit Ltd. The product is now available in the market.



- **Development of Noise model for Katunayake International Airport**

Under the EEPEX project ITI developed a noise model for the Bandaranayake International Airport following the EU Directive 2002/49/EC Guidelines. The first noise model study carried out for an airport environment was based on flight movements and take off and landing paths data collected from Katunayaka and Ratmalana control towers.

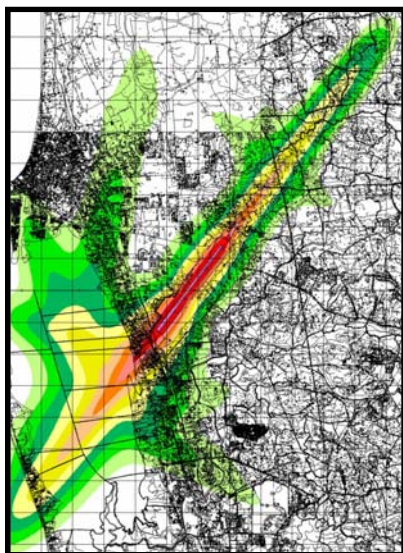


Fig 1 - L_{den} Noise Map for International Aircraft - November to April season

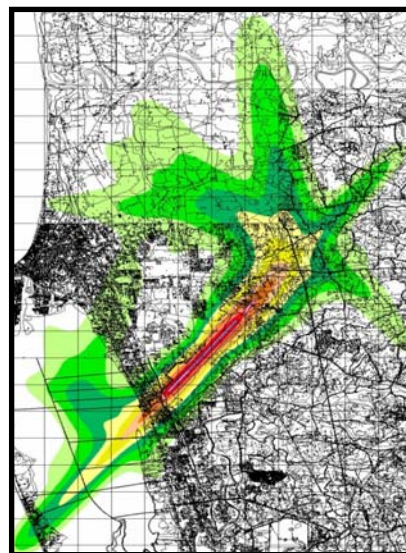


Fig 2 - L_{den} Noise Map for International Aircraft - May to October season

During the two seasons, November to April and May to October the direction of inward and outward air traffic is changed based on the wind direction during these times. Accordingly it was observed that in the May to October season when the flight movements were from the inland direction, the impact of noise on the inland areas of the airport was more than during the November to April season, when the flight movements were from the sea side. This information was useful for the authorities when making their environmental and urban development plans for the future.

- **EIA assessment of ADB Assisted dry zone urban water and sanitation project**

ITI supported a major development project in the Northern Province undertaken by SMEC International Pvt Ltd. ITI performed base line data collection on noise, vibration and air quality measurements for an Environmental Impact Assessment (EIA) on the proposed drinking water reservoir across the "Per Aru" in Vavuniya district.

The study also determined background noise levels and existing noise levels, and vibration levels at different locations that are most affected (or that might be most affected) by noise and vibration from the proposed project activities.

- **New techniques to determine the shear strength of plastic materials**



A new test method was developed to measure the shearing strength of plastic products using double side shearing techniques. This is needed mainly to assess plastic nuts and bolts. It is the new trend to use plastic nuts and bolts instead of metal nuts and bolts in applications which are exposed to water or other corrosive environments. The plastic nut and bolt shear test was requested by National Water Supply and Drainage Board Sri Lanka

- **Fabrication of new attachment and adoption of new test method for rubber to metal adhesion strength**

With recent developments in production processes, adhesion strength of rubber to metal has become important. There were several requests from industry to determine the bonding strength of rubber to metal. Hence Materials Laboratory fabricated new attachments to the Universal Testing Machine to perform ASTM test methods to determine rubber to metal adhesion strength.



ITI expertise support to solve national issues

- **Analysis of As in rice**

The occurrence of As, a toxic chemical, in rice grown in the Rajarata area, became a major national concern. ITI was called upon to assess the As content in rice samples sent by the Bathalagoda Rice Research and Development Institute. Analytical techniques for As analysis were optimized and about 80 numbers of rice samples were analysed using rigorous QC/QA procedures and it was found that some of these samples did contain Arsenic but at very low levels.



- **Analysis of Arsenic (As) and Mercury (Hg) in pesticides**

Similarly, a national issue was raised on the As and Hg content in imported pesticides and several consignments of pesticides were detained at the Sri Lanka Customs. This caused a shortage of the



pesticides in the market hindering cultivation practices and ITI was requested to test samples for As and Hg content. Analytical techniques for As and Hg analysis were optimized and about 50 numbers of pesticides samples were analysed. It was found that some of these samples except for a few, contained low levels of As or Hg. It was also highlighted that there were no

regulatory limits stipulated for As or Hg levels in pesticides anywhere in the world. The authorities released the consignments and the supply situation was brought to normal.

Quality Infrastructure

Accreditation of ITI Testing and Measurement services

- **SLAB and SWEDAC Accreditation for ISO 17025**

- **Chemical and Microbiological - a key performer in test services**

As the leading research and development institute of the country, ITI is fully committed to the provision of quality technical services to the industry. To fulfill this task, its Chemical and Microbiological *Laboratory* (CML) maintains international accreditation status for ISO 17025. A total of 117 analytical parameters comprising 3 for water and waste water (including pesticide residues), 11 for fish, 2 for milk powder, 1 for margarine, 4 for fertilizers, 12 for tea analysis, 2 for cashew, one parameter for spices have been accredited so far and the accreditation status continues for the 10th consecutive year.

- **Materials Laboratory highly commended by SLAB and SWEDAC**

Materials Laboratory is the only ISO 17025 accredited laboratory in Sri Lanka for rubber products testing. Considering the high level of performance and maintenance of ISO 17025 quality system and requirements, SWEDAC has extended the accreditation status of rubber testing laboratory for the year 2012-2013 without a surveillance audit.

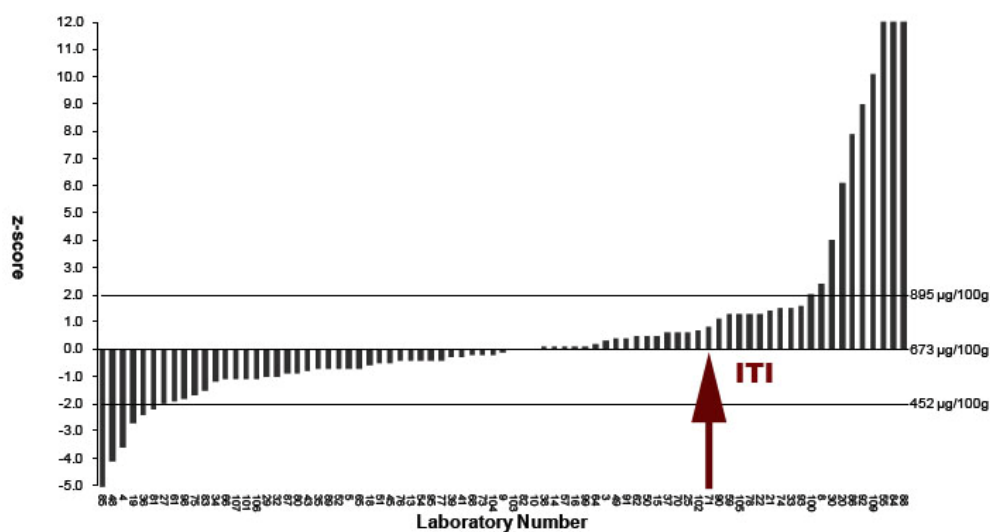
- **Noise accreditation extended for another two years**

The initial assessment for ISO 17025 accreditation of noise and vibration measurements, was conducted by SLAB in November 2011 and the laboratory was granted ISO 17025 accreditation status.

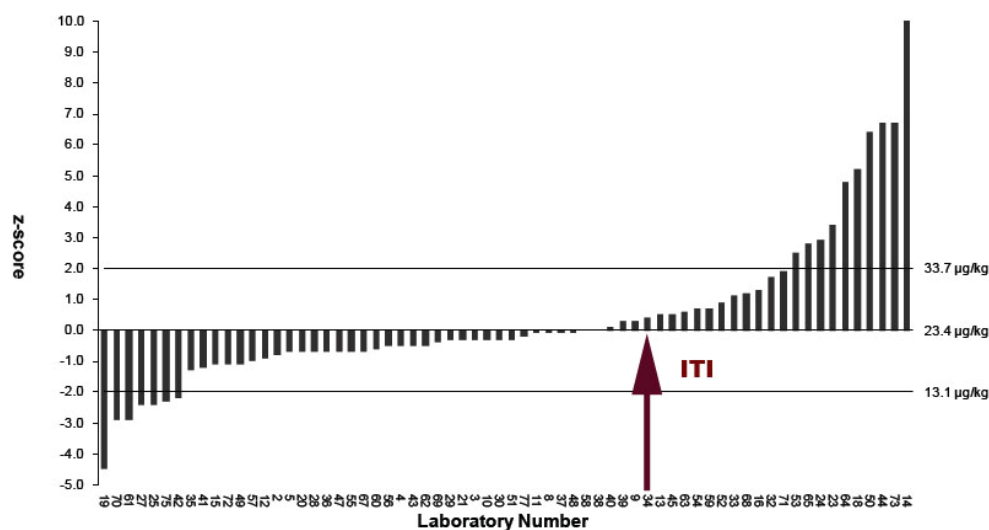
- **Participation in Proficiency testing Programmes**

Participation and satisfactory performance at proficiency testing programs is a key requirement for continuous maintenance of the accreditation status of any laboratory. To satisfy this requirement, during the year CML has successfully participated in proficiency testing of a large number of parameters. Conducted by LIVESMEDELS VERKET National Food Administration Sweden, Proficiency Testing Australia, LEAP Scheme UK, FAPAS Scheme, UK and Margruda Fertilizer check samples – USA, KHAN Indonesia, APLAC and APMP.

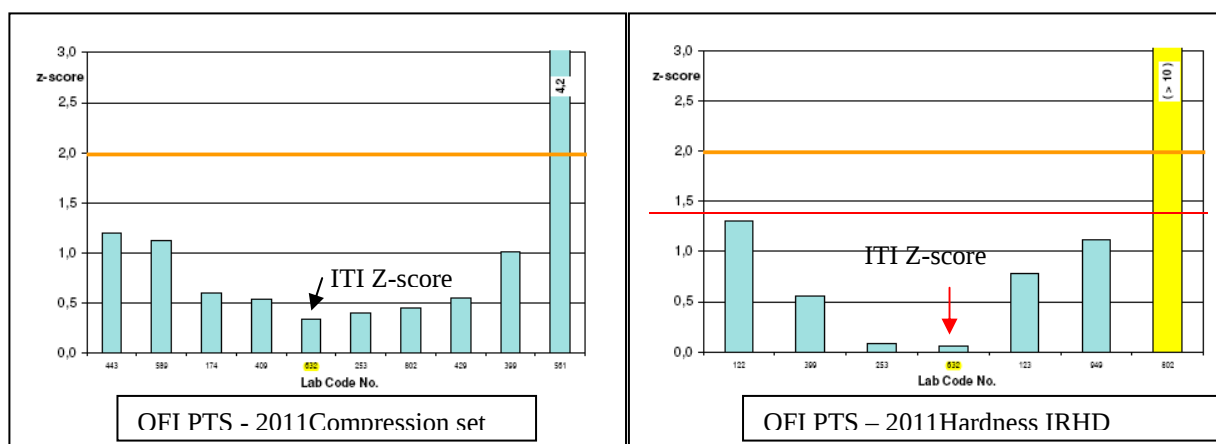
Vitamins in powdered baby foods



Metallic contaminants in canned fish



The Materials testing Laboratory participated for proficiency in the rubber testing area and satisfactory Z scores were obtained for all parameters.



ITI as a PT service provider

Up-liftment of Chemical Metrology capacity of the country

Chemical Metrology is one of the emerging areas of analytical science and the facilities for providing metrological services are not up to the required standard in Sri Lanka. The high cost of such services offered by overseas PT services providers is also a consideration. Therefore ITI has taken a lead role in capacity building in this area and has initiated provision of PT programmes for the local laboratories. Two PT programmes were conducted by ITI in 2011 for Microbiological parameters in water and Histamine levels in fish. In order to get international recognition actions have been initiated to seek ISO 17043 accreditation status from NABL, India for ITI PT services.

Accelerating Industrial Technology Development

- **Technology for making RTS beverage from Garcenia**

Methods were established for the processing of garcena (goraka) using both dried and fresh raw materials as contract project for Natural Access (Pvt) Ltd. Studies were done for selected parameters: Appearance, colour, mouth feel, sweetness, taste, smell and thickness and modifications were carried out to suit the client. In the final product Total sugar content antioxidant activities, organic acids content such as hydroxy citric acid, Citric acid and Malic acid were also determined.



- **Yoghurt coated granola bar**

A yoghurt coating for granola bars was developed at the request of Silver Mill Foods. A yoghurt coating comprising of milk, sugar, flavor and stabilizer was developed and the technology was transferred. The coating had the correct consistency to coat the granola bar and resembled the imported coating. The company staff was trained on the methodology for the formulation in the laboratory.



- **Quantification of L-Theanine and other Amino Acids in Sri Lankan Black Tea representing all tea growing areas**

L-Theanine (gamma-ethyl amino-L-glutamic acid) is a unique non-protein amino acid found in plants of *theaceae* family. Theanine was first discovered in tea leaves in 1949. This amino acid has been extensively studied in relation to food science and human nutrition, because this compound has a unique taste, characteristic of tea known as “umami”. The effects of theanine on human health has recently been investigated. Theanine is known to act as an antagonist against paralysis induced by caffeine, and is also known to be a neurotransmitter in the brain; a relaxation-inducing effect in humans has also been seen.

Apart from the above, data for theanine content in black tea is scanty, and a study to determine these values in Sri Lankan black tea was important as an added impetus to the tea industry. This could be used as a very effective marketing tool since there is an upsurge of research on health promoting effect of this unique amino acid globally.

A study was done in collaboration with Tea Research Institute of Sri Lanka and the results revealed as follows - The L-Theanine content in Sri Lankan black tea ranged from 0.91 – 1.29 % and in green tea ranged from 0.26 – 1.49 % on dry weight basis. Malwatte valley sub-region of Uva, Sabaragamuwa and Ruhuna regions showed the highest contents of L-Theanine and Bandarawela sub-region of Uva and Bogawantalawa sub-region of up country showed the lowest. Consumption of 6 cups of tea would provide 138 mg – 192 mg of L-Theanine. L-Theanine content of the teas from other countries were also compared with Sri Lankan Tea.

- **Automated Street lamp System**

It is a common observation that the street lamps installed in many locations are operative during the day time due to unplanned maintenance causing a significant waste of energy.

Colombo Municipal Council (CMC) has tried the photocell based automatic street lamp controlling systems, but was not successful due to maintenance issues. ITI is currently carrying out field trial with CMC at Independence Square and at Vidya Mawatha, to promote time based technology developed by ITI, which requires low maintenance and can be adjusted ON/OFF according to seasonal changes. Further study is also in progress to see the possibilities of operating the street lamps remotely through a radio frequency communication (RFC) channel.



- **Commercialisation of R&D Findings**

- o **Automated Weather Station at Hambantota**

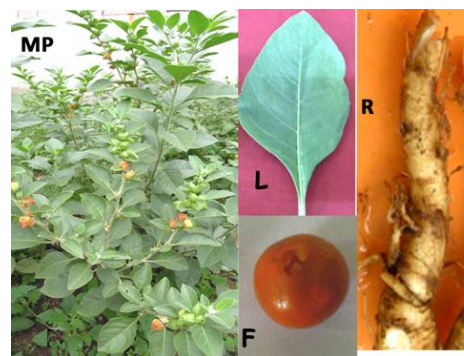


The first version of the automated weather station developed in 2006 was further improved in terms of design and functional features. The enclosure, data logging system and the data presentation software were fine tuned.

In 2011, two units were installed - One at the new dry zone Botanical Garden set up by the Department of National Botanic Gardens at Hambantota. Another unit was set up at the Katukurunda Air Force base, where the results are being compared with an imported unit. It will have considerable savings in foreign exchange as a good import substitution product when commercialised.

- **Introduction of new *Withania somnifera* (Ashwagandha) variety**

Ashwagandha used in ayurvedic medicinal preparations is currently imported at a high cost and thereby limiting its use in the industry. ITI scientists developed a new Ashwagandha variety after carrying out research trials at laboratory level and field evaluations. The new variety can be distinguished by its starchy and large root, comparatively large leaves, higher number of seeds per pod and higher number of seed pods per plant. The chemical properties are exactly same as the imported variety. Introduction of these variety in Sri Lanka is expected to significantly increase the use of this plant in the traditional medicinal industry. Steps are being taken for the commercialization of the new variety.



MP-mature plant; F= Fruit; L= Leaf; R= Root

- **Development of Red-clay based water filter for the removal of Fluoride and other Pollutants**

Kidney failure is fast spreading among the people in North Central Province (NCP) of Sri Lanka. The suspected cause for the disease is high accumulation of elements and ions such as arsenic, aluminum, magnesium, cadmium, and fluoride, in water. Particularly, fluoride content in water is very high in NCP also resulting in dental Fluorosis. The objective of this project is to develop a water filter from red clay for removal of decontaminants such as fluoride, bacteria and other pollutants. Initial studies on the Prototype filters fabricated have shown efficient results in fluoride sorbent properties.

- **Development of super absorbent material from banana fibers for feminine hygienic products and baby diapers**

White colored sorbent fiber was developed from waste banana stem with a view to utilizing it as a medium for blood and urine absorption in personal care products such as sanitary napkins and infant diapers. Benefits after commercialization are low cost, eco friendly, hygiene personal care products.

- o **Chemical characterization and authentication of *Caryota urens* (Kithul) sap and its products**

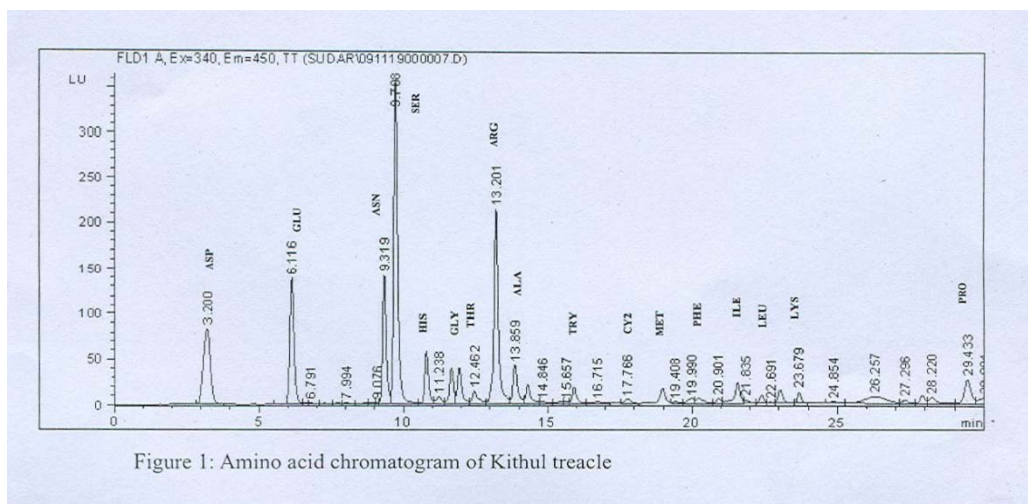
The present Sri Lankan standard for treacle (SLS 772:1987) and jaggery (SLS 521:1981) covers all types of treacle and jaggery made from coconut, palmyrah, sugarcane and Kithul. Moreover, the parameters available for the authentication of the type of treacle and jaggery in these standards are taste and aroma, which are subjective. Complete compositional data on Kithul sap, treacle and jaggery, and a separate standard for Kithul treacle or jaggery are also not available.

The colour and the aroma of the treacle and jaggery are highly dependent on the processing practice of the cottage industrialist. Hence the non-availability of a uniform quality product, in quantities required for export, is causing a major supply shortage. Investigation of the complete compositional data and establishment of a standard for the product and standardization of the production process, therefore are mandatory if the Kithul industry is to flourish in local and international markets.



ITI carried out a comprehensive study for the - Improvement of sap processing to upgrade the quality of Kithul products, establishment of techniques for authentication of Kithul sap, and products based on organic acids, amino acids, flavour profiles, sugar profiles of the products and determination of food compositional data of Kithul sap and products.

A method based on the amino acid profile was introduced for the authentication of the treacle and jaggery type and a simple test kit for the detection of adulteration of Kithul sap and treacle with cane sugar were outcomes of the project which is now commercialized.



- **SWITCH Asia Project: Enhancing Environmental Performance in Key Sri Lankan Export Sectors (EEPEX)**

This project was initiated in 2009 with ITI as lead partner and Ceylon Chamber of Commerce, Fraunhofer Institute (IFF) Germany, Swedish Environmental Research Institute (IVL) Sweden, Megaskills Research (MGS) UK as partners

A baseline survey was carried out for 608 industries in the target product sectors to obtain key information related to sustainable consumption and production. Out of the total industries surveyed 228 industries were shortlisted to gather detailed information by carrying out monitoring and measurements.

During this year, the ITI project team was involved in Initial walkthrough surveys to

- Identify priority pollution issues and cleaner production opportunities
- Identify monitoring /measurement requirements and locations
- Produce environmental status reports



Under this program a new design was provided to upgrade the wastewater treatment plant of Lanka Tiles PLC, Ranala which was commissioned in April 2011 .

- **Implementation of the method for enumeration of presumptive *Bacillus cereus* as per ISO standard**

Bacillus cereus is one of the common human pathogens able to produce food borne illnesses. Detection of this pathogen in consumer products is really important. Up to now ITI tested this microbiological parameter according to SLS 516: Part 8, 1994. Now facilities are available to continue this analysis as per international standard ISO 7932: 2004.

- **Establishment of a method for Detection of *Vibrio cholerae* and *Vibrio parahaemolyticus***



There is a high demand for analysis of *Vibrio* from the main players in the fisheries industry. Department of Fisheries (DOF) serving as the Competent Authority for fish and sea food has recognized ITI as their official laboratory, therefore most of the export industries seek the services of ITI laboratories for analysis of raw fish, fish products, and water and ice used for fish processing. However Sri Lanka has limited accredited testing facilities to detect *Vibrio* species. Hence the exporters of processed foods, fish and other sea food are constrained to provide certified consignments leading to rejects resulting in economic loss for the country. Hence a method for analysis of *Vibrio* was identified as an immediate need, and was developed by the ITI scientists. The overall impact of this exercise will be to minimize rejects of export consignments as well as enable local consumers to have access to safe food.

- **Troubleshooting Material failures/damages**

Understanding the cause of failure / damage is the key to improve the product quality and building of customer satisfaction. ITI has provided this service for several customers in different areas namely Power transmission cable, Metallic products, Cement and Concrete.

- **Cause of damage of underground high voltage aluminium cable**

Insulated high voltage power transmission aluminium cable was damaged due to presence of a foreign matter found at the point of damage. The foreign matter, insulating material, aluminium wire were analyzed to assess the effect on the quality of cable and also to understand the possible causes of damage.

- **Cause of damage of underground copper cables of power transmission**

Insulated copper cable used by a Sri Lankan company for a project in Bangladesh was found to be damaged due to corrosion. All the materials associated with the cable were examined and tested. It was found that an acidic liquid had penetrated to the cable channel and damaged the cable.

- **Cause of corrosion of colour bonded GI sheets**

Colour bonded GI sheets used in the roof of a store room of a poultry farm products has corroded within a very short period. Testing and investigations were carried out to find out the cause of extensive corrosion. The store room is regularly clean and fumigated with chemicals. These chemicals and fume reacts with the colour bonded GI sheets and initiated the corrosion. The rust was analyzed and found that the element present in the rust is same as what is available in the used chemicals.

- **Cause of malfunction of water pumps**

Leading manufacturer of water pumps faced a problem of malfunctioning of some of their water pumps. It was observed that some parts were corroded and cause of corrosion was identified to

avoid such failures. The rust was analysed and found that the clay particles are cemented with the metal parts of the pump. The pump has been used to pump water as well as sludge. When the pump is not cleaned properly after sludge was pumped out, the clay particles get cemented with metal particle and corrosion starts.

Benchmarking for Competitiveness

ITI plays a major role as the countries main state sector service provider for testing and analysis for business and industry. Chemical, microbiological and materials testing of industrial and agricultural products, including Herbal products are carried out at the specialised and accredited laboratories, well equipped with high end analytical instrumentation.

Over 5214 test services were conducted for Chemical, Microbiological parameters over the year and recorded the highest income figure achieved over the last 10 years. Routine test services have been carried out for Water, Food, Beverages, Agricultural products, Medical products, Pharmaceuticals, Cosmetics, Chemicals, Air Quality, Textile, Apparel, Footwear and a host of other products for private sector as well as for the state.

- **ITI is the officially recognized laboratory for**

- fish and sea food by the Department of Fisheries (DOF) serving as the competent authority for testing.
- cashew analysis by Cashew Cooperation.
- fertilizer analysis by the Fertilizer Secretariat
- pesticides by the Department of the Registra of Pesticides

Also the ITI certificate for preservative analysis in Gherkins is a requirement accepted by the Government of Japan

Some of the key activities can be listed as follows -

- **Confirmation of substandard fertilizer consignment by offshore sampling**

ITI was involved in the offshore sampling of a suspected substandard fertilizer consignment of 30,000 MT on the request of the Fertilizer Secretariat and the Sri Lanka Customs. Based on the analytical results of the ITI, the shipment was prevented from unloading and reshipped thereby preventing a massive fraud and heavy financial loss to the country as well as considerable environment pollution.



- **Testing for IATA Dangerous Goods Regulations**

Over 80 Services for Industries, Freight Forwarders and Sri Lankan Dangerous Cargo Handling Unit to identify cargo falling under IATA Dangerous Goods Regulations (DGR) were carried out during the year

- **Materials Testing**

Testing of materials for the building industry such as Cement, Aggregates, Steel, Tiles (floor, wall and roofing), PVC products, Timber, Paints, Adhesives, Geo-Textiles, Bricks, Concrete and Concrete admixture etc. continued while ITI also established new methods and techniques for new materials and products, which were needed for the development and improvement of plastics,

metal, paper and rubber industries. A total of 2,662 test services were provided to the industries during the year.

ITI continued to provide testing services - to the health care product industry, for Industrial oils such as Fuel oil, Lubricating oil, Thermic oil, Transformer oil, Vegetable oil, Foam compounds etc. for Lead and Cadmium release test for the ceramic industry, for footwear industry and rubber product industry. A new test method was used to assess the Nickel content of Rhodium, and Palladium coated on silver jewelry which helped the manufacturer to continue and expand jewelry exports to the EU countries.

- ITI supports to maintain the quality of new currency notes and coins

New currency notes and coins were produced in the year 2011 to be used in Sri Lanka. Several test methods were designed and performed to assess the suitability and quality of special papers and ink, used before and after printing. Series of coins used in different countries were also tested and assessed to find out the suitable metal for making coins for Sri Lanka.



- New technique to test plastic cover blocks used in concrete slabs



A new type of plastic cover is used to place reinforcement steel bars when making concrete slabs in the developed countries. Now these products are also used in Sri Lankan building industry by leading companies and a test certificate was needed prior to use. Since there is no standard test method, ITI designed a new technique to test these products.

• Calibration Services

For the 4th consecutive year ITI was requested to undertake an assignment to calibrate analytical balances at Quarshi Research International (Pvt.) Ltd., Pakistan. The results supported the client to maintain international accreditation for their laboratories. Two Technical Assistants from IML visited Pakistan for this activity during December 2011.



- **Accredited calibration services to Industry**

The Industrial Metrology Laboratory continued to provide accredited calibration services in the areas of mass, thermometry, electrical, dimension and volume to local and foreign industrialists, BOI companies, ISO 9000 certified and ISO 17025 accredited companies as well as testing laboratories including ITI labs with the main objective of maintaining the Quality Management System (QMS) in their laboratories.

During the period under review, a total number of five thousand three hundred and fifty (5350) services have been completed for outside customers.

- **Inter-laboratory Proficiency Testing (PT)**

The ITI also participated in an inter comparison organized by Sri Lanka Accreditation Board (SLAB) in the area of mass and pressure. The selected five weights and a standard pressure gauge were calibrated by direct comparison method.

- **Accredited Calibration Services to Medical Sectors**

The main medical testing laboratories in Sri Lanka, Nawaloka Hospitals (Pvt) Ltd, Asiri Hospitals (Pvt) Ltd and Lanka Hospitals Corporations PLC continued to obtain accredited calibration services from the ITI with the main objective of improving the accuracy and thus the quality of test reports that are submitted to patients who seek medical advice.

In addition to the above three main laboratories the following medical testing laboratories also obtained the ITI's Metrology Services.

- National Blood Centre
- Central Hospitals (Pvt) Ltd.
- MediSence Laboratory (Pvt) Ltd
- EsPee Diagnostic Laboratory
- OhlumsClinic Laboratory (Pvt) Ltd
- National Dangerous Drugs Control Board
- National Drug Quality Assurance Laboratory
- National Health Laboratory

Special mention should be made for the following customers who sought the assistance of ITI.

• **Motherson Sumi Electrical Wires Lanka Pvt Ltd**

This is an Indian wire manufacturing company established in Sri Lanka. The quality of the products depend on their instruments and hence they need to be calibrated by an accredited laboratory. The company is a new customer and their pressure gauges and temperature controllers used in their manufacturing process were calibrated by ITI.

A total number of hundred and twenty nine (129) services have been completed during the year.

Colombo Dockyard Ltd

This is a leading company in Sri Lanka which undertakes repairs in ships that are harboured in the Colombo port. In addition to repair work they also undertake the calibration of panel meters in the main control room in ships. The accuracy of calibrations and the quality of their repair work should be up to the international standards and the company seeks our services annually to calibrate all the measuring instruments including clamp-on-meters, multimeters, megger testers, temperature calibrators, pressure calibrators, vernier calipers, micrometers, dial gauges, height gauges, flash testers, tachometers, panel meters, calibrators, bore gauges, depth gauges etc.

Calibration services provided to Colombo Dockyard Ltd. contribute towards maintaining the Sri Lanka port as an international hub. A total number of four hundred and seventeen (417) services have been completed during the year.

Noratel International (Pvt) Ltd & Noratel Lanka (Pvt) Ltd

The Noratel Group is a major worldwide supplier of Toroidal Transformers and Inductors. All products of the Noratel Group are top of the range in terms of design, engineering and manufacturing, thus assuring the highest quality of their products.

To maintain the quality of their products both companies seek ITI's assistance annually for calibration of their digital multi-meters, resistance meters, LCR meters, watt meters, industrial ovens, digital thermometers, HV testers etc. A total number of hundred and forty five (145) services have been completed during the period under review for these two companies.

Coats Thread Exports (Pvt) Ltd

This is a leading company in Sri Lanka catering to local and export market by supplying different varieties of threads. The quality maintenance is very essential in their process and the company sought assistance to calibrate their sample drying machines, ovens, RH meters, glass thermometers, clock meters etc. A total number of fifty two (52) calibration services were carried out.

Bodyline (Pvt) Ltd

This is a leading garment manufacturing company in Sri Lanka catering to the export market. To maintain the quality of their products the company annually seeks the assistance of ITI to calibrate all instruments used in their processes such as calipers, measuring vessels, balances, RH meters, pressure gauges, temperature indicators etc. A total number of forty five (45) calibration services have been completed

Loadstar (Pvt) Ltd

This is a leading solid tyre manufacturing company in Sri Lanka catering to international markets. The company seeks the assistance of ITI to get their laboratory equipment calibrated regularly such as pressure gauges, weights, clamp-on-meters, simulators, power analyzers, glass thermometers, cylinders etc. A total number of one hundred and sixty nine (169) calibration services have completed

Cargills Quality Dairies Ltd.

This is a leading ice cream manufacturing company in Sri Lanka catering to the local market. The correct temperature maintenance is very important to produce good quality products. ITI is engaged to calibrate all temperature controllers and pressure gauges installed in their manufacturing process. A total number of seventy four (74) calibration services have been completed during the period.

Hemas Manufacturing (Pvt) Ltd

This is a leading cosmetics and consumer product manufacturing company in Sri Lanka catering to local market. The maintenance of quality is very essential for these products due to high competition in the local market from imported products. Hence the company sought the assistance of ITI's Metrology expertise and equipment used in the manufacturing process such as balances, incubators, ovens, centrifuges, thermometers, calipers etc. were calibrated. A total number of forty seven (47) services have been completed during the period.

- **Maintenance and repair of laboratory equipment**

The repair services provided by ITI's electro technology laboratory help to maintain the laboratory equipment in order to conduct uninterrupted test services and research. In addition large scale repairs were undertaken for government research laboratories mainly of the Department of Agriculture saving millions of rupees to the government. ITI also continues to offer this service to several private sector laboratories. In year 2011 a total of forty (44) repair jobs were handled for the private sector bringing an income of Rs 1.2 Mn.

Monitoring and Mitigating Pollution

The ITI provides a gamut of services to industry, to support minimising Industrial pollution caused by air, water and solid waste, and noise and vibration, which are the main causes of environmental pollution. ITI plays a key role in controlling, monitoring and measuring these parameters for clients through accredited testing services, consultancy on plant design also for Environmental Impact Assessments.

- **Industrial pollution control**

A total of 125 services were provided for industrial pollution control during this year. Of these 71 services dealt with air pollution control, 25 services with wastewater treatment, 21 services were for improvement of combustion system & ventilation facilities and 6 services were for risk evaluation & hazardous waste management. Two training programs were also conducted on industrial environment issues.

- **Air Pollution Control:**

Services provided for minimization of atmospheric pollution caused by industries included design of air pollution control systems, air dispersion modelling, performance assessment of air pollution control systems, indoor & outdoor air quality survey with design for improvement of ventilation systems, review of air pollution control system provided by other parties, performance evaluation for improvement of combustion systems and many others. Some services provided for industry sectors are detailed below -

- One air dispersion modelling for a cement kiln
- 26 air pollution control systems designed for Reduction of organic vapour generated from vehicle service stations, motor garages, rubber vulcanizing units, polythene & plastic pack manufacturing plants, furniture painting operation, paint & wood coat manufacturing plant,
- Dust control systems for lead oxide manufacturing plant, MDF board manufacturing plant, rice mills, tyre buffing operation, pesticide powder packing plant, biomass boilers, charcoal briquetting plant,
- Reduction of dust & gaseous pollutant emissions from brass, steel & aluminium smelting plants, ready mix asphalt plants, cinnamon leaf boilers
- Outdoor & indoor air quality surveys with recommendation for improvement have been provided for 19 industries -
 - o pesticide packing plant, floor tile manufacturing plant, proposed water supply project, ventilation improvement of PVA plant, garment factories, hotels, office buildings, packaging industry, electronic part assembling plant
- Performance assessment of existing air pollution control system was carried out for 18 customers –

- o Crematorium, laboratory fume cupboards, cinnamon oil extraction plants, brass/steel/aluminium/copper smelting industries, label printing plant, tyre manufacturing industries, agrochemical packing plant, polyurethane foam packs manufacturing plant, metal finishing industry, lead oxide manufacturing plant, rubber products manufacturing plant, poultry waste rendering plant etc.
- Seven air pollution control system designs were reviewed and recommendations made for improvement for Ready mix asphalts manufacturing plants & plastic pack manufacturing plant
- Exhaust gas quality measurement with recommendations for combustion Improvement for 21 customers covering boilers, standby generators, tile kilns, melting furnaces and waste incinerators including healthcare waste incinerators
- **Wastewater Treatment:**
 - Two turnkey contracts undertaken for treatment of wastewater discharged from vehicle service stations & one contract for treatment of wastewater generated from glazed floor tile manufacturing plant.
 - One pilot plant study carried out for optimization of anaerobic digestion for treatment of palm oil mill effluent
 - Ten wastewater treatment plants have been designed with chemical coagulation followed by sedimentation for effluent discharged from ready mix concrete batching plant
 - Plant design for Biological treatment including both aerobic & anaerobic digestion for centrifuged latex plant & rice mill effluent; and biological treatment with tertiary treatment for recycling of vehicle service effluent, Sewage treatment plant.
 - Plant design for advanced oxidation using peroxide with UV for treatment of tobacco processing effluent & hydrolysis followed by oxidation for pesticide packing plant effluent
 - Eleven performance assessments carried out for existing wastewater treatment plants for coconut toddy distillery, sewage treatment plants, metal finishing effluent plants, textile effluent treatment plant, scrubber effluent treatment plant of scrap steel smelting industry, poultry processing effluent, agrochemical effluent, centrifuged latex plant, vehicle servicing effluents.
- **Hazardous Waste**
 - Risk evaluation with hazardous waste management were carried out for six industries.
- **Measurement / Monitoring Services on Noise /Vibration**

A total of hundred and seventy four (194) industrial noise/vibration measurements have been completed during the year. ITI also enhanced capabilities in this area of noise modelling using

IMMI software. Assessments for Environmental Protection Licenses, Noise Audit Reports for ISO 9000, ISO 14000 and conformity to company safety requirements were provided to regulatory authorities while the following industry sectors were provided with services

- Building construction
- Road construction
- New projects on Port development
- Thermal Power Plant
- Rubber/Cement based large scale industries

- **Consultancy Services on Noise / Vibration Abatement**

A total of twenty eight (28) consultancy services on industrial noise abatement have been completed during the year 2011

Highlights of two major consultancy assignments are given below.

- **Noise control solution for Piramal Glass Ceylon PLC**

Piramal Glass is the largest glass container manufacturer in Sri Lanka. The factory is located in Horana and the main raw material silica sand is transported from Nattandiya after washing. The sand washing plant at Nattandiya is located in the middle of a coconut cultivation.

Continuous operation of the plant resulted in complaints on the high noise levels in the area by residents and ITI was contacted to find a solution to abate the issue. It was identified that the main noise generating source was the vibrator of the sieve.

As a part of the noise control solution a) the frequency of the sources were adjusted and b) an enclosure was constructed around the sieve with necessary sound proofing layers. After installing the sound proof enclosure a noise level of 52dB was achieved near the boundary, which is within the approved limit.

- **Noise control solution for Plenty Foods (Pvt) Ltd**



Blower covered by a noise attenuator #

Plenty Foods (Pvt) Ltd is a subsidiary company of Ceylon Biscuits Ltd (CBL) located in Palkelele, a semi residential area. The company manufactures a cereal product under the brand name of Samaposha. The operation of the plant generates a high noise inside and outside the plant at various processing stages.

ITI identified the high noise generating sources and proposed to install enclosures around the mills, blowers and other noise generating machinery which reduced the noise to the levels given in the legislation.



Hammer Mill inside a enclosure #

5 Contract Projects were also undertaken in this area.

- **Assessment of Trihalomethanes in chlorinated water supplies of National Water Supplies & Drainage Board**

The possibility that chlorinated water supplied by the NWSDB contains trihalomethanes has been a matter of concern of public water supply & health authorities for a long period of time, particularly with the increasing rate of cancer in the country. However due to the lack of analytical capabilities a detailed study has not been carried out. In this study the concentrations of the 4 main THMs in the water supplied to the public from three main water treatment plants (WTPs) in Colombo, six WTPs in Gampaha district and few selected transmission endpoints and distribution endpoints of WTPs located in Colombo were monitored.

The results will be very important to maintain the quality of water provided to the public through the national water supply schemes. The tests were carried out in accordance with the WHO guidelines for Drinking water and will help to determine if the public is being exposed to carcinogenic substances through the public water supply and also make recommendations to minimize the formation of these substances.

Technology for Human welfare and Socio-economic Upliftment

- **Gamata Thakshanaya**

ITI continued its programmes and extension services to support the government in its quest to uplift the rural economy of the country. These programs were designed to empower the small, medium and micro enterprise sector to significantly contribute to the national economy under the Gamata Thakshanaya program of the Ministry of Technology and Research. The trainings are organized through the Vidatha Centers directly to the potential entrepreneur and also disseminated through the Vidatha Officers who are trained by ITI.

- **Training for self employment generation**

The following training programmes were conducted through Vidatha Resource Centers (VRC)

- Rice based products including bakery products at Akurana and Hasalaka VRC, Narammala and Thamankaduwa VRC, Rathnapura VRC and Haputhale VRC
- Kithul tapping technology at Ibbagamuwa VRC, Laggala Pallegama VRC, Ukuwela VRC, Pasgoda VRC, Pasbage korale VRC and Balangoda VRC
- Manufacture of confectionary Items at Homagama VRC
- Farmer training programmes on medicinal plant cultivation and herbal tea production at ITI for VRCs.



692 persons were trained through 19 training programs conducted during the year.

- **Training of Trainers**

S&T officers of the Vidatha Centres were trained as trainers by ITI on ornamental products (59), Liquid soap (25), Postharvest handling of fresh produce using an edible wax (59) and Processing technology of herbal tea (46).

- **Divi Neguma Program**

This program coordinated by the Ministry of Traditional Industries & Small Enterprise Development is designed to improve livelihood of the rural community by establishing a million home-based economic units island wide. Training will be given to beneficiaries identified under the 'Divi Neguma Programme'. Under this activity,

- 226 persons were trained at 07 programmes held in Colombo, Anuradhapura, Jaffna, Kegalle, Gampaha, Monaragala and Puttalam on technology related to Food & Beverage, Chemical, Mineral, Kithul and Palmyrah Products.



Training Programs & Workshops

ITI continues to be a training provider to industry, laboratories and scientists, both in Sri Lanka and overseas. Over 40 training programs were conducted during the year, with 9 customized to company needs, and the rest at group or individual level.

- **Audiologist Training Programme**

The Association of Audiologist commenced a Certificate Course for Audiologist in year 2011. The course is designed to train advanced level qualified students as Audiologists. ETL conducted lectures on the topics Acoustic Terminology & Electronics as a CSR project. The first batch of students started the lectures in November 2011 at ITI.

- **Training of Foreign Scientists**

- Two scientists from Cambodia were trained on Analysis of food samples, Media preparation, Quality Control and Maintenance of Reference Cultures at a 10 day program in August .
- A technician from Maldives was trained on Analysis of Water Quality Parameters at a two day program .



- **Training of Local Technicians and professionals**

Training on

- Analysis of food and water samples, Media preparation, Quality control of media and record keeping, Maintenance of reference cultures, House keeping, General maintenance and waste management, Equipment maintenance, Monitoring and evaluation of test results were subjects at a 9 day training on Food Security Program conducted for Colombo Municipal Council Microbiological Laboratory for 6 laboratory technicians .
- Media quality control, Maintenance of reference cultures for Durdans Hospital – at a 3 day program for 2 Laboratory technicians.



- Analysis of food samples, House keeping and general maintenance, Equipment maintenance, Monitoring and evaluation of test results for CIC Holdings Pvt Ltd. - at a 7 day program for 2 persons

- Tea analysis as per ISO 3720 for Impra Teas (Pvt.) Ltd. - at a 7 day program for 1 person
- "Food hygiene management" for Bogawanthalawa Estate (Pvt.) Ltd. - at a 1 day program for 30 Participants,
- Dehydration technology of fruits - a 4 day training programme including a field visit to a factory.
- Mining of Information – a 1 day program for Research Librarians, Researchers & Students.
- Two day skill development program for 38 Effluent Treatment Plant Operators.

SMEs

Individual Training – 11 trainings were done to individuals on the following areas - Sensory evaluation of canned fish, processing of ready to serve fruit drink, papadam, yam toffee and bottled waraka, kithul, jam, spices, food safety and postharvest.



Group Training – 25 group training programs were done on processing of dry fish and maldivian fish, preparation of rice flour, manufacture of fish ambulthial and fried sprats, Herbal balm preparation, Herbal Drugs Value addition techniques, liquid hand wash, mosquito repellent incense sticks, incense sticks, decorative articles with clear plastics, fabric softener, plastic testing technologies, carbon foot print, Multiple micronutrients in Food and Beverage

ITI continued to provide academic support through supervision and training of researchers and students at post graduate and undergraduate level.

Undergraduate

- Two students from University of Colombo
- Two students of Department of Food Science and Technology, University of Ruhunu
- One student from the Open University of Sri Lanka
- One student from Monash University
- Two students from Institute of Chemistry
- B.Sc Final year (Chemistry special) students from University of Ruhunu
- Two day skill development training program was carried out for effluent treatment plant operators. There were 38 participants for this program.

Capacity Building

• Post Graduate Studies

ITI continued to support post graduate studies and short term training for its scientists to enhance their capabilities for research and development activities. In the year 2011 one Research officer completed MPhil/MSc studies while three were conferred PhD qualifications. In addition three research officers are continuing their MSc/MPhil studies while 6 are continuing with PhD studies. Among those supported were:

PhD studies:

1. P N R J Amunugoda – was awarded a PhD by the Open University of Sri Lanka. Thesis - “Quality enhancement of dehydrated products through the modification of solar tunnel dryer for continuous operation in rural communities”
2. Chamila Wijesinghe – was awarded a PhD. by the University of Colombo. Thesis - “Use of *trichoderma asperellum* to control black rot disease of pineapple and anthracnose disease of rambutan in Sri Lanka”.
3. Asitha Siriwardena received his PhD from University of Peradeniya Thesis - “Microbial insecticides from *Bacillus thuringiensis* and Fungal Metabolites from *Hirsutella thompsonii*”
4. R M Dharmadasa submitted his PhD thesis to University of Sri Jayawardenapura. Thesis - “Evaluation of taxonomic status of *Munronia pinnata* (Wall.) Theob. (Meliaceae) in Sri Lanka and its anti malarial properties”
5. P Ranasinghe continued his PhD studies at the University of Colombo. Thesis - “Bioactivity studies of Kithul sap/treacle and molecular characterization of economically useful wild yeast from Kithul sap”.
6. Theja Herath continued her PhD degree research programme with the University of Kelaniya. Thesis - “Improvement of bio-availability of iron in some locally grown rice varieties”.
7. H P P S Somasiri continued his Ph.D. Studies at the University of Colombo. Thesis - “Chemical characterization and authentication of *Caryota urens* (Kithul) sap and its products”.
8. L D C Nayanajith registered for the PhD at University of Colombo. Thesis - Synthesis and characterization of graphene composites for application in photovoltaic cells
9. C H Manoratne registered for the PhD at University of Colombo. Thesis - “Synthesis and characterization of graphene and composites for application in lithium ion batteries using Sri Lankan graphite”.

MSc/ MPhil studies:

1. C Dharmasiri completed her MPhil (Chemistry) at University of Cambridge, UK. Thesis - “Bridging, charge inversion and water films”
2. S C Hatharasinghe completed her M.Sc. in Water Resource Management at UNESCO-IHE, Netherlands and the M.Sc. Thesis - “Zinc removal and biological activity in Zinc loaded bioreactor”.
3. Ruwan Weerasinghe completed the first year of the MPhil degree at Department of Physics, University of Colombo Thesis - “Automated acid rain monitoring station”.

4. M S M Aroos completed the first year of MSc (Computer Science) at Sri Lanka Institute of Information Technology

PG Dip

- B U Hettiarachchi completed PG Diploma in Manufacturing Management, University of Colombo.

• Short term training

- N Perera completed a Diploma in Business , University of Kelaniya. (February 2010 – April 2011)
- C H Manoratne participated in a workshop on “Energy management and funding mechanisms for energy efficiency projects”, conducted by EU Switch-Asia Funded “EEPEX Project. (27 January 2011)
- W J K D Ranpatige participated in a two day workshop on “Chemical accident prevention & preparedness”, conducted by UNEP & ADPC. (14 – 15 March 2011)
- B U Hettiarachchi & D S Samarawikrama participated in training on “Introduction to sampling & basic principles of sample selecting with special reference to S & T research”, organized by Sri Lanka Association for the Advancement of Science. (22 June 2011)
- M D Y Milani participated in a IAEA training on “Advanced application of radiation processing for recycling of polymeric waste” in Malaysia (4 – 8 July 2011)
- G P C A Dharmasiri, B U Hettiarachchi, R C W Arachchi & S Weeraratne participated at a seminar on “Chronic Kidney Diseases in North Central Province of Sri Lanka”, organized by University of Sri Jayawardenapura, Faculty of Post Graduate Studies (12 December 2011)
- H Dissanayake and K Kumarasinghe participated in a training on “Air dispersion modelling using CALPUFF view software” at Hyderabad, India, conducted by Prof Jesse L Thé of Lake Environmental, Canada (14 – 16 December 2011)
- S Weeraratne participated in a training on “Statistical concept and methods for the modern world”, organized by the Applied Statistics Association of Sri Lanka Jointly with the Department of Statistics, Faculty of Science, University of Colombo. (28 - 30 December 2011).
- A M C Udayani Binduhewa participated in a six month program on “Application of cinnamon essential oil as an antimicrobial agent to extend shelf life of pasteurized pulp of papaya (*Carica papaya* L.)”, a fellowship offered by Central Food Technological Research Institute, Mysore, A Joint NAM- CFTRI (Diamond Jubilee) (20 April – 19 October 2011)
- T Abeysekera, E M S Isanka and W Divisekara participated in a workshop on “Rubric creation for personal development”, organized by YSF, National Science and Technology Commission. (24 June 2011)
- W Divisekara participated in a workshop “ISO 22000 FSMS/HACCP”, organized by Sri Lanka Standard Institute. (24 - 25 February 2011)
- N Amunugoda participated in a seminar on “National convention on organic farming: ensure, safe, healthy & nutritional food for future” at Waters Edge, Battarmulla, organized by Faculty

of Agriculture, University of Peradeniya and University Grant Commission. (24 - 25 February 2011)

- N Amunugoda participated in a workshop on "Increasing workers productivity and strategies to address energy issues in tea plantation" organized TRI and HARTI. (28 November 2011)
- W M S Wijesinghe participated in a training workshop on "Foresight analysis" conducted by National Science Foundation Sri Lanka.
- D Rajapaksa and T Herath participated in the conference of the "3rd International Network for Quality Rice (INQR)", held at Bangkok, Thailand. (15 - 20 August 2011)
- J Gooneratne participated in the "IX Asian Congress in Nutrition", held in Singapore. (12 July 2011)
- T Abeysekera participated in an seminar on "Academic writing in Social Science Research", conducted by Sri Lanka Association for the Advancement of Science (18 September 2011)
- S Samarasekera participated in the Seminar on "Information Ethics" conducted by National Science Foundation (29 August 2011)
- S Samarasekera, P M Jayasinha, T Abeysekera & E M S Isanka participated in an workshop on "Electronic Information resources for libraries" conducted by the British Council (22 August 2011)
- A S Perera participated in a training on "Motivating strategy" conducted by National Institute of Library and Information Sciences (10 - 11 March 2011)
- E M S Isanka & I Pieris participated in a cataloguing of Library Mat. & Authority Control conducted by Sri Lanka Library Association (SLLA) (06 April 2011)

Enhancing capabilities of Management , ICT and Communication skills of staff

ITI organized training programs on ICT skills, Business English and Secretarial practices to enhance ICT skills and communication capabilities of staff at different levels and grades –

The areas covered were

- "Basic Skills Development in ICT" , where 48 staff members were given hands on training in word processing, use of e mail and basic Computer skills, conducted by staff of the Computer Unit of ITI in three batches during the year
- "Training on Microsoft Office 2007 packages where senior management was given a familiarization of the advanced features of MS Office Word, Excel, Power Point, Outlook, conducted by a Microsoft Certified trainer.
- "Business Communication skills course" conducted by the Business English Unit of the Academy of English and Drama, where 54 staff members at middle and senior technical grades participated.

New Initiatives

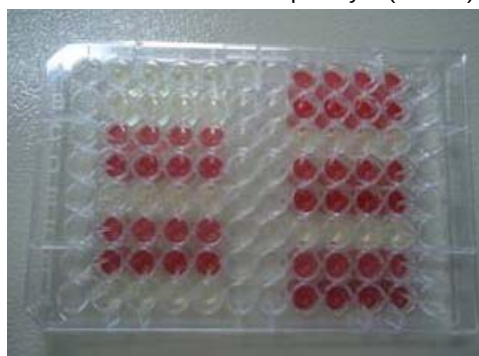
- **Effect of environment for corrosion of metallic material**

Corrosion of metallic material in various environmental conditions has become a problem for many industries and users. Accelerated weathering and corrosion tests are conducted to assess the material but there is no data for direct interpretation of these results for their true life span. Research has been conducted by the manufacturers of these testing equipment, but not published since they are based on the localized environment conditions. Therefore Sri Lanka should have its own data base on environmental conditions of different locations and its relationship to accelerated weathering and corrosion tests. To fulfill this requirement a project has been initiated by ITI with the researcher working towards a M Phil degree from the University of Moratuwa. As the first step it is proposed to study the conditions and effect of corrosion at coastal area, Colombo and Kandy, and thereafter expand to more locations after assessing the initial results.

- **Development of Micro – Plate based high throughput anti-microbial assay**

During the past few years, ITI has developed several microplate based high-throughput bioassay methods using SPECTRAMax PLUS 384 plate reader. Bioassays such as antioxidant, total polyphenolic, α -glucosidase, high-throughput Oxygen radical absorbance capacity (ORAC), Acetylcholinesterase enzyme and α -amylase are now available for client services.

Antimicrobial assays are different from chemical or enzyme assays and are very important in studying biological activities of medicinal plant extracts. Conventionally, antimicrobial assays are carried out in culture plates. Micro-plate based bioassay methods are fast, accurate and cost effective compared to conventional methods.



Literature on microplate based antimicrobial assays is limited. However, results of our basic experiments show that antibacterial assays can be efficiently adopted into 96-well microplates with few innovative steps. ITI scientists are working further on the development of 96-well microplate based antimicrobial assay methods to be used to exploit the high potential of the medicinal plant industry.

- **Development of a Method to Detect Adulterated Black Tea (with Sodium Bicarbonate)**

Tea is among the main three exports in Sri Lanka and Ceylon tea is recognized as the world's best tea. In the manufacture of black tea, many manufacturers use sodium bicarbonate (NaHCO_3) as an adulterant to enhance the color when tea is brewed. This is a threat to the Sri Lankan tea industry, and developing suitable methods to detect this becomes a very important priority.

The carbonate and bicarbonate composition in tea brew was determined using the traditional method and it was found to be in-efficient.

The ITI developed an indirect method to find out the level of sodium in black tea when adulterated with sodium bicarbonate. The tea brew prepared as per ISO 3103 was analyzed in Atomic Flame Emission mode and the produced data set was submitted to the Sri Lanka Tea Board to assign a suitable generic value for total sodium in brewed tea sample from unadulterated processes. Using these values, the detection of adulterated teas could be made correctly.

- **DNA Barcoding of Ceylon Cinnamon (*Cinnamomum zeylanicum*)**

This project was carried out as a support for the Branding of Ceylon Cinnamon, by upholding its scientific authentication as *Cinnamomum zeylanicum*, the true Ceylon Cinnamon. The significance of this work lies on the establishment of genetic barcoding information in the name *Cinnamomum zeylanicum*. Since there is a synonym as *Cinnamomum verum* it is beneficial to Sri Lanka to establish the scientific authenticity in *Cinnamomum zeylanicum* because the name implies Cinnamons' unique inheritance to Ceylon and thereby supports our national efforts in branding of Ceylon cinnamon in the international market by upholding scientific and genetic authenticity over other competitors under the name 'cinnamon'. The following accessions were granted from the Gene Bank (USA) with the Key word "BARCODE" for the *Cinnamomum zeylanicum*.

matK	JN988465
matK	JN988466
rbcL	JN988468

- **Development of a PCR based assay for Identification of Genetically Modified Foods and Organisms**

The Bio Technology Unit successfully developed a PCR based assay for Identification of Genetically Modified (GM) food and organisms and is now issuing certificates for customers for GM status as a service. This is of immense help to local plant material exporters (especially to EU countries), which in turn will help the country to bring in foreign exchange. Action is now being taken to accredit this facility and once becomes fully functional, it will pave the way for the successful implementation of the proposed Bio Safety Act.

• **Detection of Antifungal and anti algae activity of weather shield paints**

At present, paint industry of Sri Lanka has introduced new types of paints with antifungal and anti algal properties to the local market. These paints are very common and popularly known as weather shield paints. Local producers have been sending their products to overseas laboratories to verify antifungal and anti algal activities incurring lot of money and time.

Chemical and Microbiological Laboratory of Industrial Technology Institute initiated the implementation of two test methods as per ASTM to detect the degree of resistance for inoculated fungal and algal mix cultures.



Now the paint industry in Sri Lanka can get their products tested for these properties within the country .

- **Other New test methods introduced during the year**

- Qualitative Analysis of Active Ingredients in hair dyes
- Bromate content in hair colorants
- Determination of phospholipids in fats
- Determination of Theanine in tea
- Determination of As in rice
- Determination of As and Hg in pesticides

- **Industry driven R&D**

The ITI continues to develop new technologies to meet industry demands and in fields considered to have potential commercial interest. On-going research at ITI in these areas includes:

- *Bacillus thuringiensis kurstaki (Btk)* for control of Lepidopteran pests in vegetables.
- Ready to serve cold & cough preparation named “five herbs granules”
- 100% natural herbal hair cream
- Blended herbal hair oil.
- Cinnamon based air freshener called “Brain Freshener”
- Aloe vera face wash
- Mosquito repellent cream from citronella
- Moisturizing refreshing gel from Tamarind

Corporate Awareness

ITI received publicity for its activities through the electronic media and press through 28 releases, by participating in 13 exhibition including national exhibitions such as "Deyata Kirula" and "Divi Neguma".

- **Exhibitions**

- Chemex Exhibition - BMICH, Colombo in January
- Deyata Kirula - Buttala in February
- Kithulaka Varuna - Viharamahadevi Park, Colombo in April
- INCO Exhibition - BMICH, Colombo in June
- Ayurveda EXPO - BMICH, Colombo in July
- Technology Market Place - BMICH, Colombo in October
- Divi Neguma Exhibitions - Homagama, Anuradhapura, Jaffna, Kegalle, Gampaha, Monaragala, Chilaw



- **Publications**

- Published a booklet titled "Properties of some Traditional Rice Varieties of Sri Lanka", compiled by Food Technology Section
- Published catalogue on ITI Services, and Equipment for Technology Market Place exhibition organized by the Ministry of Technology and Research

Media Articles - 25 articles were published in English, Sinhala and Tamil Newspapers related to ITI and its activities.

- New wax to preserve fruits, vegetables (Sunday Observer - 11/12/2011)
- EU EEPEx project conducts training for D/C millers (Daily FT - 17/08/2011)
- Deyata Kirula Development Week: ITI help to test drinking water (Daily News - 30/07/2011)
- ITI tests show 9 out of 31 samples of pesticides contained arsenic traces – (Sunday Times 03/07/2011)
- No Arsenic in local rice – Industrial Technology Institute (The Island - 01/07/2011)
- Kotalahimbutu to control diabetes (Daily News - 22/06/2011)
- Strategies to minimize post harvest losses (Sunday Observer - 08/05/2011)

- Perfecting a cheaper, automated water discharge system in male toilets (Sunday Times - 24/04/2011)
- Traditional brown rice to prevent diabetes (Sunday Observer - 24/04/2011)
- Noise pollution - another menace in the making (Sunday Observer - 24/04/2011)
- Unique clay-based cookware from the ITI soon in the market (Sunday Times - 27/03/2011)
- Red rice bran good for diabetes control (Sunday Observer - 27/03/2011)
- Modern clay pots for cooking (Sunday Times - 20/03/2011)
- ITI's ETL awarded ISO 17025 certification (Sunday Observer - 13/03/2011)
- ITI project adds value to fish waste (Sunday Observer - 03/04/2011)
- Now an effective non-toxic wood preservative from Sri Lanka's premier scientific research agency (Sunday Times - 27/02/2011)
- Intellectual Property laws for everyone's benefit (Daily News - 11/02/2011)
- නව සොයා ගැනීමකදී නිර්මාණකරුවන් ජනතාවන් රැකෙනසේ නීති සැකසිය යුතුයි (Dinamina - 11/02/2011)
- බුද්ධිමය දේපල නීතිවලින් නිර්මාණකරුවන් එය බුක්ති විඳින්නාත් ආරක්ෂා විය යුතුයි (Divaina - 11/02/2011)
- High-pitched music could damage ears (Daily Mirror - 10/02/2011)
- Portable music can cause hearing loss (The Island - 09/02/2011)
- Ear phone භාවිතාකොට සංගීතය රසවිඳීමෙන් කර්ණාබාධ, ITI කියයි (Divaina - 09/02/2011)
- Excessive noise bad for health (Daily News - 09/02/11)
- "Polkudu" treatment for heart ailments (Sunday Times - 06/02/2011)
- ITI scientist breaks "bitter" lime barrier (Sunday Times - 16/01/2011)

Information for Industry

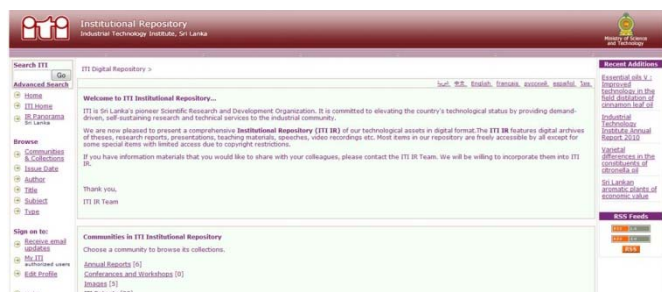
• Supporting Industry and Research

ISC's services continued to support business and industry, academic and research communities and the entrepreneurial public in all parts of the country. ITI research staff were also assisted with information for their research projects. The center also provided training to industry and professional bodies on management of research information and services .



• Our Collection

The Centre concentrated on improving its collection on new areas of technology such as Bio technology and Nano technology in addition to updating its general S&T collection. The collection on peripheral areas of industry and business such as statistics, regulatory requirements, product and market trends etc. were also improved. The Centre developed an electronic repository using DSpace Software to include the ITI publications in the first phase, through a cooperative program under the Health Information Network (HELLIS), with WHO support. The traditional Library continued to operate it's regular services with improvements to the Online cataloguing system, and streamlining of the digital services.



ITI Digital Repository

• Client Profile

The centre recorded over 1170 users during the year including 704 under graduate and post graduate students. A new membership category, Corporate Gold was introduced with more benefits to the users. 26 new members enrolled to use the centre's specialized services, 03 being Corporate Gold, 02 Corporate, 14 Deposit and 07 Individual members. Standards and books showed heavy usage with 573 loans being made to ITI staff and 475 to public. Inter-library loan facility was also made use of to complement our own collection. Orientation programs and user surveys were organized to assess the usefulness of the Centre.

The user survey conducted in 2011 gave the following indicators -

- The Center was most used for referencing/borrowing books and Standards

- More than 80% users were satisfied with the collection compared with 60% in the previous year
- The services most used were the reference and the on line data bases including Science Direct
- More than 40% users said they were satisfied with the services as against 25% in the previous year

- **Specialised Inquiry Service**

119 technical inquiries were handled during the year . Of these Inquiries 32 were for ITI staff and 87 were for business and industry.

The subject scope of inquiries received during the year are as follows - Chemistry & analytical methods – 9; Physical science – 11; Materials & energy – 15; Standards & patents – 5; Herbal & medicinal plants – 10 ; Statistics – 6; Food & beverage (analysis, formulae) – 28; Environment -7 ; Formulae – 8; Health & nutrition – 3; Cosmetics – 2 ; General business – 3;

- **Value added information**

Value added information packages were delivered after extensive searches on our collection, www and network counterparts . Some key topics are listed below –

- Information on manufacturing interlocking cement bricks
- Nutritional values of spices
- Calcium fortification of milk
- Usage and Imports and exports of CFL/fluorescent bulbs, plaster of Paris and clinical thermometers in Sri Lanka
- Metal contamination of water bodies of Sri Lanka
- US and EU regulations for plastics packaging of food

Access to information - Science Direct, EBSCO, SCOPUS and a host of other databases were used increasingly to access information for research. Membership of local institutions such as EDB and the American Centre also enabled access to statistical and American based resources respectively. For the sixth consecutive year four sectors of Science Direct was subscribed to: Chemistry, Materials, Agriculture and Biological Sciences and Pharmacology, Toxicology and Pharmaceutical Sciences. Over 11270 articles were downloaded for Research and Development over the year. These online databases are increasingly becoming a popular source of information among academics and researchers. During the year 94 books , 433 reprints and 656 journal articles were added to the custom built Automated Online Library (AOL) system which includes Catalogue and Member services and can be accessed through the web.

Dissemination of Information through Printed Media

The latest information on ITI research was disseminated through the “ITI Bulletin” a quarterly newsletter. 4 issues were published during the year and 3 Articles from the Bulletin were featured in local newspapers .

4 issues each of the quarterly publications “SciTech in Brief” and “Management Thought” giving latest developments in S and T and Management related information were published and disseminated through the website and Intranet of the ITI – i-Net, during the year .

A collection of local newspaper articles on S & T - *News Digest*, continued to be posted on the iNet, on a weekly basis. The collection dates back to 1987.

Current awareness bulletins on new additions to the Centre continued to update research staff on information received in their fields of interest. 3012 notifications were sent, and information was disseminated through a Document Delivery Service through the Automated Online System (AOL) or in print media, complying with copyright requirements.

- **Knowledge Sharing Seminars and Workshops**

ISC continued to conduct programmes for knowledge sharing among information professionals and entrepreneurs during the year. A seminar on “Mining information from e- resources” was conducted and over 25 participants benefited from the seminar. Student professionals from the Sri Lanka Library Association and the Institute of Chemistry were provided with familiarization and training on the Center's activities and services.

- **Capacity Building**

On the job Training sessions were conducted to sharpen the skills of staff members in the following areas - “Inquiry Handling” and “Indexing Information Materials” where senior staff shared their knowledge on new trends . ISC staff members participated in 11 workshops and training programs to update their skills in new techniques in information processing and services.



- **Resource Management**

The centre continued to maintain and update its resources. The book count at present is 21,147, with 55 books purchased and 44 books received as complements last year. Our Reprint collection counts to over 121,625, with 583 reprints and 657 journal articles added to the system during the year. Journal subscriptions continued for 12 foreign and 07 local journals during the year. 82 Standards - ISO, SLSI, JS, IS, ASTM were also acquired mainly to service the analytical staff of the ITI. The expenditure on Books, journals and online data bases was Rs 4.25 Mn. The collection is up-to-date with a large number of material received on exchange from S&T and R&D institutions local and foreign, and through e - resources. The collection of bound journals increased to 12,870 with 126 added during

Photo - journals area

the year. The journals area was reorganized to provide a more reader friendly environment and also create more space.

- **Specialised data bases on ITI Research and Traditional Medicinal Plants**

The database of scientific publications and reports of ITI research (CIREP) has over 1000 records, with 10 added during the year.

A database on Medicinal plants using the well known Lucid software developed by University of Queensland, Australia containing information on 220 plants available in Sri Lanka is being further developed. Identification keys are being developed by Herbal Technology researchers for Sri Lankan Medicinal plants and will be published on the website once completed.

The Centre continued to participate in the Asia Pacific Traditional Medicine network - APTMNET. Information on over 360 plants and 70 other resources have been uploaded together with other features such as marketing and enterprise information, expertise, education, press news and research being continuously updated.

- **Quality System for ISC**

The Centre was successful in the Surveillance Audit carried out by SLSI for 2010/2011, and maintained its ISO 9001:2008 certification, with minimum non conformities.

- **Networking and Co-operation**

The Centre continued to participate in the information networks, AGRINET, HELLIS and SLSTINET, relating to Agriculture, Health and Science and Technology respectively coordinated by CARP, University of Colombo, Medical Faculty and NSF. Training, exchange of publications and Information, corporate acquisitions were some activities under these networking programs which served to enhance services further. The Health Science Information network HELLIS - provides free access to the HINARI database while the Agricultural network AGRINET provides free access to the AGORA database, both of which are subscribed databases managed by WHO and FAO.



Awards and Recognition

- **Representation by ITI Officers at Presidential Committees, Boards of State Agencies, National Committees**

Dr. A M Mubarak

- Sri Lanka Delegation, First Meeting of the India Sri Lanka Joint Science & Technology Committee Meeting, New Delhi
- National Focal Point : Programme of Cooperation in S&T between India and Sri Lanka, Ministry of Technology & Research
- Governing Council, Sri Lanka Accreditation Board (SLAB)
- Board of Directors : National Engineering Research Development Centre of Sri Lanka
- National Authority, Chemical Weapons Convention, Ministry of Industry & Commerce
- Board of Directors : Post Graduate Institute of Science (PGIS)
- Chairman, Working Group : Commercialization of Research through Technology Transfer, Ministry of Technology & Research
- NSF National Committee on Innovation and Techno-Entrepreneurship

Dr. G A S Premakumara

- Board of Directors : National Research Council
- Board of Directors : National Committee on Women
- Board of Directors : Mushroom Development & Training Centre, Sri Lanka Export Development Board
- Board of Management: The Spice Council

Mr. J M S Jayatileke

- Board of Directors : National Craft Council
- National Committee on Sustainable Use of Mineral Resources, National Science Foundation
- Advisory Committee on Ceramic and Porcelain, Sri Lanka Export Development Board
- Board member : National Packaging Centre

Dr. I R M Kottegoda

- National committee on Nano Technology : National Science Foundation

Mr C H Manoratne

- National mirror committee on Nano Technology: Sri Lanka Standards Institution

- **Universities**

Dr. A M Mubarak

- Visiting lecturer : MSc/PG Dip in Environmental Engineering & Management, University of Moratuwa

Dr. M J Goonaratne

- Visiting Lecturer : Sports Nutrition - Postgraduate Institute of Agriculture, University of Peradeniya
- Visiting Lecturer : Food Science for Undergraduates - University of Ruhuna

Mr. J M S Jayatileke

- Visiting Lecturer : disseminated their knowledge, expertise and experience - University of Moratuwa

Ms. D I Rajapaksa

- Visiting Lecturer : Bakery Technology, Visiting Lecturer, Cereal Science and Technology - University of Sri Jayawardenapura
- Visiting Lecturer : Bakery Technology - University of Wayamba
- Visiting Lecturer : Cereal Science and Technology - University of Moratuwa
- Visiting Lecturer : Cereal Processing - The Open University of Sri Lanka
- Visiting Lecturer : Cereal Science and Technology - National Institute of Education, Maharagama

Dr. C J Wijesinghe

- Visiting Lecturer : Food Microbiology - University of Sri Jayawardanapura

- **Contribution to national standards and government procurement process.**

The expertise of ITI scientists were given

- to formulate National Standards serving as members of the Sri Lanka Standards Committees
- as Technical Evaluation Committee members of government institutions.

A Trainee researcher at Food Technology Section of ITI won the Best project award at their Ruhuna University symposium for the paper read on "Canning of Mushrooms and the Effect of Particle Size of Spices on the Canned Product"

Corporate Social Responsibility

➤ Celebrating National Quality Week

The National Quality Week was commemorated during 10th to 14th October 2011. The purpose of National Quality Week is to create quality awareness and encourage individuals and organizations to focus on the importance of quality.

The Quality Flag was kept hoisted throughout the week from 10th to 14th October 2011 at ITI.

- The World Standards Day was celebrated on 14th October 2011. The Slogan for this year's World Standards Day was; "International Standards creating confidence globally"

➤ Launch of Internet Cafes @ ITI

ITI set up two (2) internet cafes to help nurture and foster greater interest in the use of Information Technology, The café s operate during office hours and has provided opportunities for staff to develop ICT skills



➤ National Health Week

ITI commemorated National Health Week on 5th & 7th of October 2011

For the very first time a National Health Week was declared By the Ministry of Health during 3rd to the 9th of October 2011 in line with the "Mahinda Chinthana Forward Vision" of HE the President Mahinda Rajapaksa, with a view of promoting greater public awareness on health and allied aspects.



ITI conducted a series of lectures Health & Physical Wellness, Nutrition for Good Health, Health FIRST, Value Add Services for ITI Employees - Going Beyond Employee Health Screening, ITI's role in eradicating Dengue / BTI in support of employee well being.

Social, Welfare and Religious Activities

• The Welfare and Recreation Club

Continuing with traditional practice, the dawn of the New Year was celebrated with a Pirith ceremony, organized by the Buddhist Society and Breakfast spread of Kiribath and Kavum.

Activities during the year focused on promoting goodwill among staff and their family members and included -

- Sale of electrical and electronic items on easy payment terms from Singer Plus
- Loan scheme
- Men's Friendly Cricket Match with People's Bank
- Men's Cricket Matches with Urban Development Authority, and Employees' Trust Fund Board
- DJ Night



A cash Contribution was made to the family of the late Mr. A.M.P.S. Chandrawansa, Supplies Manager who served the ITI for over 24 years.

• The Seva Vanitha Unit

The Seva Vanitha Unit of the Institute continued to provide services to the employees with four projects and one fund raising activity during the year.

- Distribution of schoolbooks for children of deserving employees.
- An Eye Clinic, through National Eye Hospital for staff on concessionary terms.
- Sale of Oshani Linen at a discounted rate for employees.
- Organized promotional sales during Avurudu and Christmas.
- Sale of ITI T-shirt for employees together with design competition which was won by Mr. Asanka Perera was conducted as a fund raiser.



The Annual General Meeting 2011 was held on 23rd November at ITI Main Auditorium. Mrs. Suranee Samarasekera SDD/ISC was appointed as the Vice President. Mrs Chitrangani Mubarak, President of the Unit presided at the Meeting. Dr. Samitha Sirithunga, Head/Regional Scientist of Epidemiology Unit, National Institute of Health Services was invited as a guest lecturer and spoke on “සංචිඳ: සංගීතයේ ඉසිවර ප්‍රාතිභාවය”.

- **The Buddhist Society**

The Buddhist Society continued to provide question paper booklets to children of employees sitting the Grade 5 scholarship examination and O/Level examination and awards to those who were successful in the Grade 5 scholarship examination and those selected for University education.



To celebrate 2600 Sri Sambuddha Jayanthi the society organized an Osu pan dansela for the public. This was the first time such an event was organized and a very good response was received. The society also organized the Wesak Lantern competition amongst sections for the fourth consecutive year.



Arrangements were made for employees to purchase Atlas exercise books at concessionary rates.

A Blood donation campaign and a lunch for the Preethipura Children's Home were two more projects held during the year.

The Society used its benefit fund to assist 36 employees with loans during the year.

- **Christian Society**

The Christian Society continued with their traditional Annual Christmas party, with carol singing and Santa Clause distributing gifts from the Christmas tree to all children of ITI staff members.



Publications, Presentations & Patents

Publications in Refereed Journals

- Arambewela, L.S.R., Arawwawala, L.D.A.M. and Ratnasooriya, W.D. (2011). Aipinia calcarata Roscoe: A potent antiinflammatory agent, *Journal of Ethnopharmacology*. **139**(3): 889-892.
- Arambewela, L.S.R., Arawwawala, L.D.A.M., Kumaratunga, K.G.A., Dissanayake, D.S.C.T., Ratnasooriya, W.D. and Kumarasingha, S.P.W. (2011). Investigation on *Piper betle* grown in Sri Lanka, *Pharmacognosy Review*, **5**(10): 159-163.
- Arambewela, L.S.R., Arawwawala, L.D.A.M., Withanage, D. and Kulathunga, S. (2011). Efficacy of betel cream on skin ailments with special reference of Vicharchika. *Ayurveda Sameeksha*. **2**: 173-178.
- Arawwawala, L.D.A.M., Hewageegana, H.G.S.P., Arambewela, L.S.R. and Ariyawansa, H.S. (2011). Standardization of spray dried powder of *Piper betle* hot water extract. *Pharmacognosy Magazine*, **7**: 157-160.
- Arawwawala, L.D.A.M., Thabrew, I. and Arambewela, L.S.R. (2011). Evaluation of toxic potential of standardized aqueous and ethanolic extracts of *Trichosanthes cucumerina* in rats. *Boletín Latinoamericano y del Caribe de Plantas Medicinales y Aromáticas*. **1**: 11-22.
- Arawwawala, L.D.A.M., Thabrew, I., Arambewela, L.S.R., Fernando, N. and Guruge, L.D. (2011). Antibacterial activity of *Trichosanthes cucumerina* extracts. *International Journal of Pharmaceutical and Biological Archives*, **2**(2): 808-812.
- Arawwawala, L.D.A.M., Thabrew I. and Arambewela, L.S.R. (2011). *In vitro* and *in vivo* evaluation of antioxidant activity of *Trichosanthes cucumerina* aerial parts. *Acta Biologica Hungarica*. **62**(3): 235-243.
- Dharmadasa, R.M., Hettiarachchi, P.L. and Premakumara, G.A.S. (2011). Geographical distribution and conservation of a rare medicinal Plant *Munronia pinnata* (Wall.) Theob. (Meliaceae) in Sri Lanka. *Bangladesh Journal of Plant Taxonomy*, **18**(1): 39-49.
- Fari, M.J.M., Rajapaksa, D. and Ranaweera, K.K.D.S. (2011). Quality characteristics of noodles made from selected varieties of Sri Lankan rice with different physicochemical characteristics. *Journal of the National Science Foundation of Sri Lanka*, **39**(1): 53-60.
- Herath, H.M.T., Rajapakse, D., Wimalasena, S. and Weerasooriya, M.K.B. (2011). Iron content and bio-availability studies in some Sri Lankan rice varieties. *International Journal of Food Science and technology*, **46**: 1679-1684
- Kottegoda, I.R.M., Nurul Hayati, Idris, Lin, Lu, Jia-Zhao, Wang, Hua-Kun, Liu, (2011). Synthesis and characterization of graphene-nickel oxide nanostructures for fast charge-discharge application. *Electrochimica Acta*, **56**(16): 5815-5822
- Liyanawaduge, N.P., Kumar, A., Karunarathne, B.S.B., Malik, A., Kishan, H. and Awana, V.P.S. (2011) Inter- and Intra-granular Interactions of $\text{REBa}_2\text{Cu}_3\text{O}_{7-\delta}$, RE: Eu, Gd, Ho and Er, *Journal of Superconductivity and Novel Magnetism*, **24**(6): 1893-1899.

- Liyanawaduge, N.P., Kumar, A., Kumar, S., Karunarathne, B.S.B. and Awana, V.P.S. (2011). The Role of Ca in Superconducting and Magnetic Properties of $Y_{1-x}Ca_xBa_2Cu_3O_{7-\delta}$ ($x = 0.0-0.30$), *Journal of Superconductivity and Novel Magnetism*, **25**(1): 31-37
- Liyanawaduge, N.P., Singh, S.K., Kumar, A., Awana, V.P.S. and Kishan, H. (2011). Superconducting and Magnetic Properties of Zn-doped $YBa_2Cu_3O_{7-\delta}$, *Journal of Superconductivity and Novel Magnetism*, **24**(5): 1599-1605
- Ratnasooriya, W.D., Indrajith Somarathna, J.R., Premakumara, G.A.S. and Ediriweera, E.R. (2011). Lack of antiglycation activity of fresh juice of whole plant of *Enicostema axillare* (Lam.) Raynal. *Journal of Pharmaceutical Negative Results*, **2**(2): 55-57.
- Silva, D.A.D., Hettiarachchi, B.U., Nayanajith, L.C.D., Milani, M.D.Y. and Motha, J.T.S. (2011). Development of a PVP/ kappa carrageenan/ PEG Hydrogel dressing for wound healing applications in Sri Lanka, *Journal of the National Science Foundation of Sri Lanka*, **39**(1): 25-33
- Wijayasiriwardena, C. and Premakumara, G.A.S. (2011). Powder Pharmacognostical study of market samples of *Pathpadagam*. *Ayurveda Sameekshawa*, **2**(7): 117-119.
- Wijesinghe, C.J., Wilson Wijeratnam, R.S., Samarasekara, J.K.R.R. and Wijesundara, R.L.C. (2011). Development of a formulation of *Trichoderma asperellum* to control black rot disease on Pineapple caused by *Thielaviopsis paradoxa*. *Crop Protection*. **30**: 300-306.
- Wijesinghe, W.M.S. and Park, Y.T. (2011) Reference Standard for Harmonics and Nonsinusoidal Power Measurements, *IEEE Transactions on Instrumentation and Measurement*, **60**(7): 2242 – 2247.

Communications (International)

- Amunugoda, P.N.R.J. (2011). Quality Enhancement of Dehydrated Products through the Modification of Solar Tunnel Dryer for Continuous Operation in Rural Communities, *Proceedings of the International Conference and Utility Exhibition 2011*, Pattaya, Thailand, p. 60.
- Herath, H.M.T., Fernando, G.S.N. and Abeysekara, K. (2011). Evaluation of functional properties of some traditional and improved rice varieties with special reference to Glycemic Index (GI). *Proceedings of the 3rd International Network for Rice Quality (INQR)*. 17 – 19 August, Thailand.
- Premakumara, G.A.S. (2011). Anti-diabetic properties of some selected Sri Lankan traditional rice. *ANRP, 14th Asian Chemical Congress*, Bangkok, Thailand
- Punyasiri, P.A.N., Somasiri, H.P.P.S., Thotawattage, G., Abeyasinghe, I.S.B. and Amarakoon, A.M.T. (2011). L-Theanine Content in Sri Lankan Tea, determined by high performance liquid chromatography with fluorescence detection using o-phthalaldehyde derivatization, *Proceedings of 12th Government Food Analysts Conference*, Brisbane, Australia, p. 145.
- Rajapaksa, D. and Rajapaksa, T. (2011). Investigation of physico chemical properties of some Sri Lankan rice varieties with a view to formulate rice crackers. *Proceedings of the 3rd International Network for Rice Quality (INQR)*. 17 – 19 August, Thailand.
- Somasiri, H.P.P.S., Premakumara, G.A.S. and Mahanama, K.R.R. (2011). Free amino acid profile of Kithul Palm *Caryota urens* L. Treacle and its potential Application in authentication of treacle types, *Proceedings of 12th Government Food Analysts Conference*, Brisbane, Australia, p. 142.

Communications (Local)

- Abeysekera, W.K.S.M., Premakumara, G.A.S., Ratnasooriya, W.D. and Chandrasekharan, N.V. (2011). α -Amylase inhibition and anti-hyperglycemic activity of brans of some Sri Lankan traditional red rice (*Oryza sativa* L.). *Proceeding of the Nutrition Society Annual Sessions* p. 7.
- Abeysekera, W.P.K.M., Premakumara, G.A.S. and Ranasinghe, P. (2011). Antioxidant properties of *Moringa oleifera* leaves cultivated in Sri Lanka. *Proceeding of the 67th Annual Sessions, Sri Lanka Association for the Advancement of Science*, p. 98.
- Amunugoda, P.N.R.J. (2011). Development of curing drum with sandwich structure for dried ginger production, *Proceedings of the 67th Annual Session of Sri Lanka Association for the Advancement of Science, (Part 1)*, p. 38.
- Amunugoda, P.N.R.J. (2011). PhD Thesis on "Quality Enhancement of Dehydrated Products through the Modification of Solar Tunnel Dryer for Continuous Operation in Rural Communities", Faculty of Engineering technology, the Open University of Sri Lanka.
- Bamunuarachchi, B.A.G.S., Ratnasooriya, W.D., Premakumara, G.A.S. and Randeniya, P.V.U. (2011). Anti-malarial Activity of *Artemisia vulgaris* Ethanolic Leaf Extract in a *Plasmodium berghei* Murine Malaria Model. *Proceeding of the 3rd International Conference on Medicinal Plants and Herbal Products*, Colombo, p.82.
- Bamunuarchchi, B.A.G.S., Ratnasooriya, W.D., Premakumara, G.A.S. and Randeniya, P.V.U. (2011). Study of Anti-malarial Activity of *Artemisia vulgaris* Leaf Extract, using the *Plasmodium berghei* murine model. *Proceeding of the 31st Annual Sessions of the Institute of Biology, Sri Lanka*, p. 50.
- Dharmadasa, R.M., Hettiarachchi, P.L. and Premakumara, G.A.S. (2011). Comparative pharmacognostic studies of *Munronia pinnata* (Meliaceae) and its substitute/adulterant *Andrographis paniculata* (Burm.f.) Wall (Acanthaceae) *Proceeding of the 3rd International Conference on Medicinal Plants and Herbal Products*, p. 60.
- Dharmadasa, R.M., Hettiarachchi, P.L. and Premakumara, G.A.S. (2011). Polyphenol content and cytotoxic potential of five morphotypes of cytotoxic potential of five morphotypes of *Munronia pinnata* found in Sri Lanka. *Proceeding of the 3rd International Conference on Medicinal Plants and Herbal Products*, p. S3.
- Dharmadasa, R.M., Hettiarachchi, P.L. and Premakumara, G.A.S. (2011). Intraspecific variation and taxonomic delimitation in *Munronia pinnata* (Meliaceae) in Sri Lanka. *Proceeding of the 16th International Forestry and Environment Symposium*, p. 32.
- Elias, N.Y., Wijesundara, R.L.C. and Kathirgamanathar, S. (2011). Antimicrobial and dermatotoxicity studies of *Ficus benghalensis* extracts, *Chemistry in Sri Lanka*, **28**(2): 14.
- Gooneratne, J. (2011). Presented a lecture on "Food safety" for health workers organized by the *Sri Lanka Association for the Advancement of Science Section A committee*
- Hatharasinghe, S.C. (2011). M.Sc. Thesis on "Zinc removal and biological activity in Zinc loaded bioreactor", UNESCO-IHE, Netherlands.
- Jayarathne, D.L.M.B., Saputhanthri, P.S., Perera, R.P. and Premakumara, G.A.S. (2011). Antimicrobial properties of some selected lower plants. *Proceeding of the 31st Annual Sessions Institute of Biology, Sri Lanka*, ~~31~~, p. 22.

- Kothalawala, S.D., Premakumara, G.A.S., Handunnetti, S.H. and Ratnasooriya, W.D. (2011). Immunomodulatory activity of combined hot water extract of *Coriandrum sativum* L. and *Coscinium fenestratum* L. in rats. *Proceeding of the 3rd International Conference on Medicinal Plants and Herbal Products, Colombo, Sri Lanka*. p. 81.
- Kottegoda, I.R.M. (2011). presentation on “Status of NanoTechnology R&D and Innovation in Sri Lanka” meeting on *Networking of R&D Institutions in the Asia-Pacific to strengthen capacity of R&D Management and Innovation in the field of Nanotechnology*.
- Lenora, R.D.K., Dharmadasa, R.M., Abeysinghe, D.C. and Arawwawala, L.D.A.M. (2011). Effects of different growing systems on chemical profiles and plumbagin contents of *Plumbago indica* Linn. *Proceeding of the 67th Annual session of Sri Lanka Association for the Advancement of Science*, p. 31.
- Lenora, R.D.K., Dharmadasa, R.M., Abeysinghe, D.C. and Arawwawala, L.D.A.M. (2011). Comparison of antioxidant properties and cytotoxic properties of *Plumbago indica* grown under different growing techniques. *Proceeding of the 3rd International Conference on Medicinal Plants and Herbal Products*, p. S2.
- Lenora, R.D.K., Dharmadasa, R.M., Abeysinghe, D.C. and Arawwawala, L.D.A.M. (2011). *Plumbago indica* Linn. (S. Ratnital): Comparison of chemical profiles and plumbagin contents under different growing systems. *Proceeding of the 11th Agricultural Research Symposium* p. 11-15.
- Liyanaarachchi, G.D., Kottearachchi, N.S. and Samarasekera, R. (2011). Development of protocols to extract rice volatiles and comparison of volatiles profiles of four commercial rice varieties in Sri Lanka. *Proceedings of 11th Agricultural Research Symposium, University of Wayamba*,
- Madage, S.S.K., Chandramali, A.P.G.W., Ramasinghe, I. and Jayamanna, V.S. (2011). Value addition to the shrimp waste by developing into silage, *Proceedings of the 67th Annual Session of Sri Lanka Association for the Advancement of Science, (Part 1)*, p. 37.
- Madurapperuma, N., Dharmadasa, R.M. and Sakeel. (2011). *In vitro* propagation and fungal identification of *Pogostemon heyneanus*. *Proceedings of Symposium Rajarata University of Sri Lanka. Anuradhapura: Rajarata University of Sri Lanka*. p. 37.
- Premakumara, G.A.S., Abeysekera, W.K.S.M. and Ranasinghe, P. (2011). Advance glycation end products cross-link breaking capacity of *Salacia reticulata* L. (Kothala himbutu) root, stem leaf and twig extracts. *Proceeding of Scientific sessions of the Nutrition Society of Sri Lanka*, p.15.
- Ranasinghe, P., Abeysekera, W.P.K.M., Premakumara, G.A.S., Perera, Y.S., Gurugama, P. and Gunatilake, S.B. (2011). In-vitro erythrocyte membrane stabilization properties of *Carica papaya* L. leaf extracts. *Proceeding of the 3rd International conference on medicinal plants and herbal products, Colombo, Sri Lanka*. p. 105.
- Ranasinghe, P., Perera, Y.S., Abeywardane, S.H.P.E.L., Gunapala, K.N.M., Gunatilake, M., Premakumara, G.A.S., Perera, P.R.K., Lokuhetty, D. and Katulanda, P. (2011). Effects of *Cinnamomum zeylanicum* (Ceylon cinnamon) on blood glucose and lipids in Sprague-Dawley rats, *Ceylon Medical Journal*. **56**(1):16

- Ranasinghe, P., Premakumara, G.A.S., Wijeyarathna, D.C. and Ratnasooriya, W.D. (2011). Effect of *Caryota urens* L. (Kithul treacle) on serum lipid parameters of normal rats. *Proceeding of Annual Research Symposium, University of Colombo*, p. 273-276.
- Samarasekera, R., Siriwardhana, D.A.S. and Tilakaratna, A.J.A. (2011). Acetylcholinesterase enzyme inhibitors from Ceylon *Cinnamomum zeylanicum*, *Proceeding of the 3rd International Conference on Medicinal Plants and Herbal Medicines*. p. 19-21.
- Samarasekera, R., Siriwardhana, D.A.S. (2011). A new branched fatty acid from insecticidal Sri Lankan isolate of *Hirsutella thompsonii*, *Chemistry in Sri Lanka*, **28**(2): 17-18.
- Samarasekera, R., Siriwardhana, D.A.S. and Arunashanthi, M.H.N. (2011). New cytochalasins type fungal metabolite from Sri Lankan isolate of *Hirsutella thompsonii*, *Proceeding of the Sri Lanka Association of Advancement of Sciences*.
- Siriwardhana, D.A.S., Samarasekera, R., Herath, H.M.L.I., Ahangama, D., Nugaliyadde, M.M. and Nishantha, K.M.D.W.P., (2011). Sri Lankan *Bacillus thuringiensis* for control of cruciferous pests, *IFS-AFASSA International symposium on Natural Products and their applications in health and Agriculture*, Colombo.
- Siriwardhana, D.A.S., Samarasekera, R., Peiris, M.L., Weerasena, O.V.D.S.J., Weerasinghe, I. S., Ahangama, D. (2011). Gene activity relationship of *Bacillus thuringiensis* Sri Lankan strains against dipteran, lepidopteran and coleopteran pests. *Chemistry in Sri Lanka*, **28**(2): 13.
- Somasiri, H.P.P.S., Premakumara, G.A.S., Ranasinghe, P., Mahanama, K.R.R. (2011). A simple test kit for the detection of adulteration of *Caryota urens* L. (Kithul Palm) sap and treacle with cane sugar, *Proceedings of The Young Scientists Forum Symposium*, p. 23.
- Weerasinghe, R.M. (2011). "Construction of an automated weather station with Remote data Transmission capability," *Annual Research Symposium, University of Colombo*.
- Weerasinghe, R.M. (2011). "Construction of an Automated weather station for ground level weather Monitoring," *Institution of Engineers Sri Lanka Annual Sessions*.
- Weeratunge, H.D., Abeysekera, W.P.K.M., Premakumara, G.A.S. and Thavarajah, P. (2011). Phenolic composition of two varieties of red lentils (*Lens culinaris*) consumed in Sri Lanka, *Nutrition Society Annual Sessions*. p. 13.
- Wijayasiriwardena, C., Premakumara, G.A.S. (2011). Comparative powder microscopical identification of *Alpinia calcarata* Roscoe and *A.galanga*, *Proceeding of the 3rd International Conference on Medicinal Plants and Herbal Products*. p. 60.
- Wijedeera E.N. and Gooneratne J. (2011) Chemical comparison of banana pseudo stem(*Musa spp*) and the use of cellulose in the preparation of carboxymethyl cellulose, *Proceedings of the 67th Annual Session of Sri Lanka Association for the Advancement of Science, (Part 1)*, p. 22.

Booklet

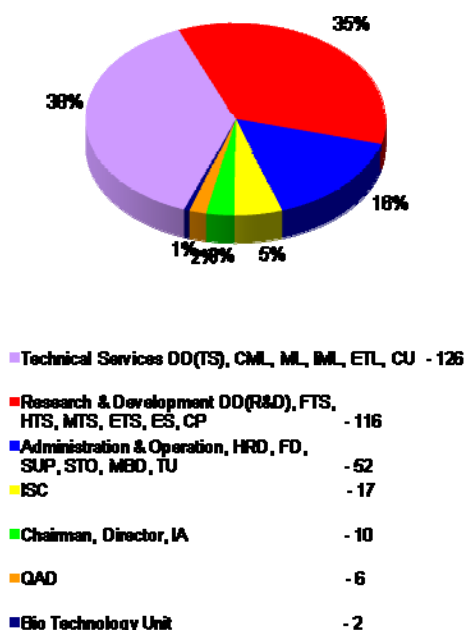
- Booklet on "Properties of Traditional rice varieties of Sri Lanka". Published jointly by Industrial Technology Institute, Colombo 7 and Department of Agriculture (2011).

Human Resources

*This years review
year ended 31st December 2011*

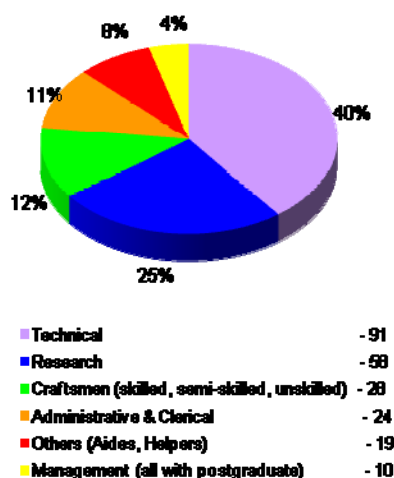
The total permanent staff of the Institute was 329. This total comprised of 70% in the Technical divisions and 30% in Support divisions. The Chemical & Microbiological Laboratory is the largest division with almost 16% of the total staff.

Division-wise distribution of staff

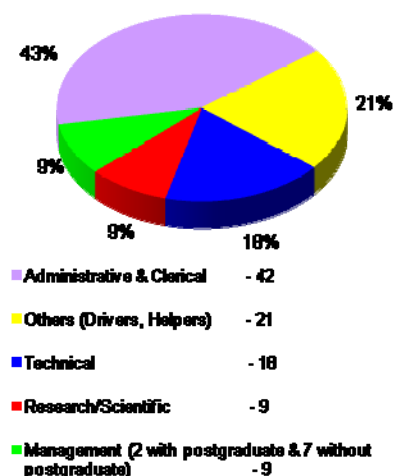


* see page 6 for acronym descriptions

Category-wise distribution of staff -
Technical divisions



Category-wise distribution of staff -
Support divisions

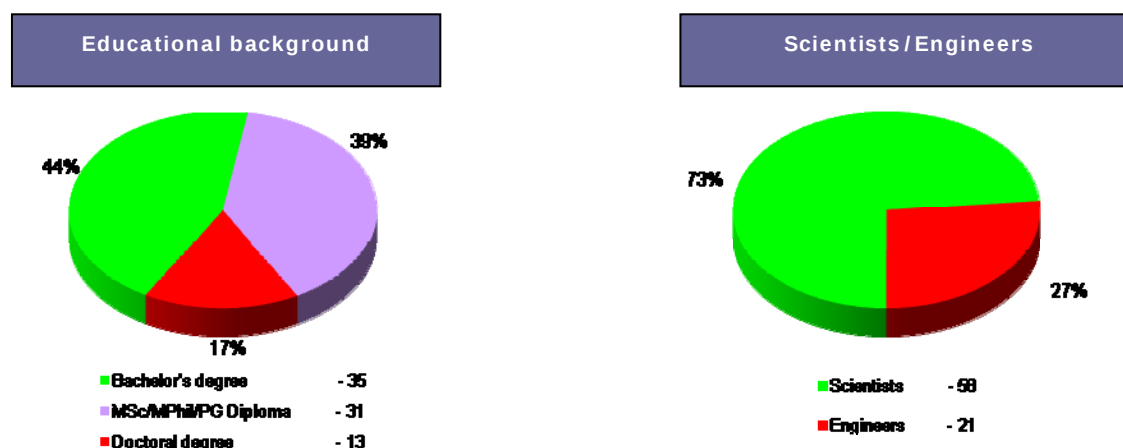


Human Resources

*This years review
year ended 31st December 2011*

Research staff

Of the total of 79 Research officers (in both Technical and Support divisions) 56% possessed Post-graduate qualifications. Scientists constituted 73% of the research staff and continued to be in the majority.



Expertise of research staff

In the area of Agro and Food Technology the Institute has considerable expertise in food processing, post harvest technology, industrial microbiology, plant tissue culture, medicinal and aromatic plants and essential oils and spices. In the Materials field, ceramics, rubber, plastics and wood technology are areas in which we have developed expertise. In the Environmental area our strength lies in industrial pollution control and environmental monitoring including noise and vibration monitoring.

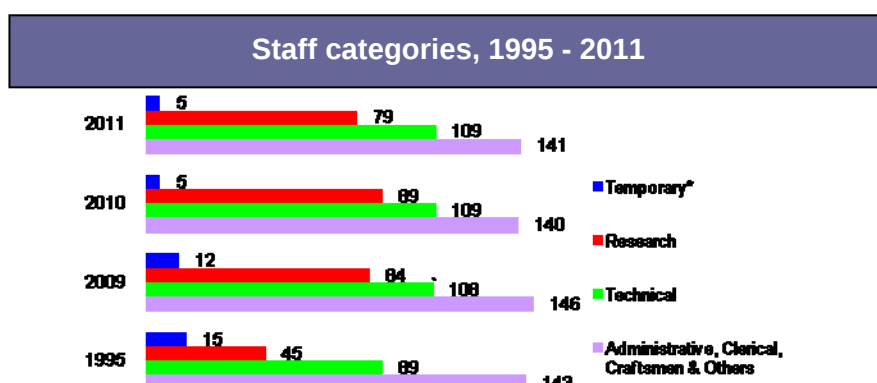
We are one of the leading testing and measurement laboratories in the country. We have analytical expertise in chemical, microbiological and physical testing of a variety of samples. We are also one of the very few laboratories in the country that provide calibration and measurement services. Over the years our laboratory staff has also developed expertise in laboratory quality management systems. The Research staff also has expertise in information management and corporate management.

Human Resources

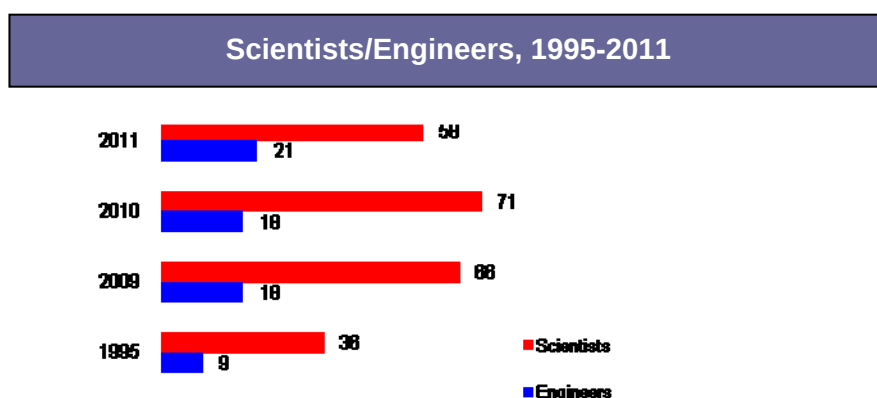
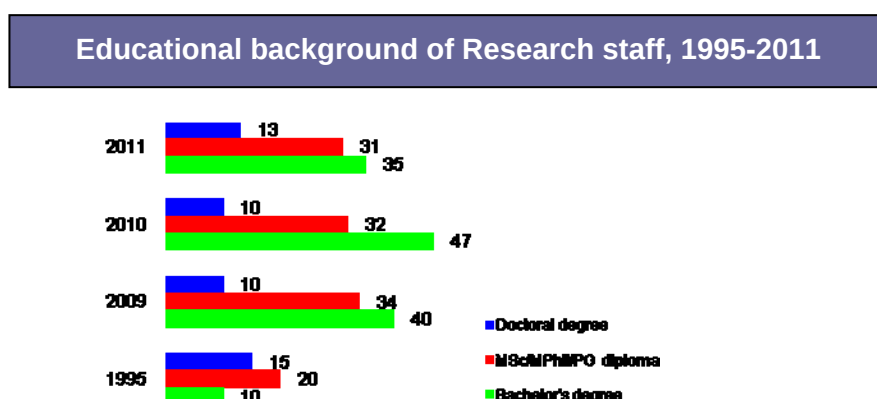
*This years review
year ended 31st December 2011*

Trend analysis

The total staff (permanent & temporary) increased by 14% from 1995 to 2011. During this period the research staff increased by almost 12% and the technical grades by 7%. There was an decrease of 1% of the administrative, clerical, craftsmen and other positions. PhDs and post-graduates increased by 20% during the period 1995 to 2011. The temporary staff number fluctuated during the period and decreased to 5 in 2011.



* Trainee, Project, Assignment



Executive Staff

as at 31st December 2011

DIRECTOR/CEO

A M Mubarak
BSc(Hons)(Cey), PhD(Cantab), CChem, FICChemC

Additional Director, Research & Development

R S Wilson (Ms)
BSc(Hons)(London), PhD(Cantab)

Additional Director, Technical Services

A S Pannila
*BSc(Peradeniya), MPhil(Kelaniya), MIM(UK),
MIP (SL), CPhys(SL)*

Additional Director, Administration & Operation

D C A Sattrukalsinghe
BSc(Hons) (UK), MBA(Sri J'Pura), CEng(UK), FBCS, CITP, MACS, PCP, MCS(SL), MHRP, PGMN

RESEARCH & DEVELOPMENT

BSc(Spl)(Peradeniya) PhD(Open University)

FOOD TECHNOLOGY SECTION

K V T Gunawardhana
BSc(Spl)(Hon)(Peradeniya)

Senior Deputy Director, Food Technology Section

D M W D Divisekara(Ms)
BSc (Bangalore), MSc (Bangalore)

M J Gooneratne (Ms)
*BSc(Hons)(Allahabad), MSc(Bombay), PhD(SL),
LIChemC*

E N Wijedeera (Ms)
BSc(Spl)(Peradeniya)

Senior Research Scientists

M M N P Gunasekera
BSc(Spl)(Hons)(Colombo)

D I Rajapaksa (Ms)
*BSc (Hons)(SL), MSc(Sri Jayewardenepura),
CChem, MIChemC*

Research Engineers

I G N Hewajulige (Ms)
*BSc(Hons)(Peradeniya), MPhil(Colombo),
PhD(Colombo)*

R M N C B Ranaweera
BSc(Eng)(Peradeniya), AMIESL

Research Scientists

S G Walliwala (Ms)
BSc (Eng)(Moratuwa), MSc(Moratuwa)

H M T Herath (Ms)
*BSc(Hons)(Peradeniya),
MPhil (Sri Jayewardenepura), MIChemC*

A B G C J de Silva (Ms)
BSc (Eng)(Moratuwa)

S S K Madage
BSc (Peradeniya)

Laboratory Technologists

A M C U Binduhewa (Ms)
BSc(Peradeniya), MSc(Sri Jayawardenapura)

G D S K Rajapakse (Ms)
LTCC (IChemC)

P N R J Amunugoda

A Fernando (Ms)
LTCC(IChemC), Tech(IChemC)

Technical Officers

D M K Aponso (Ms)
LTCC (IChemC)

R C Pitipanaarachchi (Ms)
*Grad IChemC, BSc(Open University),
MSc(Sri Jayewardenepura), CChem*

M G D S Perera (Ms)
LTCC(IChemC), Dip.Agri(Aquinas)

HERBAL TECHNOLOGY SECTION

Senior Deputy Director, Herbal Technology Section

G A S Premakumara
*BSc(Colombo), PhD(Colombo), CBiol, MIBiol,
MChemC*

Senior Research Scientists

K R Dayananda
Grad IChemC, MPhil(Kelaniya), CChem, MChemC

J K R R Samarasekera (Ms)
*BSc(Hons)(Colombo), PhD(Rothamsted), CChem,
MChemC, MIBiol*

Research Scientists

R M Dharmadasa
*BSc(Hons)(Ruhuna), MPhil(Sri Jayewardenepura),
MIBiol*

P Ranasinghe
BSc(Hons)(Peradeniya), MPhil(Colombo), MIBiol

C Wijayasiriwardena
*BSc(Bangalore), MSc(Gujarat), PhD(Gujarat
Ayurved University)*

S Chelvendran (Ms)
BSc(Spl)(Hons)(Jaffna), PhD(Peradeniya)

D A S Siriwardhana
*BSc(Spl)(Hons)(Sri Jayewardenepura),
PhD(Peradeniya)*

L D A M Arawwawala (Ms)
*BSc(Hons)(Peradeniya), MSc(Sri
Jayewardenepura), MPhil(Peradeniya), MIBiol,
AIChemC, PhD(Kelaniya)*

W P K M Abeysekera (Ms)
BSc(Spl)(Hons)(Colombo)

H D Weeratunga
BSc(Spl)(Colombo), MSc (Midway)

Laboratory Technologist

P I P K Fernando (Ms)
LTCC (IChemC)

Technical Officer

V S Bandara (Ms)
LTCC(Merit)(IChemC), Grad IChemC, MRSC(UK)

MATERIALS TECHNOLOGY SECTION

Senior Research Scientist

I R M Kottegoda (Ms)
*BSc(Colombo), MPhil(Sri Jayewardenepura),
PhD(Colombo)*

Research Scientists

S Weeraratne
Grad IChemC, MSc(Colombo), CChem, MChemC

L D C Nayanajith
BSc(Chem)(Hons)(Peradeniya)

C H Manoratne
BSc(Rajarata), MPhil(Peradeniya)

M D Y Milani (Ms)
BSc(Spl)(Colombo), MSc(Moratuwa)

G P C A Dharmasiri (Ms)
*BSc(Spl)(Sri Jayewardenepura), MPhil(Cambridge,
UK)*

ENVIRONMENTAL TECHNOLOGY SECTION

Senior Deputy Director, Environmental Technology Section

H N Gunadasa
BSc(Eng)(Moratuwa), PGDip(Moratuwa), AMIE

Senior Research Engineer

W R K Fonseka
BSc(Eng)(Hons)(Moratuwa), MSc(Delft)

Research Engineers

N A T D D Gunasekera
BSc(Eng)(Moratuwa), Associate Member (IESL)

W J K D Ranpatige (Ms)
BSc(Eng)(Hons)(Moratuwa), PGDip(Moratuwa)

W R L Wijesekera (Ms)
NDT(Che.Eng.Tech)(Moratuwa), ECE (Che.Eng)(UK)

D M H S Dissanayake (Ms)
BSc(Eng)(Hons)(Moratuwa)

K A N Kumarasinghe (Ms)
BSc(Eng)(Peradeniya)

W A D D Sampath
BSc(Eng)(Moratuwa)

C K Nanayakkara
BSc(Eng)(Moratuwa)

Y N Gunawardane (Ms)
BSc(Eng)(Moratuwa)

Laboratory Technologist

K D Attanayake (Ms)
NDT(Moratuwa)

Technical Officer

J A P V Jayasinghe
NDT(Moratuwa)

ENGINEERING SERVICES

OIC, Engineering Services

A S Arachchi
BSc(Eng)(Moratuwa)

Premises Superintendent

M K D V Siriwardena
NDT(Moratuwa)

Administrative Officer (Admin)

K P R T Perera (Ms)

OFFICE OF THE ADDITIONAL DIRECTOR RESEARCH & DEVELOPMENT

Senior Administrative Officer (Admin)

M A C P Perera (Ms)

TECHNICAL SERVICES

CHEMICAL & MICROBIOLOGICAL LABORATORY

Head, Chemical & Microbiological Laboratory

J K A B Wijegunasekara
BSc(Spl)(Peradeniya), MPhil(Wales)

Research Scientists

H P P S Somasiri
*BSc(Spl)(Peradeniya) MSc(Peradeniya), CChem,
MChemC*

V A J Sajeewika Perera (Ms)
BSc(Spl)(Hons)(Kelaniya), MSc(Kelaniya)

M N A Mubarak
BSc(Spl)(Hons), MSc(Delft)

S H S Karunaratne (Ms)
BSc(Bangalore), MSc(Kelaniya)

D G S C Hatharasinghe (Ms)
BSc(Spl)(Hons)(Ruhuna)

G V V Liyanaarachchi (Ms)
BSc(Spl)(Hons)(Colombo)

M R P Dassanayake(Ms)
BSc(Spl)(Hons)(Sri Jayawardenepura)

S K Liyanage(Ms)
BSc(Kelaniya), MSc(Kelaniya)

B N Dorakumbura(Ms)
BSc(Spl)(Hon) (Sri Jayawardenepura)

Laboratory Technologists

S P A Wijeratne Herath (Ms)
LTCC (IChemC),BSc(Open University)

R P D C J Cooray (Ms)
LTCC (Merit)(IChemC)

S K M P Fernando (Ms)
LTCC (Merit)(IChemC)

Y A Pitawela (Ms)
LTCC (Hons)(IChemC)

P V M D N Karunanayaka (Ms)
LTCC (IChemC)

K D L Gunathilake
LTCC (IChemC)

S K D Sarath Kumara
LTCC (IChemC)

Technical Officers

K D R De Costa (Ms)

Y M C Piyathilaka (Ms)
LTCC (IChemC)

J M M Herath (Ms)
LTCC (IChemC)

R M S Ratnayaka (Ms)
LTCC (IChemC)

P K G De Alwis (Ms)
LTCC (IChemC),LTCC Diploma(IChemC)

C K Wickramasinghe (Ms)
LTCC (IChemC)

P S F Perera (Ms)
LTCC (IChemC),BSc(Peradeniya),MSc(Colombo)

I Jayakody (Ms)
GIC, LTTC(IChemC)

S P Hettiarachchi
LICC, DLTC

B M R S Gunaratne
BSc(Open University)

Administrative Officer (Admin)

B M S Delwala (Ms)

MATERIALS LABORATORY

Senior Deputy Director, Materials Laboratory

J M S Jayatileke
BASc(Hons)(Eng)(Moratuwa), MEng(Akita)

Research Engineers

A A M T Adikari
BSc(Hons)(Eng)(Moratuwa)

C N Vitharana (Ms)
BSc(Hons)(Eng)(Moratuwa)

L P C Ranasinghe
BSc(Hons)(Eng)(Moratuwa)

M D C P Jayatissa (Ms)
BSc(Eng) (Moratuwa)

Research Scientists

L K S Roshanie (Ms)
BSc(Hons)(Colombo)

P W C Dilhani (Ms)
BSc(Spl)(Hon)(Sri Jayawardanepura)

Laboratory Technologists

D S Kannangara
LTCC (ICChemC)

D Nandasoma
LTCC (ICChemC)

Technical Officers

K D N Weerasinghe
LTCC (ICChemC)

I Withana (Ms)
LTCC (ICChemC)

K Weeratunga
NDT (Moratuwa), DipPRI(SL)

K Silva (Ms)
LTCC (ICChemC), BSc(Open University)

INDUSTRIAL METROLOGY LABORATORY

Research Scientists

W M S Wijesinghe
BSc(Hons)(Sri Jayawardanepura), MSc(USM, Malaysia), PhD.(UST, Korea) CPhys(SL), MIP(SL)

N P Liyanawaduge
BSc(Spl)(Hons)(Ruhuna), MPhil(Ruhuna), MACS

G D T A Pathiragoda (Ms)
BSc(Spl)(Hons)(Colombo)

Technical Officer

T N P K Peiris
BSc (OUSL)

ELECTRO TECHNOLOGY LABORATORY

OIC, Electro Technology Laboratory

R M Weerasinghe
BSc(Eng)(Peradeniya), MSc (AIT -Thailand)

Research Engineer

R P K Wijewardena
BSc(Eng)(Moratuwa)

Research Scientists

M S M Aroos
BSc(Spl)(Hons)(Kelaniya)

C M Kalansuriya
BSc(Hons)(Open University), LIP(SL)

K A C Perera
BSc(Spl)(Hons)(Ruhuna)

Laboratory Technologist

R A S Dewapriya
NDT(Moratuwa)

Technical Officers

S N W M Surasena
LTTC (ICChemC), MIPRE, City&Guilds(London)

L A M N Pushpakumara
BSc(Hon)(Peradeniya)

Administrative Officer (Admin)

P G P Jayawardene (Ms)

OFFICE OF THE ADDITIONAL DIRECTOR TECHNICAL SERVICES

Customer Liaison Officer

I D R Chamani (Ms)
BSc(Peradeniya)

Senior Administrative Officer(Admin)

Y Y W De Silva (Ms)

Administrative Officer (Admin)

C J Sirisena (Ms)

BIO TECHNOLOGY UNIT

OIC, Bio Technology Unit

S G Senaratne (Ms)
BSc(Spl)(Hons)(Colombo), PhD (UK)

Research Scientist

W K S M Abeysekara (Ms)
BSc(Spl)(Hons)(Peradeniya), MSc(PGIA)

QUALITY ASSURANCE DEPARTMENT

OIC, Quality Assurance Department

M K D R Dayarathna (Ms)
BSc(Spl)(Hons)(Colombo), MSc(USA)

Research Scientists

K S Weerakkody
BSc(Peradeniya), MSc(Kelaniya)

D C H Thirimanna (Ms)
BSc(Spl)(Hons)(Colombo)

D U Rajawardana (Ms)
BSc(Bangalore), MSc(Peradeniya)

K P Wijekuruppu (Ms)
BSc(Hon)(Peradeniya)

S A M K Jayathilake
BSc(Spl)(Hons)(Sri Jayewardenepura)

ADMINISTRATION & OPERATION

DIRECTOR'S OFFICE

Institute Secretary

A M K R Jayatilaka (Ms)
Attorney-at-law & Notary Public

Confidential Secretary

S M Cramer(Ms)
BSc(Com)(Kelaniya)

Personal Assistant/ Secretary to Chairman

G Edirisuriyage (Ms)

FINANCE DEPARTMENT

Senior Deputy Director Finance

J Solomon
AMA, MCPM, Higher Dip in Acc & Finance

Accountant

S M S Yapa
BSc(Hons)(Peradeniya)

Accounts Officers

A L L Priyangika (Ms)
BSc(Spl)(Business Administration)

R Malavipathirana (Ms)
IAB(London)

L K Lalitha (Ms)
IAB(London)

Administrative Officer (Admin)

W A Malani (Ms)

STORES

Stores Officer

W K J A Bandara

SUPPLIES

Senior Administrative Officer (Admin)

J H K Jayamaha (Ms)
Dip Sup Mat Mang

Administrative Officers (Admin)

K M L W Fernando (Ms)

B P N Peiris (Ms)
Dip Sup Mat Mang

Ms. D L Gamlath
BSc(Spl) Public Management (Sri Jayawardanepura)

HUMAN RESOURCES DEPARTMENT

Senior Administrative Officer (HR)

I Kannangara (Ms)
CCHRM(IPM)

Administrative Officers (Admin)

S M G A Samarakoon(Ms)
CCHRM(IPM)

L Ranaweera (Ms)

MARKETING & BUSINESS DEVELOPMENT DEPARTMENT

Senior Marketing Officer

W A Hathurusinghe (Ms)
PGDip(Mktg)(UK), ACIM(UK)

Senior Industrial Liasion Officer

J D Madanayake
Dip Food Tech (PISE, Italy),LTCC (IChemC)

Laboratory Technologist

P Jeyachandran
NDT (Moratuwa)

INFORMATION SERVICES CENTRE

Senior Deputy Director, Information Services Centre

S Samarasekera (Ms)
BSc(Peradeniya), ASLLA

Research Scientists

P M Jayasinha (Ms)
GradIChemC, MPhil(Open University), CChem, MChemC

K H T Abeysekara (Ms)
BSc(Spl)(Hons)(Kelaniya), MPhil(Kelaniya)

E M S Isanka (Ms)
BSc(Spl)(Hons)(Peradeniya)

Librarian

D J M Jayaweera (Ms)

Assistant Librarians

N S Sangasinghe (Ms)
ASLLA

W W P N Geekiyanage (Ms)
ASLLA

Senior Administrative Officer (Admin)

G S M Senanayake (Ms)

Administrative Officer (Admin)

R Kapurubandara (Ms)

COMPUTER UNIT

Technical Officer

N K Alagoda (Ms)
NDT (Moratuwa)

Computer Systems Administrator

S S Wickramasekara

INTERNAL AUDIT

Chief Internal Auditor

K A S P Kaluarachchi
BSc(B.Ad)(Spl)(Sri Jayewardenepura),CBA(ICASL), MAAT

Senior Audit Assistants

D T M C Jayasinghe (Ms)

B M Roberts (Ms)
IABK (London), Dip.Com.Based Acctg (Professional Accounting Institute, Colombo)

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)
STATEMENT OF FINANCIAL POSITION AS AT 31ST DECEMBER, 2011

	NOTE	2011	2011	2010	2010
<u>ASSETS</u>					
Non-current Assets					
Property, Plant and Equipment	1	407,603,627		461,988,603	
Other Assets (Work-in progress)	2	108,148,340		79,095,925	
			<u>515,751,968</u>		<u>541,084,528</u>
Current Assets					
Inventories/Stocks	3A	10,217,790		11,528,243	
Trade and other receivables	3B	52,097,906		53,192,352	
Prepayments	3C	1,663,441		2,882,653	
Cash and Cash equivalents	3D	361,973,734		293,721,325	
			<u>425,952,870</u>		<u>361,324,574</u>
Total Assets			<u>941,704,838</u>		<u>902,409,102</u>
<u>LIABILITIES</u>					
Current Liabilities					
Payables	4A	12,110,061		39,539,370	
Accrued Expenses	4B	18,799,347		25,196,688	
			<u>30,909,408</u>		<u>64,736,058</u>
Non-current Liabilities					
Payable	5A	7,060,264		7,858,685	
Differed Income	5B	434,259,056		357,071,098	
Provision for Gratuity	5C	71,394,755		72,007,107	
			<u>512,714,075</u>		<u>436,936,890</u>
Total Liabilities			<u>543,623,483</u>		<u>501,672,948</u>
Total Net Assets			<u>398,081,355</u>		<u>400,736,154</u>
<u>NET ASSETS / EQUITY</u>					
Accumulated Fund	6A	215,018,120		197,433,817	
Reserves - Donations	6B	54,220,807		74,459,908	
Revaluation Surplus	6C	128,842,429		128,842,429	
Total Net Assets / Equity			<u>398,081,355</u>		<u>400,736,154</u>

.....
Johnson Soloman
 (Senior Deputy Director - Finance)

.....
Prof. Vijaya Kumar
 (Chairman)

INDUSTRIAL TECHNOLOGY INSTITUTE
STATEMENT OF FINANCIAL PERFORMANCE FOR THE YEAR ENDED 31ST DECEMBER, 2011
ILLUSTRATING THE CLASSIFICATION OF EXPENSES BY NATURE

	NOTE	2011	2010
		Rs.	Rs.
Operating Revenue			
Recurrent Grant		162,000,000.00	165,000,000.00
Amortization of Government Grants - Depreciation	5A1	116,657,142.66	66,431,860.64
R & D Projects	5B	5,681,851.43	3,469,220.99
Rehabilitation & Improvements	5B	2,151,913.60	6,874,001.06
HRD - Training	5B	1,294,919.80	
Income - Revenue	7A	135,854,651.02	127,681,819.18
- Other Income	7B	22,479,297.57	16,602,415.97
		446,119,776.08	386,059,317.84
Operating Expenses	8		
Personnel Emoluments	8A	169,573,700.00	169,417,121.20
Travelling	8B	1,876,603.36	1,901,650.91
Supplies and Consumable used	8C	18,348,976.47	14,516,071.14
Maintenance	8D	13,022,099.57	12,093,650.21
Contractual Services	8E	34,321,145.11	31,338,299.45
R & D Projects & HRD	8F	6,976,771.23	3,469,220.99
Depreciation	8G	116,657,142.66	66,431,860.64
Other Operating Expenses	8H	23,959,159.77	23,412,589.68
Rehabilitation & Improvements	8I	2,151,913.60	6,874,001.06
Disposal & write Offs			168,028.95
Vehicle Damage & Losses		27,586.22	5,963.27
Fixed Assets write off		-	341,255.00
Consumable write off		-	1,630,790.96
Total Operating Expenses		386,915,097.99	331,600,503.46
Surplus/(Deficit) from Operating Activities		59,204,678.09	54,458,814.38
Adjustment for Over Provide Bad Debts		114,308.04	172,589.10
Net Surplus / (Deficit) for the period		59,318,986.13	54,631,403.48

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)
THE STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 31st DECEMBER , 2011

	Accumulated Fund	Reserves Donations	Re-Valuation Surplus
	Rs.cts.	Rs.cts.	Rs. cts.
Balance as at 01.01.2011	197,433,817.33	74,459,908.43	128,842,429.00
<u>Changes in Equity for 2011</u>			
Surplus for the period	59,318,986.13	-	-
Amortizarion of Non - Current Assets Up to 2002	(41,734,683.87)	-	-
Donation received during the year	-	-	-
Amortization of Non - Current Donated	-	(20,239,100.56)	-
Balance as at 31.12.2011	215,018,119.59	54,220,807.87	128,842,429.00

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)
CASH FLOW STATEMENT FOR THE YEAR ENDED 31ST DECEMBER, 2011

	2011 (Rs)	2010 (Rs)
Cash Flow From Operating Activities		
Operating Surplus/(Deficit)	59,318,986	54,631,403
<u>Adjustment for</u>		
Depreciation	116,671,055	66,431,861
Gratuity Provision	6,441,548	7,515,671
Interest Received	(6,434,272)	(4,507,751)
Profit /(Loss) on Sale of Assets	(2,278,888)	
Capital Grants Amortized	(125,785,827)	(76,775,082)
Operating Surplus/(Deficit)	47,932,602	47,296,102
<u>Change in Working Capital</u>		
(Increase)/Decrease in Inventories	1,310,454	1,215,450
(Increase)/Decrease in Debtors	1,818,115	6,760,697
(Increase)/Decrease in Prepayments	1,218,999	(264,285)
(Decrease) /Increase in Payables-Non Current	(798,421)	(130,760)
(Decrease)/Increase in Payables -Current	(27,429,309)	(5,852,163)
(Decrease) /Increase Accrued Expenses	(6,397,130)	8,520,850
Cash Generated from Operating Activities	17,655,311	57,545,891
Gratuity Paid	(7,053,900)	(8,972,876)
Net Cash Flow From Operating Activities	10,601,411	48,573,015
<u>Cash Flow From Financing Activities</u>		
Capital Grants Received	141,000,000	120,000,000
Net Cash Flow From Financing Activities	141,000,000	120,000,000
<u>Cash Flow From Investing Activities</u>		
Acquisition of Property Plant & Equipment - Purchases	(59,263,176)	(10,030,726)
Acquisition of Property Plant & Equipment - TG	(1,219,189)	
Write Offes of PPE - Cost	16,630,703	19,193,694
Write Offes of PPE - Depreciation	(18,434,417)	(18,344,761)
Deposit/Investment	(26,000)	(60,074,000)
Proceeds from Sale of Assets	2,278,888	
Other Assets -(Work in Progress)	(29,052,415)	(31,562,180)
Interest Received on deposit	5,710,605	3,703,264
Net Cash Flow From Investing Activities	(83,375,002)	(97,114,709)
Net Cash Flow	68,226,409	71,458,306
Cash as at beginning of the year	183,547,325	112,089,019
Cash at the end of the year	251,773,734	183,547,325

ACCOUNTING POLICIES AND SIGNIFICANT EVENTS – 2011

1. GENERAL

The Statement of Financial Position as at 31.12.2011 and the related Financial Statements have been prepared on the historical cost convention, in accordance with Generally Accepted Accounting Principles applied on a consistent basis in conformity with the Sri Lanka Accounting Standards.

Retirement benefits to employees are provided according to the laid down statutory requirements. Institute's contribution for Provident Fund and Employees' Trust Fund is 15% and 3% respectively. Gratuity Provision is made according to the Gratuity Act No. 12 of 1983 to employees who have completed five years service in the Institute. This provision is not externally funded.

2. ACCOUNTING FOR GOVERNMENT GRANTS

Recurrent Grant from the General Treasury has been recognized as revenue in the statement of financial performance. Since year 2003 Capital Grant has been shown under deferred income in conformity with the formats specified in Circular No. PED/19. Depreciation for the year is funded by amortizing the following.

Fund	Depreciation for the year
Differed Income	Non-Current Assets acquired after 2003
Government Grant - Capital	Non-Current Assets acquired before 2003
Donation & Grants	Non-Current Assets relating to Donations

3. ASSETS - BASIS OF THEIR VALUATION

3.1 Fixed Assets

Funds for acquisition of Fixed Assets are provided by the General Treasury.

Fixed Assets have been shown at cost, less depreciation. Assets are depreciated at the following rates:

Buildings	5%
Plant and Machinery	10%
Office Equipment and Furniture	5%
Vehicles	20%
Computers	33 1/3%
Library Books and Journals	5%
Software and Other Assets	33 1/3%

Depreciation in respect of motor vehicles, computers and software was 10% before the 1st of January 1999 and was revised to 20% and to 33.33% respectively after that date.

Depreciation is charged from the year of purchase until the year of disposal as per the accepted procedure of the institute in compliance with the Sri Lanka Accounting standards.

3.1.1

Assets received as donations or purchased with Government Grant are amortized at the rates of depreciation referred above.

3.2 Debtors

Debtors and other recoverable are stated at the value estimated to be realized. The debtors consist of sundry trade debtors and the debts of ex-employees who are in breach of bonds and agreements.

3.3 Stocks

Stocks are shown at the Book Value. Stock issues are valued at the simple average basis.

3.4 Savings Bank Deposit Account

This Account denotes the Fidelity Bonds invested with the Bank of Ceylon.

4. LIABILITIES AND PROVISIONS

Current Liabilities are those which fall due for payments on demand or within one year from the Balance Sheet date.

4.1 Funds for ITI Chairman's Science Award Fund

This fund is externally invested.

5. INCOME AND EXPENDITURE ACCOUNT

Income and Expenditure are based on accrual accounting basis.

6. PROVISION FOR DOUBTFUL DEBTS

Provision for doubtful debts is made generally at 2.5% of the debts outstanding for over one year. However in cases of specific debts where it is considered that a higher provision is prudent such additional provision has also been made.

7. LONG TERM RESEARCH AND DEVELOPMENT

Research and Development Projects were curtailed during the year due to non-release of the allocated treasury funds for R & D on time. In addition local agencies such as National Science Foundation (NSF) and National Research Council (NRC) also sponsor some Research and Development Projects.

8. DISALLOWED VAT

Due to the fact that the General Treasury is funding the Institute, Department of Inland Revenue has given two options, either to pay VAT on the Treasury Grant or to apply Disallowed Input Tax Principal. Commencing in year 2005 ITI has implemented the Disallowed Input Tax Principal.

9. VIDHATHA PROGRAM

During the year under review number of employees of ITI participated in the Vidhatha Program conducted by the Ministry of Science & Technology, of which the cost was reimbursed by the Line Ministry.

**Schedule on Buildings, Plant Machinery & Lab Equipment, Furniture Fittings, Vehicles, Computer Equipment
Library Books & Journals , Software & Other Assets as at 31st December 2011**

NON -CURRENT ASSETS

NOTE - 01

	Buildings 5%	Plant Mach. & Lab Equip. 10%	Furni. Fittings & Office Equi. 5%	Vehicles 20%	Computer Equipment 33.33%	Library Book & Journals 5%	Soft Ware & Accessories 33 1/3%	Other Assets 33 1/3%	TOTAL
<u>Cost</u>									
Balance as at 01.01.2011	220,906,930.50	567,238,230.64	40,144,129.82	43,076,781.30	45,232,956.28	72,493,743.71	11,252,098.07	4,512,594.44	1,004,857,464.76
Add									-
Purchases	396,345.29	38,090,284.56	2,033,972.69	9,993,839.00	2,767,600.00	4,546,664.04	1,434,470.87	-	59,263,176.45
Donations	-	-	-	-	-	-	-	-	-
Donations - TG	-	1,219,189.43	-	-	-	-	-	-	1,219,189.43
Re-Valuation	-	-	-	-	-	-	-	-	-
Less:									-
Write - Off	-	(9,526,851.66)	(980,515.36)	(1,580,804.22)	(4,542,532.50)	-	-	-	(16,630,703.74)
Balance as at 31.12.2011	221,303,275.79	597,020,852.97	41,197,587.15	51,489,816.08	43,458,023.78	77,040,407.75	12,686,568.94	4,512,594.44	1,048,709,126.90
Less									-
<u>Depreciation</u>									-
Balance as at 01.01.2011	51,519,710.10	345,549,312.99	12,852,104.63	38,330,503.50	36,241,051.96	43,575,231.91	10,288,352.02	4,512,594.44	542,868,861.55
Charges for 2011	-	-	-	-	-	-	-	-	-
Add:									-
Depreciation for 2011	21,227,257.51	67,421,772.58	3,391,771.41	5,254,834.99	12,401,035.44	5,533,044.08	1,441,339.53	-	116,671,055.54
Less:									-
Disposal	-	(9,066,561.60)	(581,910.18)	(1,580,804.22)	(7,205,141.05)	-	-	-	(18,434,417.05)
Balance as at 31.12.2011	72,746,967.61	403,904,523.97	15,661,965.86	42,004,534.27	41,436,946.35	49,108,275.99	11,729,691.55	4,512,594.44	641,105,500.04
Written Down Value as at 31.12.2011	148,556,308.18	193,116,329.00	25,535,621.29	9,485,281.81	2,021,077.43	27,932,131.76	956,877.39	-	407,603,626.86

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)
NOTES TO BALANCE SHEET AS AT 31ST DECEMBER 2011

	2011	2010
	Rs. Cts.	Rs. Cts.
<u>Other Assets (work in progress) - (Note - 2)</u>		
Work in Progress - General	220,665.95	220,666.95
Working Progress - Modern R & D Complex, Malambe	104,208,869.31	76,215,313.77
TG 08/24 Alternative sterilization technology to treat cinnamon	93,482.16	86,213.25
TG 09/29 Dev. of health promoting products from local fruits & herbal resources	-	2,000.00
TG 09/31 App. of biotech. to promote new industries	-	2,511,651.89
TG 09/00/01 DF R & D Bio availability Studies	-	43,176.00
TG 10/00/01 DF Dev. of Pharma. monograph for SL MP	-	10,510.00
TG 10/00/02 DF 78 - Landslide Early warning system	-	6,392.95
ISO 17043 Accreditation status to ITI's PECMA PT scheme	124,302.75	
TG 11/00/04 DF Synthesis of graphene and graphene composites from natural graphite using	33,617.43	
TG 11/00/06 Synthesis lab	341,577.30	
TG 11/34 High iron & protein containing rice products	439,625.96	
TG 11/35 Rice brain snacks rich in antioxidants	125,177.00	
TG 11/37 Identificaton of anti-inflammatory and lipid lowering traditional rice	4,686.38	
TG 11/39 Bio-active kithul dring	17,207.00	
TG 11/41 Enhancing the quality of Jaadi	262,636.39	
TG 11/42 Establishment of a testing facility to assess imported feed	98,705.14	
TG 11/46 Biological control of strawberry and vegetable pests	9,081.00	
TG 11/47 Branding Ceylon Cinnamon - Chem. Fingerprinting & GI	52,861.99	
TG 11/48 Investigation of health promoting properties	188,185.00	
TG 11/49 Trehalose rich rice for breas making	167,792.18	
TG 11/50 Bioremediation of soils contaminated with petroleum hydrocarbon	11,182.08	
TG 11/51 Production of Industrial enzymes	107,376.73	
TG 11/52 Iron fortification of rice seeds using soya bean ferritin	797.82	
TG 11/55 Development of super absorbent materials from banana fibres for sanitary	97,318.63	
TG 11/56 Development of Red-clay based water filter for the removal of Fluoride	160,676.76	
TG 11/58 Development of an early warning system for landslides	216,689.34	
TG 11/59 Development of automated street lamp control systems	164,100.80	
TG 08/23A Continuation of wound Dressing Hydro gel	7,770.00	
TG 47A Branding cey. cinnamon - DNA bar- Coding	38,747.42	
TG 11/60 Bioactivity of Ceylon Cinnamon	330,824.55	
TG 11/61 Automated Acid Rain Monitoring station	624,382.20	
	108,148,339.27	79,095,924.81

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)
NOTES TO BALANCE SHEET AS AT 31ST DECEMBER 2011

	NOTE	2011	2010
		Rs. Cts.	Rs. Cts.
<u>Current Assets (Note - 3)</u>			
<u>Consumable Stores</u>			
Inventory - Chemical		6,044,863.98	6,444,206.41
Inventory - Laboratory Ware		2,971,907.63	3,921,107.59
Inventory - Mis. Supplies		452,665.82	497,548.04
Inventory - Electronic Components		6,012.85	6,012.85
Inventory - Stationery		742,339.49	659,368.22
	(Note - 3A)	10,217,789.77	11,528,243.11
Purchase Advances - Local Supplies	15A	7,006,739.31	912,041.28
Purchase Advances - Foreign Supplies	16	3,848,758.72	640,746.92
Sundry Debtors	17	9,662,212.06	23,333,631.66
Trade Debtors	18A	6,332,888.74	7,525,680.45
Staff Advances	20	21,333,987.40	17,688,544.55
Deposits	21	3,261,313.60	3,091,707.60
Funded Projects	23	2,015.00	
Obsolete Assets for Disposal		649,991.11	
	(Note - 3B)	52,097,905.94	53,192,352.46
Pre-payments	(Note - 3C) 19	1,663,440.16	2,882,653.33
Deposit		110,200,000.00	110,174,000.00
Cash & Bank Balance	22	251,773,734.07	183,547,325.13
	(Note - 3D)	361,973,734.07	293,721,325.13

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)
NOTES TO BALANCE SHEET AS AT 31ST DECEMBER 2011

		NOTE	2011	2010
			Rs. Cts.	Rs. Cts.
<u>Current Liabilities (Note - 4)</u>				
Trade Creditors		18B	2,330,610.11	2,927,539.40
Sundry Creditors		15B	944,935.69	1,153,122.02
Tender & Security Deposits		24	429,125.50	347,034.30
VAT Payable			2,475,723.00	2,475,723.00
Daycare Fund			15,000.00	15,000.00
Funded Projects		23	5,914,667.18	32,620,951.47
		(Note - 4A)	12,110,061.48	39,539,370.19
Accrued Expenses	(Note - 4B)	25	18,799,346.71	25,196,687.83
<u>Non-Current Liabilities (Note - 5)</u>				
Provision for Gratuity	(Note - 5C)	26	71,394,755.00	72,007,107.00
Provision for Bad debts			1,712,099.78	4,242,805.64
Reserves - Bond Defaulters			4,076,010.75	2,578,372.09
Science Award Fund (Originated by Prof. Vijaya Kumar)			214,958.18	237,548.59
Staff Activity Fund			1,037,130.64	779,893.66
Kasper Unit Fund			20,064.68	20,064.68
		(Note - 5A)	7,060,264.03	7,858,684.66

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)

NOTES TO BALANCE SHEET AS AT 31.12.2011

<u>Amortization of Government Capital Grants (5A1)</u>		Rs. Cts.	Rs. Cts.
<u>(A/C - 604440-70700)</u>			
Depreciation	:- Non-Current Assets Upto 2002	41,734,683.87	
	Non-Current Assets 2003 Onwards	54,683,357.74	
	Non-Current Assets Donated	20,239,100.56	116,657,142.17
R & D Projects & HRD	:- Treasury Granted	2,125,253.57	
	Research & Development (Accreditation)	3,556,597.86	
	HRD - Training	1,294,919.80	6,976,771.23
Rehabilitation & Improvement	:- Building & Structure	125,470.37	
	Plant Machinery and Equipment	1,996,953.23	
	Improvement of Vehicles	29,490.00	2,151,913.60
			<u>125,785,827.00</u>
<u>Differed Income (Note - 5B)</u>		Rs. Cts.	Rs. Cts.
<u>Government Contribution - Capital - 2003 Onwards)</u>			
<u>(A/C - 300102-29755 & A/C - 300104)</u>			
Balance as at 01.01.2011		357,071,098.11	
Additions during the year		141,000,000.00	498,071,098.11
Schedule Adjustment			
Amortization (Depreciation of Non-Current Assets)		(54,683,357.74)	
Amortization (Treasury Granted Project Expenditure)		(5,681,851.43)	
Amortization (Rehabilitation Expenditure)		(2,151,913.60)	
Amortization (HRD)		(1,294,919.80)	(63,812,042.57)
Balance as at 31.12.2011			<u>434,259,055.54</u>
<u>Accumulated Fund (Note - 6A)</u>		Rs. Cts.	Rs. Cts.
<u>Government Contribution Capital - Upto 2002 and</u>			
<u>Income & Expenditure Account Balance)</u>			
<u>(A/C - 300101-30000 & A/C - 300300-30400)</u>			
Government Contribution Capital Upto 2002 - 01.01.2011		398,147,657.97	
Income & Expenditure Account - 01.01.2011		(200,713,840.64)	197,433,817.33
Schedule Adjustment			
Amortization - Capital		(41,734,683.87)	
Surplus for the period of 2011		59,318,986.13	
Balance as at 31.12.2011			<u>17,584,302.26</u>
			<u>215,018,119.59</u>

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)

DONATIONS AND GRANTS AS AT 31ST DECEMBER, 2011

NOTE - 6B

Donations	A/C No.	Balance 01.01.2011	Additions during the year 2011	Amortisations during the year 2011	Balance 31.12.2011 Rs. Cts.
Grants and Donations	300201	695,154.40	-	(347,576.60)	347,577.80
UNIDO - AID	300202	9,102,467.83	-	(1,947,256.87)	7,155,210.96
Other Donations	300204	832.00	-	(832.00)	-
Capital Reserves	300205	1,523,209.00	-	-	1,523,209.00
ADB Donation	300207	31,544,772.79	-	(9,435,665.85)	22,109,106.94
GMBH	300208	129,375.00	-	(25,875.00)	103,500.00
Donation-Ensilage Tank	300209	2,283,416.90	-	(456,683.48)	1,826,733.42
Gift from JICA	300210	917,329.80	-	(458,664.30)	458,665.50
Gift from Germany	300211	13,838.50	-	(6,918.50)	6,920.00
Gift from Italy	300212	15,725.00	-	(7,862.50)	7,862.50
Gift from JICA - FP 42	300213	349,288.08	-	(137,775.85)	211,512.23
Gift from MHIM - FP 36	300214	20,901.79	-	(7,492.40)	13,409.39
Gift from CARP FP 48	300215	5,400.00	-	(450.00)	4,950.00
Gift from CARP FP 49	300216	51,760.00	-	(24,330.00)	27,430.00
Gift from NSF FP 33	300217	8,964.00	-	(4,482.00)	4,482.00
Gift from NSF FP 44	300218	7,242.00	-	(3,621.00)	3,621.00
Gift from TVEC	300219	66,020.60	-	(18,439.30)	47,581.30
Gift from NRC FP 38	300220	3,555.00	-	(1,777.50)	1,777.50
GIFT FROM NRC FP 46	300221	44,905.80	-	(22,452.30)	22,453.50
Japanese 2KR Project	300222	10,741,472.00	-	(4,941,074.29)	5,800,397.72
Gift From NSF & JICA	300223	387,043.60	-	(129,014.40)	258,029.20
Gift from UNDP	300224	4,491,464.46	-	(650,221.81)	3,841,242.65
Gift from UNDO PROJECT	300225	476,884.05	-	(68,126.31)	408,757.74
Int.Atomic EA Donation	300226	5,107,840.94	-	(567,537.88)	4,540,303.05
NSF Tsunami Project	300227	101,148.65	-	(94,225.68)	6,922.98
NSF - Accessories to SEM	300228	1,110,000.00	-	(111,000.00)	999,000.00
ICBR Int.Centre for Bamboo ration	300229	2,442,703.50	-	(271,411.50)	2,171,292.00
Ministry of rural industries & self	300230	46,041.75	-	(5,115.75)	40,926.00
Common Fund commodities	300231	2,771,150.00	-	(493,217.50)	2,277,932.50
TOTAL		74,459,907.44	-	(20,239,100.56)	54,220,806.88

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)
REVALUATION BALANCE AT AT 31/12/2011

Note -6C

	2011	2010
	Rs. Cts.	Rs. Cts.
2008 Re-Valuation		
Plant Mach. & Lab Equipment	26,950,099.00	26,950,099.00
Furni. Fittings & Office Equip.	6,404,627.35	6,404,627.35
Computer Equipment	(7,197,653.65)	(7,197,653.65)
	26,157,072.70	26,157,072.70
2009 Re-Valuation		
Buildings	102,685,356.82	102,685,356.82
	128,842,429.52	128,842,429.52

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)
NOTES TO INCOME & EXPENDITURE STATEMENT
FOR THE YEAR ENDED 31ST, DECEMBER 2011

<u>Revenue (Note - 7A)</u>	Rs.	Cts.	Rs.	Cts.
Income -Standard Services	111,019,308.52			
Less: Refund of paid Customer Invoice	<u>255,350.00</u>		110,763,958.52	
Income -Consultancy Service			8,013,133.00	
Income-Technology Transfer			1,683,606.00	
Income-Contract Projects	14,251,653.32			
Less: Expenditure - Sub Contract Projects	<u>9,730,184.78</u>		4,521,468.54	
Income-Customised Services			6,987,249.21	
Income-Training			3,885,235.75	
			<u>135,854,651.02</u>	
<u>Other Income (Note - 7B)</u>				
<u>Other Operating Income</u>				
Income-Library	423,251.20			
Income - Other / General	<u>12,238,747.26</u>		12,661,998.46	
<u>Other Non Operating Revenue</u>				
Interest on Loan	599,612.37			
Interest on Investments (Projects Funds)	6,434,272.00			
ITI Project Contribution	99,040.26			
Income - % of Consultancy Fee	33,000.00			
Royalty Received ITI	228,417.00			
Income from Sale of Assets	2,032,888.88			
Exchange Gain & losses	390,068.60		9,817,299.11	
			<u>22,479,297.57</u>	

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)
NOTES TO INCOME & EXPENDITURE STATEMENT
FOR THE YEAR ENDED 31ST, DECEMBER 2011

Personnel Emoluments (Note - 8A) **Rs. Cts.**

Salaries & Wages	132,420,811.90
Casual Wages	1,873,536.15
Other Allowances	760,000.00
Employee Provident Fund	15,198,972.30
Employee Trust Fund	3,039,794.47
Gratuity	6,441,548.00
Overtime	1,820,845.18
Honorarium - G.B. Members	332,936.77
Medical Reimbursement	1,237,083.00
Incentive	6,181,819.50
Salaries for Ministry Officers	266,352.73
	<u>169,573,700.00</u>

Travelling (Note - 8B)

Travelling - Local	537,910.56
Travelling - Foreign	722,337.31
Travelling - Pool Transport	616,355.49
	<u>1,876,603.36</u>

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)
NOTES TO INCOME & EXPENDITURE STATEMENT
FOR THE YEAR ENDED 31ST, DECEMBER 2011

<u>Supplies and Consumable used (Note - 8C)</u>	Rs. Cts.
Supplies - Chemicals	6,793,622.00
Supplies - Labware	1,921,226.30
Supplies -Electronic Components	20,551.00
Supplies - Stationery	1,981,339.00
supplies - Other	1,413,751.10
Supplies - Other / CRR	168,109.67
Safety Measures	81,341.98
Uniforms - Watchers, Drivers, Etc.	520,732.50
Welfare Including Sports	746,311.42
Gas	18,022.90
Vehicles / Fuel	4,683,968.60
	18,348,976.47

<u>Maintenance (Note - 8D)</u>	
Maintenance - Buildings & Premises	3,612,779.12
Maintenance - Plant &Machinery	1,453,879.75
Maintenance - Furniture & Equipments	1,769,328.03
Maintenance - Laboratory ware	806,615.72
Maintenance - Computer	1,549,343.14
Maintenance - Canteen	8,190.69
Vehicles / General - Maintence	3,821,963.12
	13,022,099.57

<u>Contractual Services (Note - 8E)</u>	
Electricity	23,539,478.60
Telephone & Internet	3,930,093.15
Postage	435,021.10
Rate & Taxes	1,455,300.00
Security Services	3,884,329.08
Water rates	1,076,923.18
	34,321,145.11

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)
NOTES TO INCOME & EXPENDITURE STATEMENT
FOR THE YEAR ENDED 31ST, DECEMBER 2011

Projects & HRD (Note - 8F)

	Rs. Cts.
TG Expenditure	2,125,253.57
Research & Development (Accreditation)	3,556,597.86
HRD - Training	1,294,919.80
	<u>6,976,771.23</u>

Depreciation & Amortisation Expenses (Note - 8G)

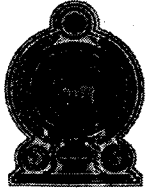
Depreciation - Buildings	21,227,257.51
Depreciation - Plant & Machinery	67,407,859.71
Depreciation - Furniture & Equipments	3,391,771.41
Depreciation - Computers	12,401,035.44
Depreciation - Vehicles	5,254,834.99
Depreciation - Software	1,441,339.53
Depreciation - Library Books	5,533,044.07
	<u>116,657,142.66</u>

Rehabilitation Expenditure (Note - 8I)

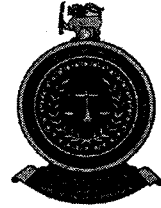
Rehabilitation of Building and Structures	125,470.37
Rehabilitation of Plant Machinery and Equipments	1,996,953.23
Rehabilitation of Improvement of Vehicles	29,490.00
	<u>2,151,913.60</u>

INDUSTRIAL TECHNOLOGY INSTITUTE (SUCCESSOR TO CISIR)
NOTES TO INCOME & EXPENDITURE STATEMENT
FOR THE YEAR ENDED 31ST, DECEMBER 2011

<u>Other Operating Expenses (Note - 8H)</u>	Rs. Cts.
Staff Training	855,993.91
Payment of Subs. - Local / Foreign/Other	240,714.17
Laboratory Membership Fee (Local)	2,117,671.09
Honorarium	81,453.00
New Recruitments - Medical Examination Fee	48,955.00
Entertainment	229,132.38
Insurance	749,662.83
Printing	465,791.44
News Papers & Subs.	75,368.00
Audit Fees	356,303.00
Legal Fees	16,200.00
Bank Charges	45,027.85
Bank Debit Tax	2,701.44
Advertising	229,115.23
Publication - Annual Reports	442,008.50
Promotional & Publicity	581,406.69
Economic Tax	363,672.76
National Building Tax	2,909,382.07
Survey Fee - Board of Survey	358,078.60
Incidental Expenses	13,750.00
Patency & Consultancy Fee	141,392.00
Expenditure- Standard Services	4,562,754.28
Expenditure -Consultancy Services	535,024.41
Expenditure -Technology Transfer	55,031.64
Expenditure -Contract Project	518,868.98
Expenditure -Customised Services	387,307.61
Expenditure -Training	389,918.36
Clearing Charges	20,620.27
Exhibition	734,819.59
Technology Market Place - BMICH	678,358.63
Disallowed VAT	5,662,353.37
Stamp Duty	42,750.00
Provident Fund Stationeries	22,072.67
Donations	25,500.00
	<u>23,959,159.77</u>



විගණකාධිපති දෙපාර්තමේන්තුව
கணக்காய்வாளர் தலைமை அறிபதி திணைக்களம்
AUDITOR GENERAL'S DEPARTMENT



මගේ අංකය }
 எனது இல }
 My No } EL/E/ITI/FA/2011

ඔබේ අංකය }
 உமது இல }
 Your No. }

දිනය }
 திகதி } 2012 July 16
 Date }

The Chairman
 Industrial Technology Institute

Report of the Auditor General on the Financial Statements of the Industrial Technology Institute
 for the year ended 31 December 2011 in terms of Section 14(2)(c) of the Finance Act, No. 38 of
 1971.

The audit of financial statements of the Industrial Technology Institute for the year ended 31 December 2011 comprising the balance sheet as at 31 December 2011 and the income statement, statement of changes in equity and cash flow statement for the year then ended and a summary of significant accounting policies and other explanatory Information was carried out under my direction in pursuance of provisions in Article 154(1) of the Constitution of the Democratic Socialist Republic of Sri Lanka read in conjunction with Section 13(1) of the Finance Act, No. 38 of 1971 and Section 40 of part VII of the Science Technology Development Act. No. 11 of 1994. My comments and observations which I consider should be published with the Annual Report of the Institute in terms of Section 14(2)(c) of the Finance Act appear in this report. A detailed Report in terms of Section 13(7)(a) was furnished to the Chairman of the Institute on 14 May 2012.

1:2 Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Sri Lanka Accounting Standards and for such internal control as the management determines is necessary to enable the preparation of financial statements that are free from material misstatements whether due to fraud or error.

අංක 306/72 පොල්දූව පාර,
 බත්තරමුල්ල, ශ්‍රී ලංකාව

දුරකථනය }
 தொலைபேசி } 2887028 -34
 Telephone }

இல. 306/72, பொல்துவ வீதி,
 பத்தரமுல்லை இலங்கை

ෆැක්ස් අංකය }
 பக்ஸ் இல } 2887223
 Fax No. }

No.306/72, Polduwa Road,
 Battaramulla, Sri Lanka

ඉලෙක්ට්‍රොනික් තැපෑල }
 #- மெயில் } oaggov@slt.net.lk
 E-mail. }

1:3 Auditor's Responsibility

My responsibility is to express an opinion on these financial statements based on my audit. I conducted my audit in accordance with Sri Lanka Auditing Standards. Those Standards require that I comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatements.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgements, including the assessment of the risks of material misstatements of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Institute's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Institute's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of financial statements. Sub - sections (3 and 4) of Section 13 of the Finance Act, No. 38 of 1971 give discretionary power to the Auditor General to determine the scope and the extent of the audit.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my qualified audit opinion.

1:4 Basis for Qualified Opinion

My opinion is qualified based on the matters described in paragraph 2.2 of this report.

2. Financial statements

2:1 Qualified Opinion

In my opinion, except for the effects of the matters described in paragraph 2:2 of this report, the financial statements give a true and fair view of the financial position of the Industrial Technology Institute as at 31 December 2011 and its financial performance and cash flows for the year then ended in accordance with Sri Lanka Accounting Standards.

2:2 Comments on Financial Statements

2:2:1 Sri Lanka Accounting Standards

Non-compliances with the following Sri Lanka Accounting Standards were observed during course of audit.

- (a) The following had been done contrary to Sri Lanka Accounting Standard No. 9.
 - (i) The fixed deposits valued at Rs.10,200,000 with maturity period exceeding 03 months had been inappropriately shown as cash and cash equivalents.
 - (ii) The profit from the sale of fixed assets amounting to Rs.2,032,888 had been erroneously adjusted to the operating profit as Rs.2,278,888.
 - (iii) The cost of write off of fixed assets amounting to Rs.16,630,703 and the depreciation on the write off of fixed assets valued at Rs.18,434,417 had been inappropriately shown as cash flows under the investing activities.
 - (iv) The following difference had been observed in the variances of working capital adjustments

	2011	2010	Correct Difference	Difference shown in the Cash Flow	Difference
	----- Rs.	----- Rs.	----- Rs.	----- Rs.	----- Rs.
Accrued Expenses	18,799,347	28,196,688	6,397,341	6,397,130	(211)
Trade and Accounts Receivable	52,097,906	53,192,352	1,094,446	1,818,115	723,669
Prepaymetns	1,663,441	2,882,653	1,219,212	1,218,999	(213)

- (b) According to Sri Lanka Accounting Standard 16, and the Notification published in the Gazette No. 1103/18 dated 28 October 1999, the gratuity should be computed and brought to account from the first year of employment of the employee. Nevertheless, the provision for gratuity made by the Institute in the year 2011 had been understated by a sum of Rs.1,874,297 in respect of 73 employees of the Institute who had completed 01 year of service and who had served up to 05 years. In addition the provision for gratuity amounting to Rs.71,394,795 had not been invested.

- (c) (i) The value of the land on which buildings valued at Rs.220,906,930 had been constructed had not been included in the accounting policies in terms of Sri Lanka Accounting Standard 18.
- (ii) According to Sri Lanka Accounting Standard No. 18, depreciation of fixed assets should commence from the date on which they are put to use. Nevertheless, the fixed assets valued at Rs.60,482,365 purchased in the year under review had been depreciated for the entire year. As such depreciation had been overstated by a sum of Rs.4,616,613.

2:2:2 Accounting Deficiencies

The following deficiencies were observed.

- (a) Even though the stock of consumables had been shown in the year under review under current assets as Rs.10,217,790, according to the physical verification report that amounted to Rs.10,013,436. As such the stock of consumables had been overstated in the accounts by a sum of Rs.204,354.
- (b) Action had not been taken to capitalize the capital works-in-progress older than 05 years valued at Rs.220,665.
- (c) Contributions to the Employees' Trust Fund amounting to Rs.506,084 and contribution to the Employees' Provident Fund amounting to Rs.4,217,373 in respect of cost of living allowances amounting to Rs.16,869,495 paid during the period January to September of the year under review, had been understated in the accounts.
- (d) The machinery and equipment purchased in the year under review had been understated by a sum of Rs.540,796.
- (e) A sum of Rs.3,744,204 paid to a foreign institution for the renewal of the annual membership fee for the year 2011 for the utilization of library books, had been capitalized as the expenditure on library books incurred in the year. Depreciation thereon amounting to Rs.187,210 had also been brought to account.
- (f) Even though the physical balance of library books as at 31 December 2010 had been shown as Rs.13,528,919, the opening balance of the library books on 01 January 2011 amounted to Rs.71,479,135. This balance included the annual online access fees paid to a foreign institution for the previous years.

2:2:3 Age Analysis of Debts Receivable

Category of Debts	Amount as at Balance Sheet Date	Age Analysis (Years)				
		Less than 01	1-2	2-3	3-4	Over 5
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Sundry Debtors	9,662,212	2,089,326	835,684	1,245,612	397,766	5,093,824
Staff Advances	21,333,987	11,512,899	826,402	1,351,128	2,710,158	4,933,400
Deposits	3,261,313	175,606	529,609	144,350	110,500	2,301,248

The following observation is made.

Even though there were debtors older than 05 years, no legal action whatsoever had been taken for the recovery of debts.

2:2:4 Lack of Evidence for Audit

The following items could not be satisfactorily vouched in audit due to the unavailability of the evidence indicated against each item.

Particulars	Value	Evidence not made available
	Rs.	
Current Liabilities (Bid and Security Deposits)	83,339	Confirmation of Balances
Trade and other Deposits Receivable	1,091,813	Receipts, Documents
Debtors	4,459,333	Confirmation of Balances

2:2:5 Non-compliance with Laws, Rules, Regulations and Management Decisions

Instances of the following non-compliances. were observed.

Reference to Laws, Rules, Regulations, etc.	Non-compliance
(a) Establishments Code of the Democratic Socialist Republic of Sri Lanka	
(i) Chapter II Section 10.1 to 10.5	An officer receiving a new appointment to a permanent Government Post, should undergo a medical test under a Government Medical Officer and get his physical and mental fitness certified as a primary qualification for the appointment. Contrary to that requirement, a sum of Rs.43,955 had been spent by the Institute to get that suitability tested by a private hospital.
(ii) Chapter II Section 9 and Public Administration Circular No. 24/2011 of 16 November 2011	Two officers over the age of 60 years had been recruited for a period of 06 months contrary to the instructions of the Establishments Code and the Public Administration Circular and paid a sum of Rs.597,660.
(iii) Chapter XIV and Public Administration Circular No. 6/2006 IV of 24 February 2006	Contrary to the rates of payment approved for different groups of officers, payment had been made at Rs.600 based on an internal circular, thus resulting in an overpayment of Rs.31,200.
(iv) Financial Regulation 104	In the event of any loss or damage immediate action should be taken to assess the value and determine those responsible. No such action had been taken in connection with 03 accidents to motor vehicles.

- | | |
|--|---|
| (c) Public Administration Circular No. 15/90 of 09 March 1990. | Contrary to the circular instructions, temporary employees for vacancies had been obtained from a private institution. |
| (d) Section 9.10 of the Circular No. PED/12 of 02 June 2003. | Without obtaining the approval of the Secretary to the Treasury for making an appointment to the post of <u>Instructor</u> not included in the approved cadre of the Institute, the services of an Instructor had been obtained for the period January 2009 to December 2012 at a monthly allowance of Rs.20,000 and had paid a sum of Rs.480,000 up to 31 December 2011. |

??

2:2:6 Transactions of Contentious Nature

The following observations are made.

- (a) An incentive allowance of Rs.25,350 had been paid for the year 2010 contrary to the rules of the Procedure for the Payment of Incentive Allowance to a clerk recruited on contract basis to the Industrial Technology Institute through a private institution.
- (b) Employees for the temporary vacancies occurring in the Institute had been obtained through a private employment agency and had paid a sum of Rs.144,224 to that agency without obtaining the approval of the Department of Management Services and the Ministry of Technology and Research.

3. Financial Review

3:1 Financial Results

According to the financial statements presented, the working of the Institute for the year ended 31 December 2011, after taking into account the Government grant of Rs.162,000,000 received for recurrent expenditure, had resulted in a surplus of Rs.59,318,986 as compared with the corresponding surplus of Rs. 54,631,403 after taking into account the Government grants of Rs.165,000,000 received for the recurrent expenditure of that year. As such financial results for the year under review, as compared with the preceding year, had indicated an improvement of Rs.4,687,583. The earnings of the Institute had affected that improvement.

3:2 Analytical Financial Review

The total income earned by the Institute during the year under review from the operating activities amounted to Rs.148.4 million and corresponding income of the preceding year amounted to Rs.138 million. Details appear below.

	<u>2011</u>	<u>2010</u>
	Rs.(Millions)	Rs.(Millions)
Standard Services	110.87	102.9
Consultancy Services	8.01	4.5
Technology Transfers	1.7	1.5
Contract Projects	4.5	5.8
Descriptive Services	7.0	7.0
Training	5.9	5.9
Libratory Income	0.4	0.3
Others	10.04	10.00
	-----	-----
	148.64	138.00
	=====	=====

The following observations are also made.

- (a) The operating expenses of the current year and the preceding year amounted to Rs.386.9 million and Rs.331.6 million respectively.
- (b) Out of the operating expenses for the current year and the preceding year, only 39 per cent and 35 per cent respectively could be covered from the operating income.
- (c) A system for separate accounting for the cost of each of the above operating service had not been implemented by the Institute and as such the profitability of each item could not be computed.

4. Operating Review

4:1 Management Inefficiencies

The following observations are made.

- (a) Action had not been taken on the shortage of assets amounting to Rs.1,092,428 identified at the verification of assets. The Chairman informed that the assets not identified at the verification of assets had been referred to the respective Divisions for re-examination.
- (b) A formal procedure had not been followed for the training of the officers of the Institute.

4:2 Underutilisation of Funds

An examination of the progress of 34 Projects commenced in the year under review revealed that the estimates amounted to Rs.36.02 million and the actual expenditure incurred amounted to Rs.7.405 million and the under expenditure amounted to Rs.28.615 mullion. The under expenditure relating to those Projects ranged from 0 to 44 per cent. It was observed that the delay in the receipt of Treasury grants had been the main reason for such situation.

4:3 Idle and Underutilised Assets

- (a) Out of the sum of Rs.1,672,550 received from the Ministry of Industrial Development for the Centec Project, a sum of Rs.619,840 remained in the Account No. 0000351567 since 15 October 2010 and 37 per cent of the money made available to achieve objectives had not been utilized.
- (b) It was observed that 05 Current Accounts with balances amounting to Rs.1,824,010 had been dormant from January 2011.
- (c) An examination of 15 items of consumable goods valued at Rs.1,404,922 revealed that 06 of those assets had not moved from the year 2009 and that their value amounted to Rs.497,482. The Chairman informed that these essential stocks are retained to prevent any delays in the future.

4:4 Uneconomic Transactions

- (a) Even though the officer responsible for the conversion of salaries of employees in terms of the Management Services Circular No. 30 had not performed his functions, that officer had been re-employed on contract basis for a period of 04 months after his retirement for the conversion of salaries on the payment of an allowance of Rs.147,660. That officer had failed to complete the salary conversions.
- (b) Even though institutions recognized by Government and having expertise for providing training to the Government Officers are available, a sum of Rs.720,000 had been paid to an institution without such expertise, for improving the knowledge of officers in English.
- (c) The participation of the officers at a training provided by the Institute to its officers had been poor and as such a sum of Rs.53,048 out of the payment made for that training was observed as an uneconomic expenditure.

4:5 Identified Losses

The following deficiencies were observed.

- (a) The assignment on the verification of stocks of the Institute had been awarded to the institution which quoted a higher price instead of selecting the lowest bid, thus causing loss of Rs.92,720.
- (b) A sum of Rs.73,718 had been spent on servicing computers, of which the guarantee period had not expired.
- (c) The Bank of Ceylon had recovered a sum of Rs.599,085 out of the interest on the sum of Rs.110,200,000 invested in that Bank in fixed deposits as the Withholding Tax and remitted to the Commissioner General of Inland Revenue.

5. Systems and Controls

Deficiencies in systems and controls observed during the course of audit were brought to the notice of the Chairman from time to time. Special attention is needed in respect of the following areas of control.

Areas of Systems and Controls

- (a) Recruitment
- (b) Postal Expenses
- (c) Training
- (d) Purchases

H.A.S. Samaraweera
Auditor General

-/dk.

Observations, Comments and Proposed Action of ITI for Auditor General's Report on the Accounts of ITI
for the year ended 31, December 2011
under Section 14.2 (c) of the Finance Act No. 38 of 1971

Item Ref. of A.G's Report	Description/Comments of the Auditor General's Report	ITI Observations, Comments and Proposed Action for rectification of audit comments
2.2.	Comments on financial Statements	
2.2.1.	Sri Lanka Accounting Standards	
(a)	Non-compliances with the following Sri Lanka Accounting Standards were observed during course of audit. The following had been done contrary to Sri Lanka Accounting Standard No. 9.	
(i)	The fixed deposits valued at Rs.10,200,000 with maturity period exceeding 03 months had been inappropriately shown as cash and cash equivalents.	This deposit is kept as security to import equipments & goods on Letters of Credit and stated under Cash and Cash equivalent.
(ii)	Profit of Rs. 2,278,888 on sale of fixed assets to the value of Rs. 2,032,888 had been adjusted to profit from operation activities erroneously.	Actual profit on sale of fixed assets is Rs.2,032,888, but the trade in value of a photocopier has been reconciled against this account. The realization value has been added to the profit from operation activities.
(iii)	The cost of write off of fixed assets amounting to Rs.16,630,703 and the depreciation on the write off of fixed assets valued at Rs.18,434,417 had been inappropriately shown as cash flows under the investing activities	Action will be taken not to repeat.

Observations, Comments and Proposed Action of ITI for Auditor General's Report on the Accounts of ITI
for the year ended 31, December 2011
under Section 14.2 (c) of the Finance Act No. 38 of 1971

Item Ref. of A.G's Report	Description/Comments of the Auditor General's Report					ITI Observations, Comments and Proposed Action for rectification of audit comments
(iv)	The following difference had been observed in the variances of working capital adjustments					The stated differences were shown in the cash inflows and was deducted from the out flows and showed separately. In future will comply with the standard reporting methods
		2011 (Rs)	2010 (Rs)	Correct variance (Rs)	Difference (Rs)	
	Accrued expenses	18,799,347	25,196,688	6,397,341	(211)	
	Trade and Accounts Receivable	52,097,906	53,192,352	1,094,446	723,669	
	Pre-payments	1,663,441	2,882,653	1,219,212	(213)	
(b)	According to Sri Lanka Accounting Standard 16, and the Notification published in the Gazette No. 1103/18 dated 28 October 1999, the gratuity should be computed and brought to account from the first year of employment of the employee. Nevertheless, the provision for gratuity made by the Institute in the year 2011 had been understated by a sum of Rs.1,874,297 in respect of 73 employees of the Institute who had completed 01 year of service and who had served up to 05 years. In addition the provision for gratuity amounting to Rs.71,394,795 had not been invested.					Action will be taken to act according to Sri Lanka Accounting Standard number 16 for the provision. Extra funds to be generated for the investment on the provision made

Observations, Comments and Proposed Action of ITI for Auditor General's Report on the Accounts of ITI
for the year ended 31, December 2011
under Section 14.2 (c) of the Finance Act No. 38 of 1971

Item Ref. of A.G's Report	Description/Comments of the Auditor General's Report	ITI Observations, Comments and Proposed Action for rectification of audit comments
2.2.2.	(c) (i) The value of the land on which buildings valued at Rs.220,906,930 had been constructed had not been included in the accounting policies in terms of Sri Lanka Accounting Standard 18.	The land ownership refers to as Crown Land and hence not accounted. In the future this will be stated in the accounting policies.
	(ii) According to Sri Lanka Accounting Standard No. 18, depreciation of fixed assets should commence from the date on which they are put to use. Nevertheless, the fixed assets valued at Rs.60,482,365 purchased in the year under review had been depreciated for the entire year. As such depreciation had been overstated by a sum of Rs.4,616,613	Action will be taken to depreciate the fixed assets from the date of acquisition from year 2012.
	Accounting Deficiencies The following accounting deficiencies were observed.	
	(a) Even though the stock of consumables had been shown in the year under review under current assets as Rs.10,217,790, according to the physical verification report that amounted to Rs.10,013,436. As such the stock of consumables had been overstated in the accounts by a sum of Rs.204,354.	Action will be taken to rectify in future
	(b) Action had not been taken to capitalize the capital works-in-progress older than 05 years valued at Rs.220,665.	Action will be taken to analyze the said amount and to capitalize the same

Observations, Comments and Proposed Action of ITI for Auditor General's Report on the Accounts of ITI
for the year ended 31, December 2011
under Section 14.2 (c) of the Finance Act No. 38 of 1971

Item Ref. of A.G's Report	Description/Comments of the Auditor General's Report	ITI Observations, Comments and Proposed Action for rectification of audit comments
2.2.2. (contd..) (c)	Contributions to the Employees' Trust Fund amounting to Rs.506,084 and contribution to the Employees' Provident Fund amounting to Rs.4,217,373 in respect of cost of living allowances amounting to Rs.16,869,495 paid during the period January to September of the year under review, had been understated in the accounts	Payment of EPF/ETF on the Cost of living allowance is accounted from October 2011 as per the Board recommendation.
(d)	The machinery and equipment purchased in the year under review had been understated by a sum of Rs.540,796.	Correct accounting policies will be used in the future.
(e)	A sum of Rs.3,744,204 paid to a foreign institution for the renewal of the annual membership fee for the year 2011 for the utilization of library books, had been capitalized as the expenditure on library books incurred in the year. Depreciation thereon amounting to Rs.187,210 had also been brought to account.	'Science Direct' is a web based Journal Data Base, hence accounted under capital assets. The cost has been depreciated accordingly. Will seek clarification from appropriate authority and act accordingly
(f)	Even though the physical balance of library books as at 31 December 2010 had been shown as Rs.13,528,919, the opening balance of the library books on 01 January 2011 amounted to Rs.71,479,135. This balance included the annual online access fees paid to a foreign institution for the previous years.	The cost of the books is Rs 13,528,919 and the total of Rs 71,479,135 includes Books, Journals, articles and online access fees, Heading of the Fixed Assets Schedule in the Financial Statement will be changed as Library Books, Journals, and Online Access Fees etc.,

Observations, Comments and Proposed Action of ITI for Auditor General's Report on the Accounts of ITI
for the year ended 31, December 2011
under Section 14.2 (c) of the Finance Act No. 38 of 1971

Item Ref. of A.G's Report	Description/Comments of the Auditor General's Report							ITI Observations, Comments and Proposed Action for rectification of audit comments	
2.2.3..	Age analysis of accounts receivable							Sundry Debtors Most of the ledger outstanding appeared due to book entry errors. Considerable work was done by the finance department to reconcile and collect the balances and confirmation letters were sent to most of the debtors. However only few have replied. When reconciliation was done it was noted that the amounts which were transferred from the previous computer systems (Bottle Neck and Sage) were with mistakes. The outstanding which have been transferred to present DMS module have only the bulk amount and it is difficult to identify and set-off against the correct invoices. Staff Advances This account consists of distress loan given to employees which is recovered in 5 years time. The other loans are Educational and Computer loans. These loans are being recovered on monthly basis from salaries. Deposits The major deposit in this account is for Ceylon Electricity Board (1.2 million) and the balance consists for Fuel, Gas, etc.	
	Type of Debtors	Amount as at date of Balance Sheet (Rs)	Less than 1 year (Rs)	1-2 (Rs)	Age Analysis (Year) 2-3 (Rs)		3-4 (Rs)		Over 5 years (Rs)
	Sundry Debtors	9,662,212	2,089,326	835,684	1,245,612	397,766	5,093,824		
	Staff Advances	21,333,987	11,512,899	826,402	1,351,128	2,710,158	4,933,400		
	Deposits	3,261,313	175,606	529,609	144,350	110,500	2,301,248		
	The following observation is made.								
Even though there were debtors older than 05 years, no legal action whatsoever had been taken for the recovery of debts.									

Observations, Comments and Proposed Action of ITI for Auditor General's Report on the Accounts of ITI
for the year ended 31, December 2011
under Section 14.2 (c) of the Finance Act No. 38 of 1971

Item Ref. of A.G's Report	Description/Comments of the Auditor General's Report	ITI Observations, Comments and Proposed Action for rectification of audit comments												
2.2.4..	Lack of evidence for audit The following items could not be satisfactorily examined in audit due to the unavailability of evidence indicated against each item. <table><thead><tr><th>Particulars</th><th>Value (Rs)</th><th>Evidence not made available</th></tr></thead><tbody><tr><td>Current Liabilities (Tender & Security Deposits)</td><td>83,339</td><td>Confirmation of balances</td></tr><tr><td>Deposits</td><td>1,091,813</td><td>Receipts, documents</td></tr><tr><td>Debtors</td><td>4,459,333</td><td>Confirmation of balances</td></tr></tbody></table>	Particulars	Value (Rs)	Evidence not made available	Current Liabilities (Tender & Security Deposits)	83,339	Confirmation of balances	Deposits	1,091,813	Receipts, documents	Debtors	4,459,333	Confirmation of balances	Relevant ledger accounts to confirm these balances are available. However no replies have been received for confirmation of balances sent to clients.
Particulars	Value (Rs)	Evidence not made available												
Current Liabilities (Tender & Security Deposits)	83,339	Confirmation of balances												
Deposits	1,091,813	Receipts, documents												
Debtors	4,459,333	Confirmation of balances												
2.2.5.	Non-compliance with Laws, Rules, Regulations & Management Decisions Instances of the following non-compliances were observed <table><thead><tr><th>Reference to Laws, Rules etc., Regulations etc.,</th><th>Non-compliance</th></tr></thead><tbody><tr><td>(a) E-code of the DSR of SL Chapter II Section 10.1 to 10.5</td><td>An officer receiving a new appointment to a permanent Government Post, should undergo a medical test under a Government Medical Officer a and get his physical and mental fitness certified as a primary qualification for the appointment. Contrary to that requirement, a sum of Rs.43,955 had been spent by the Institute to get that suitability tested by a private hospital</td></tr></tbody></table>	Reference to Laws, Rules etc., Regulations etc.,	Non-compliance	(a) E-code of the DSR of SL Chapter II Section 10.1 to 10.5	An officer receiving a new appointment to a permanent Government Post, should undergo a medical test under a Government Medical Officer a and get his physical and mental fitness certified as a primary qualification for the appointment. Contrary to that requirement, a sum of Rs.43,955 had been spent by the Institute to get that suitability tested by a private hospital									
Reference to Laws, Rules etc., Regulations etc.,	Non-compliance													
(a) E-code of the DSR of SL Chapter II Section 10.1 to 10.5	An officer receiving a new appointment to a permanent Government Post, should undergo a medical test under a Government Medical Officer a and get his physical and mental fitness certified as a primary qualification for the appointment. Contrary to that requirement, a sum of Rs.43,955 had been spent by the Institute to get that suitability tested by a private hospital													

Observations, Comments and Proposed Action of ITI for Auditor General's Report on the Accounts of ITI
for the year ended 31, December 2011
under Section 14.2 (c) of the Finance Act No. 38 of 1971

Item Ref. of A.G's Report	Description/Comments of the Auditor General's Report		ITI Observations, Comments and Proposed Action for rectification of audit comments
(ii)	Public Administration Circular No. 24/2011 of 16, November 2011 and Chapter 11 Section 9 of the Establishment Code	Two officers over 60 years had been recruited for a period of 06 months contrary to the instructions of the Establishment code and the Public Administration Circular and paid a sum of Rs. 597,660	The IML department was running without a Head for several years and repeated attempts to recruit a suitable head through news paper advertisements failed. Since AD/TS was the former head of IML he was given assignment to oversee the section after his retirement until a suitable officer is found. Similarly to complete the DMS (30) salary work the HR office was given a 3 month assignment
(iii)	Chapter XIV and Public Administration Circular No. 6/2006 IV of 24, February 2006	Contrary to the rates of payment approved for different groups of officers, payment had been made at Rs. 600 based on an Internal Circular, thus resulting in an overpayment of Rs. 31,200	The payment made is recovered from the clients and paid as per the board decision.
(iv)	Financial Regulations FR 104	In the event of any loss or damage immediate action should be taken to assess the value and determine those responsible. No such action had been taken in connection with 03 accidents to motor vehicles	The relevant officer was advised to act in a prompt manner in the future.
(c)	Public Administration Circular No. 15/90 of 09, March 1990	Contrary to the circular instructions, temporary employees for vacancies had been obtained from a private institution	Whenever there is an urgent need for man power due to staff going on Maternity Leave etc Employees are hired from the private organizations to cover up the work for the smooth operation of ITI.

Observations, Comments and Proposed Action of ITI for Auditor General's Report on the Accounts of ITI
for the year ended 31, December 2011
under Section 14.2 (c) of the Finance Act No. 38 of 1971

Item Ref. of A.G's Report	Description/Comments of the Auditor General's Report	ITI Observations, Comments and Proposed Action for rectification of audit comments
(d)	Section 9.10 of the Circular No. PED/12 of 02, June 2003 Without obtaining the approval of the Secretary to the Treasury for making an appointment to the post of Instructor not included in the approved cadre of the Institute, the services of an Instructor had been obtained for the period January 2009 to December 2012 at a monthly allowance of Rs. 20,000 and had paid a sum of Rs. 480,000 up to 31 December 2011	On the instructions of the MOTR the Bio Technology unit was set up for biotechnology research. relevant to the country. Since ITI did not have a senior Bio Technology Specialist it was decided to obtain the service of a University Biotechnologist for expert advice/guidance and was paid an allowance with board approval.

Observations, Comments and Proposed Action of ITI for Auditor General's Report on the Accounts of ITI
for the year ended 31, December 2011
under Section 14.2 (c) of the Finance Act No. 38 of 1971

Item Ref. of A.G's Report	Description/Comments of the Auditor General's Report	ITI Observations, Comments and Proposed Action for rectification of audit comments
2.2.6.	Transactions of Contentious Nature The following observations are made.	
(a)	An incentive allowance of Rs.25,350 had been paid for the year 2010 contrary to the rules of the Procedure for the Payment of Incentive Allowance to a clerk recruited on contract basis to the Industrial Technology Institute through a private institution.	At the time of paying the incentive the said staff was taken into the ITI permanent cadre
(b)	Employees for the temporary vacancies occurring in the Institute had been obtained through a private employment agency and had paid a sum of Rs.144,224 to that agency without obtaining the approval of the Department of Management Services and the Ministry of Technology and Research.	Due to delays in getting approval for recruitment from the DMS these officers were taken on temporary basis to ensure smooth operation of the institute.

Observations, Comments and Proposed Action of ITI for Auditor General's Report on the Accounts of ITI
for the year ended 31, December 2011
under Section 14.2 (c) of the Finance Act No. 38 of 1971

Item Ref. of A.G's Report	Description/Comments of the Auditor General's Report	ITI Observations, Comments and Proposed Action for rectification of audit comments																																	
3. 3.1.	Financial Review Financial Results According to the financial statements presented, Financial and Operating Review, the working of the Institute for the year ended 31, December 2011 after taking into account the Government Grant of Rs. 162,000,000 for Recurrent Expenditure had resulted in a surplus of Rs. 59,318,986 as compared with the surplus of Rs 54,631,403 after taking into account the Government Grants of Rs. 165,000,000 received for Recurrent Expenditure of that year. As such financial result for the year under review as compared with the preceding year had indicated an improvement of Rs. 4,687,583. The earnings of the Institute had affected that improvement.	No comments																																	
3,2,	Analytical Financial Review The total income earned by the Institute during the year under review from the operating activities amounted to Rs. 148.4 million as compared with the income of Rs. 138 million in the preceding year. Details appear below. <table> <tr> <td></td><td style="text-align: center;">2011</td><td style="text-align: center;">2010</td></tr> <tr> <td></td><td style="text-align: center;">(Rs. M.)</td><td style="text-align: center;">(Rs. M.)</td></tr> <tr> <td>Standard Services</td><td style="text-align: right;">110.87</td><td style="text-align: right;">102.9</td></tr> <tr> <td>Consultancy Service</td><td style="text-align: right;">8.01</td><td style="text-align: right;">4.5</td></tr> <tr> <td>Transfer of Technology</td><td style="text-align: right;">1.7</td><td style="text-align: right;">1.5</td></tr> <tr> <td>Contractual Service</td><td style="text-align: right;">4.5</td><td style="text-align: right;">5.8</td></tr> <tr> <td>Descriptive Service</td><td style="text-align: right;">7.0</td><td style="text-align: right;">7.0</td></tr> <tr> <td>Training</td><td style="text-align: right;">5.9</td><td style="text-align: right;">5.9</td></tr> <tr> <td>Income from Library</td><td style="text-align: right;">0.4</td><td style="text-align: right;">0.3</td></tr> <tr> <td>Others</td><td style="text-align: right;"><u>10.04</u></td><td style="text-align: right;"><u>10.00</u></td></tr> <tr> <td></td><td style="text-align: right;"><u>148.4</u></td><td style="text-align: right;"><u>138.0</u></td></tr> </table>		2011	2010		(Rs. M.)	(Rs. M.)	Standard Services	110.87	102.9	Consultancy Service	8.01	4.5	Transfer of Technology	1.7	1.5	Contractual Service	4.5	5.8	Descriptive Service	7.0	7.0	Training	5.9	5.9	Income from Library	0.4	0.3	Others	<u>10.04</u>	<u>10.00</u>		<u>148.4</u>	<u>138.0</u>	No comments
	2011	2010																																	
	(Rs. M.)	(Rs. M.)																																	
Standard Services	110.87	102.9																																	
Consultancy Service	8.01	4.5																																	
Transfer of Technology	1.7	1.5																																	
Contractual Service	4.5	5.8																																	
Descriptive Service	7.0	7.0																																	
Training	5.9	5.9																																	
Income from Library	0.4	0.3																																	
Others	<u>10.04</u>	<u>10.00</u>																																	
	<u>148.4</u>	<u>138.0</u>																																	

Observations, Comments and Proposed Action of ITI for Auditor General's Report on the Accounts of ITI
for the year ended 31, December 2011
under Section 14.2 (c) of the Finance Act No. 38 of 1971

Item Ref. of A.G's Report	Description/Comments of the Auditor General's Report	ITI Observations, Comments and Proposed Action for rectification of audit comments
4. 4.1.	The following observations are made.	
	(a) The operating expenses of the current year and the preceding year amounted to Rs. 386.9 million and Rs. 331.6 million respectively	No comments
	(b) Out of the operating expenses for the current year and the preceding year, only 39% and 35% respectively .could be covered from the operating income	No comments
	(c) A system for separate accounting for the cost of each of the above operating service had not been implemented by the Institute and as such the profitability of each item could not be computed	No comments
	Operating Review Management Inefficiencies	
	The following observations are made	
	(a) Action had not been taken on the shortage of assets amounting to Rs.1,092,428 identified at the verification of assets. The Chairman informed that the assets not identified at the verification of assets had been referred to the respective Divisions for re-examination.	Unidentified assets at the physical verification were sent along with the Excess lists to relevant Divisions for re-verification. Few items had been identified and further verifications with regard to 2011 verification is in progress. After finalizing the 2011 verification, appropriate action will be taken on confirmed shortages.
	(b) A formal procedure had not been followed for the training of the officers of the Institute	Each year ITI submit the training requirement to ERD. Due to limited funds allocated for training, it is difficult to have a detailed plan for training.

Observations, Comments and Proposed Action of ITI for Auditor General's Report on the Accounts of ITI
for the year ended 31, December 2011
under Section 14.2 (c) of the Finance Act No. 38 of 1971

Item Ref. of A.G's Report	Description/Comments of the Auditor General's Report	ITI Observations, Comments and Proposed Action for rectification of audit comments
4:2	Under-utilisation of Funds An examination of the progress of 34 Projects commenced in the year under review revealed that the estimates amounted to Rs.36.02 million and the actual expenditure incurred amounted to Rs.7.405 million and the under expenditure amounted to Rs.28.615 million. The under expenditure relating to those Projects ranged from 0 to 44 per cent. It was observed that the delay in the receipt of Treasury grants had been the main reason for such situation.	The projects commenced only from the month of June 2011 as the treasury did not release funds for Projects. Limited funds were allocated for projects having high potential while works on other projects were curtailed. Purchase orders have been raised for several projects and funds will be utilized once the payments are made
4.3.	Idle and Underutilised Assets	
(a)	Out of the sum of Rs.1,672,550 received from the Ministry of Industrial Development for the Centec Project, a sum of Rs.619,840 remained in the Account No. 0000351567 since 15 October 2010 and 37 per cent of the money made available to achieve objectives had not been utilized.	The grant was given to CENTEC to undertake R & D and ITI was managing the fund on behalf of the Ministry of Industrial Development .The balance fund of Rs 619,840 will be released to CENTEC once the CENTEC board makes a request.
(b)	It was observed that 05 Current Accounts with balances amounting to Rs.1,824,010 had been dormant from January 2011.	On submission of the final reports of the Sponsored Projects action will be taken to transfer the balance funds to ITI income accounts.
(c)	An examination of 15 items of consumable goods valued at Rs.1,404,922 revealed that 06 of those assets had not moved from the year 2009 and that their value amounted to Rs.497,482. The Chairman informed that these essential stocks are retained to prevent any delays in the future.	For R & D work it is necessary to have stocks to meet urgent requirements considering the delays in imports and unavailability in local market.

Observations, Comments and Proposed Action of ITI for Auditor General's Report on the Accounts of ITI
for the year ended 31, December 2011
under Section 14.2 (c) of the Finance Act No. 38 of 1971

Item Ref. of A.G's Report	Description/Comments of the Auditor General's Report	ITI Observations, Comments and Proposed Action for rectification of audit comments
4.4.	Uneconomical Transactions	
(a)	Even though the officer responsible for the conversion of salaries of employees in terms of the Management Services Circular No. 30 had not performed his functions, that officer had been re-employed on contract basis for a period of 04 months after his retirement for the conversion of salaries on the payment of an allowance of Rs.147,660. That officer had failed to complete the salary conversions.	The Final DMS 30 Report of salary scales was received by the Institute at the end of January 2010. It was decided to obtain the service of the Senior Personal Officer, who was knowledgeable in this subject after his retirement. The work is completed now.
(b)	Even though institutions recognized by Government and having expertise for providing training to the Government Officers are available, a sum of Rs.720,000 had been paid to an institution without such expertise, for improving the knowledge of officers in English.	This Institute is a recognized organization and has conducted similar programs to government organizations such as Ministry of Plan Implementations and reputed public and private sector institutes hence this is a recognized institute.
(c)	The participation of the officers at a training provided by the Institute to its officers had been poor and as such a sum of Rs.53,048 out of the payment made for that training was observed as an uneconomic expenditure.	Explanations were called from the relevant officers for absenteeism and the Management has decided that their attendance will be taken into consideration for future training programmes and promotions

Observations, Comments and Proposed Action of ITI for Auditor General's Report on the Accounts of ITI
for the year ended 31, December 2011
under Section 14.2 (c) of the Finance Act No. 38 of 1971

Item Ref. of A.G's Report	Description/Comments of the Auditor General's Report	ITI Observations, Comments and Proposed Action for rectification of audit comments
4.5.	Identified Losses The following deficiencies were observed. (a) The assignment on the verification of stocks of the Institute had been awarded to the institution which quoted a higher price instead of selecting the lowest bid, thus causing loss of Rs.92,720. (b) A sum of Rs.73,718 had been spent on servicing computers, of which the guarantee period had not expired. (c) The Bank of Ceylon had recovered a sum of Rs.599,085 out of the interest on the sum of Rs.110,200,000 invested in that Bank in fixed deposits as the Withholding Tax and remitted to the Commissioner General of Inland Revenue.	Although the offer of Ernst & Young was higher the firm was selected based on the expertise, experience and quality of work. The Firm completed the verification successfully. The price difference was only Rs. 50,000. Price variance of Rs. 92,720 stated in the audit comment is inclusive of VAT and NBT. Payment is made only for computers which do not come under warranty No comments

Observations, Comments and Proposed Action of ITI for Auditor General's Report on the Accounts of ITI
for the year ended 31, December 2011
under Section 14.2 (c) of the Finance Act No. 38 of 1971

Item Ref. of A.G's Report	Description/Comments of the Auditor General's Report	ITI Observations, Comments and Proposed Action for rectification of audit comments
5.	Systems and Controls Deficiencies in systems and controls observed during the course of audit were brought to the notice of the Chairman from time to time. Special attention is needed in respect of the following areas of control. Areas of Systems and Controls (a) Recruitment (b) Postal Expenses (c) Training (d) Purchases	New Scheme of Recruitment was approved in May 2012 recruitments is being done accordingly. Action will be taken to rectify in future The budget for training is limited there by nominees is made by the heads of the departments as per the needs & trends and employees are sent for different training programmes. Action will be taken in future to rectify and correct the procedures in the areas needed.

Sgd, H.A.S. Samaraweera
Auditor-General

September 2012 ISSN 1391 - 4456

Compiled and edited by :

Ms. Suranee Samarasekera
Senior Deputy Director, Information Services Centre

Editorial Advice by :

Prof. Vijaya Kumar, Chairman
Dr. A.M. Mubarak, Director/CEO

Typesetting & graphics by:

Charunie Samaranayake

Divisional data provided by Divisional Senior Deputy Directors & Heads,
Financial data provided by Finance Department and Personnel data
provided by Human Resource Department is acknowledged.



INDUSTRIAL TECHNOLOGY INSTITUTE

363, Baudhaloka Mawatha, Colombo 07.

Tel: 2379800 Fax: 2379850

Website: www.iti.lk