

### **INSTITUTE OF FOOD SCIENCE & TECHNOLOGY SRI LANKA**

# NEWSLETTER

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# upcoming **EVENTS**

## FoodTechno 2016: Innovation to Application

The Second Annual Research Session of the IFSTSL

The Institute of Food Science & Technology Sri Lanka successfully held its first annual research session on 15<sup>th</sup> December 2015 at Renuka City Hotel, with eleven presentations of industry oriented research conducted at different universities and research institutes of the country. The aim of the annual research session is to provide an opportunity for the universities and the other research institutes to present their industry oriented applicable research findings to the food industrialists as a means for transferring new innovations to industrial applications. With the requests of the participants and the stakeholder groups, Institute decided to expand its second annual research session for a larger audience. Therefore, the second annual research session of the IFSTSL will be held on 13th August 2016 during ProFood/ProPack Exhibition at BMICH as a full day event, under the name "FoodTechno 2016: Innovation to Application". Researchers who have unpublished food industry oriented applicable research are hereby invited to submit abstracts to the FoodTechno 2016 and, the interested audience is requested to confirm participation by registering to the research session. All the research presentations will be published in the proceeding of FoodTechno 2016 as extended abstracts.

#### **Submission of Abstracts**

- Send extended abstract in the Word format to ifstslinfo@gmail.com
- For the guidelines of preparing abstracts please visit http://slfpa.org/ifstsl.php
  - For late submissions please contact IFSTSL secretariat

12 <sup>th</sup> Aug 2016	Food Regulations and Standards: National and International Perspectives An awareness seminar
13 <sup>th</sup> Aug 2016	FoodTechno 2016: Innovation to Application Second IFSTSL Annual Research Session

# Food Regulations and Standards: National and International Perspectives

An awareness seminar organized by the Institute of Food Science and Technology, Sri Lanka

On the first day (12<sup>th</sup> August 2016, afternoon) of Profood/Propack 2016 exhibition at BMICH

Effective national food control systems are essential to protect the health and safety of domestic consumers. They are also critical in enabling countries to assure the safety and quality of their foods entering international trade and to ensure that imported foods conform to national requirements. The new global environment for food trade places considerable obligations on both importing and exporting countries to strengthen their food control systems and to implement and enforce risk-based food control strategies. Further, dialogue among different stakeholder groups of the food sector is necessary to improve awareness to ensure enforcement of regulatory requirements and also to seek for possible improvement in the food sector.

The objectives of this awareness seminar includes

- Review of national primary and secondary food regulations and identification of gaps
- Importance of meeting the requirements under changing international food regulations and guidelines
- Application of Sri Lankan specifications for food in food regulatory system in Sri Lanka
- Regulations governing livestock food sector and importance of meeting standards

Target group: Managers and supervisors in the food industry engaged in food safety and quality management, Personnel engaged in food regulatory and standardizing activities, personnel engaged in food inspection activities and Undergraduate and postgraduate students studying food science and technology

For more details & registration contact IFSTSL secretariat (Mrs. Sandhya Fernando)
Phone: 011-7548770 or 011-4920206; Fax: 011-7548771
Email: ifstslinfo@gmail.com

Ifstsl Colombo



#### Message from the President of IFSTSL

The Institute of Food Science and Technology Sri Lanka was established in the year 2011 with the prime objective of acting as a linking body for main stakeholder groups of the Food Sector in the country and to provide a common platform to initiate a dialogue basically targeting the advancement of the Sri Lankan



food Industry with a long term goal of protecting and meeting the needs of the consumers.

The food industry in Sri Lanka is growing fast and it has become one of the key industries in the country which contributes greatly to the country's economy. The numbers of food manufacturing and service establishments as well as the personnel involved in the sector have increased gradually over the past years. In order to continue these developments, the sector needs to entrench product and process diversification, adapt new technologies, develop competent and skillful manpower and specially meet the needs of local and global food trade requirements. Compared to the other aspects, food quality and safety have become priorities in the sector due to the emerging and rising foodborne disease issues associated with the food consumption all over the world. In Sri Lanka particularly higher attention is given to regulate the sector by imposing laws, mandatory standards, guidelines and promoting the use of voluntary standards in relation to food safety and quality conformance. More stringent requirements need to be met in dealing with the global food trade, in relation to the quality and safety aspects of products as they play a paramount role to enter into the global food trade as well as to stay long by facing the competition coming from the other exporting countries. In this context it is understood that the collaboration among stakeholder groups of the food sector is essential to go forward with the timely developments. Collaboration among authorities, regulatory bodies, food industry, research institutions, academic institutions and public would provide means to develop and obtain compliance to global requirements. In Sri Lanka particularly there are a considerable number of academic institutions and research institutions who are engaged in conducting valuable research that can provide viable solutions for the burning issues among the food industrialists and also provide information required even to aid setting regulations and the standards for the food sector. However, the system is not developed to effectively share relevant information among the groups in need. This situation urges the institute to involve as a mediator among stakeholder groups to develop linkages.

The institution is proceeding with its services for the 5<sup>th</sup> consecutive year and we have strong and dedicated individuals representing all the stakeholder groups of the food sector in Sri Lanka. These professionals take the lead organizing and serving the needs of the country backed by their expertise and we have achieved considerable developments in meeting objectives of the institute. The institute is mainly serving as a training provider for the food industry by identifying the timely needs to be in par with the global developments mainly targeting the human capacity development to handle situations especially pursuing quality

and safety requirements. Among them the institute conducted training programs targeting good manufacturing practices and basic hygiene regulations applicable to the food industry, microbiological troubleshooting specially for the food exporters, and accreditation of microbiological laboratories with ISO 17025:2005 standard and food safety system certification. The institute has so far organized and successfully held interactive sessions specifically targeting to identify and discuss the lapses and improvements needed in the food control infrastructure, accreditation and certification framework of Sri Lanka. The institute organized an annual research session last year with the aim of providing the opportunity for food industrialists to get to know the related research conducted by the university students from the field of food science and technology. Institute is continuing to provide advice and relevant information for the food industry and we are happy that the link is getting strengthened. This year we are planning to conduct training programs specifically targeting accreditation of chemical laboratories with ISO 17025:2005, food safety assurance for the food catering sector, ISO 22000 food safety certification training for the trainers and the consultants, food processing technologies and process optimization targeting small scale and medium scale producers among others.

We are in the process of flaring our member base to accomplish our goals successfully and as the president of the Institute I personally invite the academics, researchers, scientists, personnel involved in regulatory activities and experts from the food industry to join us by taking the membership to reinforce our service to the nation through combined efforts.

Dr. Eresha Mendis

#### Message from the President of SLFPA

While congratulating and welcoming the new board of the Institute, as the incoming president of the SLFPA, I am looking forward to seeing the industry work closely with the institute to help the Sri Lankan food and beverage manufacturing industry reach greater heights.



At our recently concluded planning sessions for the coming years, on identifying and discussing issues faced by the industry currently and the issues we may face in the future, we find that there are some very important roles to be fulfilled by the IFSTL for the betterment of the industry in Sri Lanka.

While we hope that the IFSTSL will be the champion of the effort to make globally acceptable food safety standards the norm in Sri Lanka, and the voice of the institute will be invaluable in helping shape future policy to ensure the best products for our consumers while at the same time being adoptable by the industry.

We also hope to support the Institute to uplift the level of knowledge and professionalism among those working in the industry, which while helping the industry would also help uplift the profile of food processing as a profession, making it a more attractive option to young people entering the workforce.

Mr. Maliek de Alwis

#### RESEARCH FOR THE FOOD INDUSTRY

Inauguration lecture delivered by Emeritus Professor Upali Samarajeewa at the First Annual Research Sessions of IFSTSL – 2015

Food industry is a fast developing industry everywhere in the world, continuously seeking development of new products and improving the quality of existing products to meet consumer preferences. Industry requires a strong research backing, both within the industrial premises and from the academia. The research backing needs to be operative as a two-way process between the research scientists and the industry. The levels of interactions required to be operated between the universities and the industries depend on the scale of production and the levels of the technology applied in the food industries.

The food industry in Sri Lanka could be grouped into three categories based on the levels of operations. The first category consists of the multinational industries using the technology developed abroad, but applied in processing local raw materials. The scale of production at this level naturally face problems arising due to morphological and rheological characteristics of the raw materials which does not match adequately with the processing conditions. This needs an approach of modifying the processes, machinery, inputs and operational conditions, closely monitoring the sensory characteristics of the locally processed foods against their counterparts elsewhere. It demands research, addressing processing and formulation adjustments to suit the individual situations. The second category consists of large food industries committed to develop new products using local raw materials. They need scientists who could work out the processes based on first principles taking in to consideration the compositional characteristics, active ingredients and the ingredients creating the market demand in the new products, to finally end up with innovations for modern vibrant markets. The third category consists of small-medium industries operating with the local know how, requiring more guidance based on sound food science and problem solving approaches.

The research scientists in the universities and the research institutions in Sri Lanka need to get oriented to address the needs of one or more of the above categories effectively, through service oriented commitments. Since most of the Sri Lankan industries do not maintain research arms, the external services of the scientists in problem solving and introducing new concepts need to occur continuously. One of the major functions of the IFSTSL, which has taken the challenge and has started working continuously and effectively is to bring the two groups together. The research session today is a major step taken towards this goal, which should become an event everybody interested in food technology should be looking forward for. It provides the exposure necessary for the young graduates to understand the industry and market their research talents.

It is well known that the success of a researcher depends heavily on his or her ability to select and identify the research problems correctly, and plan the strategies operational under a given set of conditions to achieve the targets. This approach requires an in-depth knowledge in the subject area, continuously bombarded by new knowledge emerging in the field. It is an exercise of the mind that creates the materials necessary for innovations in one's mind. The food industry is continuously looking for persons with such potential.

There is always a belief among the researchers that the industry is rich and should fund the research proposed by the scientists. On the other hand, the industry as major tax contributors expect returns for their taxes through research from institutions. Research requires much funds and much time than what is said and expected. It is therefore the responsibilities of all those who are interested to understand the realities in the limitations and commitments associated with innovations.

Among the administrators and the industry there are many who complain that the research has not produced desirable benefits, that the funds put on return do not give immediate benefits, and hence research is considered a less important activity related to national development. Conversion of academic research findings to industrial applications needs time. Generally, there is an incubation period of a few years before the research results find its way in to application. The mechanism for conversion of research findings to applications lie in constant communications between the researchers and the industries. The IFSTSL plays an important role to keep this process active, lively and operational.

If the university-industry relations are to be meaningful and effective, it is important that the research scientists become proactive and predict the future problems and the developmental needs of identified food industries. If the solutions could be identified and documented, the most important base for the university-industry link, and the recognitions to the institutions for research would get established easily. Scientists expecting the industry to come to them with problems, and the scientists taking years to find solutions to problems are of no value to the food industry, which is facing market competitions. A few success stories of industrialization of research are given below as case studies. The case studies bring out the solutions put into a time frame in addressing the problems from a pro-active angle. Each case presented make it clear that there is an incubation period before a research finding gets into industrial application.

<u>Case 1</u>: In 1969 the United States Department of Agriculture banned container loads of copra from Philippines as they were contaminated with aflatoxins. At that time the knowledge of aflatoxins in our part of the world was almost non-existent. In 1971, the Coconut Board of Ceylon along with the National Science Foundation and the University of Peradeniya established a research project and employed a student for full time research. By 1975, Sri Lanka had all aspects of the problem explored recognizing the origins, the extent of the problem,

the preventive measures and decontamination measures, documented and published at international level. The knowhow was therefore available in Sri Lanka before any foreign parties dictate terms and the industry knew how to avoid the issues, and also to prevent the exposure of the local population to this carcinogenic compound, aflatoxins.

<u>Case 2</u>: In mid-nineteen fifties the Coconut Research Institute examined the chemistry behind the process of acidification of toddy resulting in vinegar, and worked out means to enhance the reactions to be applied commercially. In 1960, the CRI was able to establish a medium scale processing unit with a private party and provide him technical assistance free of charge to run the operation for years. The activity finally ended as the generator process for natural coconut vinegar production, which captured the Sri Lankan food market replacing the imported and synthetic vinegars.

Case 3: By 1974, the test methodology along with validation data and interferences and artifacts associated with test methods for aflatoxin analysis were well established locally under case 1. In 1988, - Nestle — the company which was producing Thriposha using soybean as an ingredient ran into a problem of aflatoxins arising from Soybean in their products, meant for pregnant mothers. The knowledge already published and in hand, helped a researcher to go and work voluntarily in the Nestle laboratories and demonstrate that there are no aflatoxins in the soybeans, and what has occurred was a misidentification of another compound as aflatoxins. The solution was already in hand for the industry, due to development of new knowledge by scientists.

Case 4: In 1983, a researcher in the University examined different packaging materials for storage and export of desiccated coconuts, and found the best as well as the moisture absorption properties of desiccated coconuts subjected to different relative humidity conditions, that the desiccated coconut may be exposed to during transit. This lead to establishing the maximum limits of moisture that may be permitted at the export point. In 1988, a shipment of desiccated coconut arriving in Germany was found to be contaminated with aflatoxins. On perusal of the test reports pertaining to the exported lot, it became obvious the moisture at export point was more than what was recommended in the published study in 1983. Obviously the industry benefited from available research data to understand the problem immediately and ensure the future lots will not face the problem.

Case 5: In 1987, the peanuts sold in Colombo and Kandy were found to be heavily contaminated with aflatoxins due to faulty agronomic practices and handling, in the cultivation areas. Sale of peanuts and peanut products were banned in the Kandy Municipality area. By 1988, the Food Testing laboratory of the Municipality was able to train all the small scale peanut producers to sort out the moldy, immature and wrinkled peanuts, by demonstrating to them with experimental data, that sorting eliminates the problem. The industry was able to market peanuts with no contamination and ban was lifted.

Case 6: In 1975, the research on smoke curing of coconuts to produce copra revealed that the smoke brings in a protective effect on coconuts against growth of fungi. However, this raised a new food safety issue as to whether there is deposition of carcinogenic polycyclic aromatic hydrocarbons (PAH), on copra. In 1995, the western world got interested in examining PAH in coconuts. They established a research project in 6 countries, which included Sri Lanka. The research lead to the finding, that the copra curing could be best done with coconut charcoal instead of coconut shells. That was in 1997. A copra kiln designed for operations using coconut shell charcoals brought in a national award for the researchers in 2004. The system is now available for the coconut industry to use. Some copra producers, especially for the export market are using this method.

Case 7: One of the major drawbacks in our alcoholic fermentation industry was the low yield in production of alcohol from sweet coconut toddy. Much research was done by several groups in 1970, 1977, 1981, 1983 and 2000. One group developed the technology in 1977 to increase the yields by adding urea to toddy collecting pots, while another group worked out the introduction of sodium metabisulphite, both influencing the natural yeast activity through two approaches. Unfortunately, the alcoholic fermentation—distillation industry was never ready to use the new technologies for their benefits.

<u>Case 8</u>: Cashew is a product which has ready market potential with only 50% of the demand met globally. A project examined scientifically the causes behind low quality of Sri Lankan cashew in 1993 and identified remedial measures including design of a drier in 2000 to be used at cooperative level by small industries to improve quality. A process for marketing at the village level was established in 2002. This industry needs more organized attention to make improved benefits from the export sector using the research findings.

<u>Case 9</u>: The research on polycyclic aromatic hydrocarbons in 1995 accumulated new knowledge that the coconut oil on exposure to heat during expulsion above 60 °C results in generation of PAH. The new virgin coconut oil export industry ran into problems due to presence of PAH in 2015. The research data available from previous studies helped in providing immediate solutions to the industry to avoid formation of PAH in virgin coconut oils.

The above case studies provide ample evidence that the research should be conducted well ahead of the industry, with the researchers identifying the problems that may arise in the future. This is possible only if the researchers are constantly vigilant, identifying what problems are arising in the industries elsewhere, and working out solutions by their own. Up to date knowledge in the subject area, supporting data generated by one self, untiring efforts and the readiness to exercise the mind addressing potential problems, are the key features necessary in the university-industry interactions to be an effective partner in national development efforts.

#### **IFSTSL First Annual Research Session (2015)**

Institute of Food Science and Technology Sri Lanka held its first Annual Research Session on 15<sup>th</sup> December 2015 at Renuka City Hotel, Colombo 03. The session commenced with the lighting of the traditional oil lamp and session coordinator and the secretary of IFSTSL-2015 Dr. Niranjan Rajapakse delivered the welcome speech. In his speech he highlighted the objective and the importance of the research session organized by the institute. He emphasized that the institute in its mandate has clearly identified its role to promote linkages among different stakeholder groups of the Sri Lankan food sector and this event was one such activity organized to accomplish that. Also he stated that findings of research conducted by institutions including universities, research stations and other line agencies need to be exposed to the food industry where the highest need exists for knowledge to apply aiming at improvements or innovations in the food sector in Sri Lanka. Further he emphasized that through this event the food science graduates get an opportunity to present themselves s along with their findings to the food industry to open up employment opportunities for them and at the same time the food industry get a chance to gather the findings which are relevant to their scope, identify competent graduates to join with them and to have a dialogue to highlight the research needs of the food industry.

The keynote address was made by the president of IFSTSL. Emiritus Prof. Upali Samarajeewa on "research for the food industry". In his speech he highlighted the importance of research scientists in the universities and the research institutions in Sri Lanka to get oriented to address the different needs of the food industry effectively, through service oriented commitments. Also he emphasized that if the university-industry relations are to be meaningful and effective, it is important that the research scientists become proactive and predict the future problems and the developmental needs of identified food industries.

Research presentations were allocated to three technical sessions and Emeritus Prof. Upali Samarajeewa, Prof. K.B. Palipana and Prof. K.K.D.S Ranaweera chaired these sessions. There were eleven presentations of industry oriented research conducted at different universities and research institutes of the country on following topics.

- 1. DEVELOPMENT OF A SYNBIOTIC BEVERAGE FROM BEET ROOT JUICE USING BENEFICIAL PROBIOTIC *Lactobacillus Casei* 431
- 2. EFFECT OF PHYSICALLY STRUCTURED WATER PRODUCED BY NANO-TOURMALINE IMPREGNATED CERAMIC BEADS ON IMPROVING EXTRACTABILITY OF CAFFEINE, CURCUMIN AND OIL EMULSIFICATION
- 3. DEVELOPMENT OF HOT SMOKED FISH PRODUCT BY HERRINGS (Amblygaster sirm)
- 4. FORMULATION OF A NOVEL HIGH ENERGY BREAKFAST BAR F O R ADULTS
- 5. COMPARATIVE STUDY OF INCORPERATION OF MORINGA (Moringa oleifera) LEAF POWDER INTO SOY MILK AS A SUBSTITUTE FOR COW MILK
- 6. DEVELOPMENT OF A METHOD TO REMOVE BEANY FLAVOUR IN READY-TO-SERVE SOYA DRINK
- 7. EFFECT OF COOKING TIME AND COOKING TEMPERATURE O N ANTIOXIDANT ACTIVITY AND ANTIMICROBIAL ACTIVITY OF CINNAMON, GARLIC, GINGER AND TURMERIC
- 8. DEVELOPMENT OF HEALTH BENEFICIAL INSTANT NOODLE BY INCORPORATING EDIBLE FIBRE FROM NATURAL FOOD SOURCES
- ENHANCING TEXTURE STABILITY AND GEL FORMATION OF FISH SURIMI PRODUCED FROM SWORDFISH (Xiphias gladius) BY REPLACING EXISTENT CRYOPROTECTANTS WITH OVOMUCOID
- 10.IMPROVEMENT OF TEXTURE AND FLAVOUR OF A DEEP-FRIED Keeramin badum FISH PRODUCT BY MODIFYING SALTING AND FRYING CONDITIONS
- 11. DEVELOPMENT OF READY TO USED RICE BASED OYSTER MUSHROOM (*Pleurotus ostreatus*) BURGER

A good dialogue took place during the event between the industrialists and the presenters and the participants emphasized the need of having a wider industry audience in the future to accomplish the goals of the activity.



## Highlights of the Training Seminar on Food Microbiology Laboratory Accreditation

Food supply chains have become ever longer and more complex as food production has developed into a truly global industry. The need to monitor the safety of food at every stage means that microbiological testing remains a key weapon in the fight against food contamination and the volume of testing undertaken continues to grow. In this context over the last twenty years it has become almost essential for food microbiology laboratories to demonstrate their competence and the reliability of their results by gaining some form of third-party accreditation. The accreditation standard chosen by most food microbiology laboratories is ISO/IEC 17025:2005 "General requirements for the competence of testing and calibration laboratories", which covers the general requirements of running a laboratory competently and responsibly. To gain accreditation the laboratory will need to ensure that all aspects of its operation meet the requirements of this standard. In Sri Lanka the numbers of accredited laboratories providing microbiological testing facilities are few and a trend exists among food companies to develop their own accredited laboratories to accomplish their standard testing requirements.

Identifying this need the Institute of Food Science and Technology Sri Lanka organized a one day training seminar on MICROBIOLOGY LABORATORY ACCREDITATION to provide preparatory guidance for accreditation against International Standard ISO 17025:2005. This was held on 24<sup>th</sup> February 2016at Renuka City Hotel, Colombo 03. The training session was conducted by Emeritus Professor Upali Samarajeewa who has worked on laboratory accreditation as an International Expert for United Nations Industrial Development Organization and the Asian Development Bank in 20 countries since 1998. He has guided building up of more than 100 testing laboratories in the areas of microbiology, chemistry, pesticide residue analysis and heavy metal analysis through several accreditation bodies in the developed countries. The objective of this training program was to provide a opportunity for the Sri Lankan testing laboratories to gain knowledge, to plan the way-forward counting on his wide laboratory experiences, developmental approaches, and the techniques that has led

to undisputed success internationally. The training covered the following areas,

- Introduction to concepts of Laboratory Accreditation
- Infrastructure development, maintenance of laboratories and financial requirements
- Preparation of quality system documents in line with ISO 17025:2005.
- Preparation of technical documents for accreditation in line with technical requirements of the ISO 17025:2005
- Staff Responsibilities and quality management activities for successful gain and maintenance of accreditation
- Method validation and Proficiency testing as keys to international acceptance

Thirty one participants got trained and they represented the following food manufacturing companies, Universities or research institutes.

- 1. Fonterra Brands Lanka (Pvt) Ltd
- 2. Cargills Quality Foods (Pvt) Ltd
- 3. Country Style Foods (Pvt) Ltd
- 4. HJS Condiments (Pvt) Ltd
- 5. D.Y & D.U. Rajapakse Henegama Mills
- 6. S.A. Silva & Sons Lanka (Pvt) Ltd (Silver Mills Group)
- 7. Ceylon Cold Stores PLC
- 8. Akbar Brothers (Pvt) Ltd
- 9. Samik Natural Food (Pvt) Ltd
- 10. American Premium Water Systems (Pvt) Ltd
- 11. CBL Global Foods Ltd
- 12. Unilever Sri Lanka Ltd
- 13. Department of Food Science & Technology, Faculty of Agriculture, University of Peradeniya
- 14. Department of Food Science & Technology, Wayamba University of Sri Lanka
- 15. Department of Public Health & Pharmacology, Faculty of Veterinary Medicine & Animal Science, University of Peradeniya
- 16. Tea Research Institute
- 17. Horticultural Crop Research & Development Institute, Department of Agriculture







#### **New Regulation on Sugar Content in Beverages**

With the intention of support controlling the non-communicable diseases, Ministry of Health has introduced a new regulation on which is cited as the Food (Colour Coding for Sugar levels) Regulations- 2016 and shall come into force from 01st August 2016. New draft regulation has been already gazetted on 3<sup>rd</sup> May 2016, No.1965/18.

This new regulation will cover carbonated beverages, ready to serve beverages other than milk based products, fruit nectar and fruit juices. As per the new guidelines, container or the package which contains such food shall have a label with: (i) a numerical description of the sugar content, (ii) a description of the relative sugar level and (iii) a colour code as specified in the regulation. If the sugar content per 100ml of drink is more than 11g, food will be rated as High sugar (Red), 2g to 11g per 100 ml will be rated as medium sugar (Amber colour) and if the sugar content is less than

2g it will be rated as low sugar (Green). Further specification of the label has been clearly mentioned in the regulation. In the regulation "Sugar" has defined as all monosaccharides and disaccharides in food.



Rasika Roshan Seneviratne

## **EXECUTIVE COMMITTEE** FOR THE YEAR 2015/2016

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Mr. Mohamed Rushdi-Committee Member

#### ආහාර ආරක්ෂිතව පිළියෙළ කිරීම පිළිබඳ දේශනය

ශී ලංකා ආහාර විදාහ හා තාක්ෂණ ආයතනයේ දායකත්වයෙන් හා නාවලපිටිය සෞඛ්‍ය කාර්යාලයේ අනුගුහයෙන්, පාසල්ළමුන් සඳහා ආහාර පිළියෙළ කිරීමේ යෙදී සිටින කුඩා ආයතන සහ එම පාසැල්වල ගුරුවරුන් හා සෞඛ්‍ය සේවිකාවන් දැනුවත් කිරීම සඳහා දේශනයක් හා සාකච්චා වටයක් මාර්තු 29 වන දින නාවලපිටිය නගරසභා දේශනශාලාවේ පැවැත්විණ. බොහෝවිට වාර්තාවන පාසැල් දරුවන් හා වෙනත් රැකියාකාණ්ඩ අතර ආහාර හේතුකොටගෙන විෂවීමට බලපාන කියාවලියන් හා එම සිදුවීම් වලක්වාගත හැකි කුම පිලිබඳ උපදෙස් මෙම වැඩ සටහනේදී සාකච්චාවට බදුන් විය. ආහාර තුල ක්ෂුදුජීව හානි වලක්වාලීම පිළිබඳ දැඩි අවධානයන් හා ගතයුතු කියා මාර්ග මෙහිදී ඉදිරිපත් කෙරින. මෙම වැඩ සටහනට 75 දෙනෙක් සහභාගීවිය. දේශනය අවසානයේදී මතු පුයෝජනය සඳහා ශී ලංකා ආහාර විදාහ හා තාක්ෂණ ආයතනය මගින් පිළියෙළ කළ දේශණ ඇතුළත් සංයුක්ත තැටියක්, වැඩ සටහණ කියාත්මක කල ආහාර පරීක්ෂක මහතාට පිළිගන්වන ලදී.



#### The relevance of GMP standard for the Sri Lankan cinnamon processing industry

Amongst other agricultural exports from Sri Lanka, spices and allied products hold a greater share of the export revenue. According to information published by the Export Development Board, Sri Lanka has captured the interest of the world, especially the interest of western nations due to the supply of spices with a distinctive quality. Cinnamon, pepper, cloves, cardamoms, nutmeg, mace and vanilla have been popular in the international market and the global demand seems to increase over the time. Among spices, cinnamon is the number one in the spice sector and currently Sri Lanka witnesses the pride of becoming the largest world producer and the exporter.

Cinnamon is a crop which has a high potential to develop considering its adaptability to various soil and climatic conditions prevailing in Sri Lanka other than its increasing export potential. Cinnamon has grown in Sri Lanka for many years and at present, pure Ceylon cinnamon is marketed as a branded product to the world. Cinnamon is used by the buyers for several purposes. In terms of food uses, it is mostly used as a spice or a flavor enhancer. However, it is becoming popular as a beverage in many countries. The functional and medicinal effects of cinnamon promote its use among the health conscious consumers. According to market data it is becoming apparent that Ceylon cinnamon is losing few markets due to the cheaper substitute cassava. Furthermore, the loss of market is resulted due to Ceylon cinnamon does not adequately meet product specifications and compliance to food safety and quality standards. Being a food, quality and safety criteria of cinnamon need to be considered as vital parameters for international trade. Particularly in case of exports, if the required quality and safety are not ensured in products, it is not possible to anticipate long-term competitiveness to acquire a good market and a good export potential for cinnamon. Because many stringent regulations, standards and specifications related to food quality and safety are appearing in the international trade, due to safety related issues of food items experienced by the consumer. The compliance to the requirements is a requisite to exist in international trade seeking a better future.

In Sri Lanka, both cinnamon cultivation as well as processing takes place mostly on smaller scale. Thus, the high cost of production, low volumes, and poor quality assurance limit the competitiveness in major export markets. Considering the scale of production and other limiting factors of the cinnamon processing industry in Sri Lanka, it is ideal to establish basic food safety standards like Good Manufacturing Practice (GMP) to lay the foundation of food safety demanded by the international market. GMP covers the basic conditions and activities that need to be established in cinnamon processing to maintain a hygienic environment suitable for the production, handling and provision of safe end product and safe food for human consumption. Understanding the nature of the operations and the risks associated with production and processing, the organizational GMP program needs to be established, implemented and maintained in such a way that the likelihood of introducing food safety hazards to the product through the work environment is minimized and in turn maintain high quality standards of products to consumers.

To provide guidance on practical aspects of developing, implementing, and maintaining GMP within a cinnamon processing facility to protect cinnamon from chemical, microbiological and physical contaminations two books were published jointly with United Nations Industrial Development Organization (UNIDO) and The Spice Council under the "UNIDO-WTO-TSC" cinnamon project called *Enhancing the compliance, productive capacities and competitiveness of the cinnamon value chain in Sri Lanka*, and the funds were provided by UNIDO and Standard and Trade Development

Facility (STDF) of the World Trade Organization (WTO). These two books written in English and Sinhala were authored by Dr. Eresha Mendis (President of IFSTSL) who has been serving as a food safety consultant for UNIDO projects. Requirements highlighted in this booklet can be followed and adopted by the interested parties involved in cinnamon processing to obtain compliance with GMP.





