IFSTSL
INSTITUTE OF FOOD SCIENCE & TECHNOLOGY SRI LANKA

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NEWSLETTER

VOLUME 13
ISSUE I
July - 2024

PRESIDENT'S MESSAGE

As we move through 2024, I am filled with immense pride and optimism for the future of the Institute of Food Science and Technology Sri Lanka (IFSTSL) hand in hand with Sri Lanka Food Processors Association (SLFPA) Sri Lanka. We continue to lead and take innovative movements in the field of food science and technology, making significant contributions that impact not only our industry but also the well-being of the people of Sri Lanka.

This year, we want to witness remarkable advancements in food safety, sustainability, and nutrition. Our members have been at the forefront of developing new technologies and methodologies that enhance the quality and safety of our food supply. The theme of our upcoming annual scientific sessions, "Science for Sustainable Food systems," reflects our commitment to addressing the pressing challenges of our time. I encourage you to join us as we explore new strategies and solutions that will drive our industry forward. Together, we can harness the power of science and technology to create a more sustainable and resilient food system.

I am also delighted to announce several new initiatives aimed at supporting our members' professional development. Our certificate programs, such as sensory evaluation, food quality and food safety requirements for food exports, expanded webinar series, E magazine and enhanced online and public resources are designed to provide you with the tools and knowledge needed to excel in your careers. We believe that continuous learning and collaboration are key to our collective success.

As we look ahead, I am excited about the opportunities that lie before us. The IFSTSL is more than just an organization; it is a vibrant community of dedicated professionals committed to advancing the science and technology of food. Your passion, expertise, and commitment are what make our institute truly exceptional. Thank you for your continued support and active participation in IFSTSL. Together, we will continue to lead, innovate, and inspire.

Prof Anoma Chandrasekara
President IFSTSL

DISSEMINATION OF KNOWLEDGE

Short Courses, Workshops and Webinars

IFSTSL successfully held the packaging workshop on 16th March, 2024 at the Sarvodaya Nagarodaya Centre, Colombo 01, as the 4th workshop of the workshop series under the theme of 'Becoming a successful entrepreneur', to serve as a platform for micro, small and medium-sized enterprises (MSMEs) to enhance their knowledge and understanding of food packaging. This full-day workshop covered the topics of packaging machinery and packaging materials with practical demonstrations followed by the 'Packaging Clinic', which was a platform for the participants to clarify their questions. IFSTSL is thankful to Mr. Nishan Perera and Mr. Ranil Thilanka who delivered the lectures and shared their valuable knowledge marking this a very fruitful event for all the 35 participants, who are engaged in different areas of food industry holding different capacities.

Sensory evaluation: Beyond Basics - A short course on sensory Evaluation; Beyond Basics is conducted from June 1st till 20th July 2024 by eminent academics and industry expertise. There are 24 participants from industry and universities.

A public webinar on guide to correct food pattern for busy life style was conducted on June 8th by two senior dieticians in Sri Lanka. Dr. Disna Kumari, Senior Dietician of Waththala Hemas Hospital and Ms. Amal Feroz Senior Dietician of Asiri Hospital Group participating as resource persons. There were nearly 51 participants.

PUBLICATIONS DURING 2023 & 2024

Publications in Journals

Samarajeewa, U. (2024). Coconut: Nutritional and Industrial Significance. In "Nut Consumption and Usefulness in the Modern World". Edited by Dr. Ing. Marc, IntechOpen Limited, London.
http://doi.10.5772/intechopen.1004173

Samarajeewa, U. (2024). Fishery products safety, processing, and utilization. Fishes. DOI:
10.20944/preprints202403.0579.v1

Wijewardhana S.P.R.1 and Weerakkody N.S (2024) Potential of incorporating Alpinia malaccensis crude extract into hand sanitizers. Sri Lankan J. Biol. 2024, 9 (1): 1-8 DOI: 10.4038/sljb.v9i1.116

Clemens R., Rao PG., Elouafi I, Ruth Oniang'o R, Chandrasekara A, Pressman P., Yadav J (2023) A commentary on millets for enhancing agri-economy, nutrition, environmental, and sustainable development goals. Journal of Food Bioactives, 22 1-4.
https://doi.org/10.31665/JFB.2023.18342

Book Chapter

Chandrasekara A, Diyapaththugama S & Shahidi F (2024) Nutraceutical potential of herbal beverages, In Herbal Nutraceuticals: Products and Processes edited by SK Upadhyay, and SP Singh; John Wiley & Sons Ltd, UK

Chasna M.R.P., Rajawardana D.U., Amunugoda P.N.R.J., An overview of the impact of climatic change on the occurrence of aflatoxins in cereals: Sri Lankan perspective, YSF Thematic Publication-2024, Young Scientist Forum (YSF), National Science and Technology Commission Sri Lanka, January 26, 2024.

Conference proceedings-abstracts

Prasangika Y.G.G.K.D.M. and Mahinda Senevirathne (2024) Development of edible coating formulation based on Dawul Kurundu (Neolitsea cassia) leaf mucilage to extend the postharvest shelf-life of green chillies (Capsicum frutescens). International Conference on Multidisciplinary Research. 2024, 55-56.

Sahani NMDD, Ramalingam S, Chandrasekara A (2024) Sensory attributes and antioxidant activities of natural fruit-flavored green and black teas, ICSD 2024, The 1st International Conference on University-Industry Collaborations for Sustainable Development – 2024, Colombo, Sri Lanka – 16th – 17th March

Kavindi KARN, Sarap GMS, Sirasa MSF, Wickramasinghe IPM, Chandrasekara A(2024) Recession proof healthy one-dish meals (odms) for university canteens . ICSD 2024, The 1st International Conference on University-Industry Collaborations for Sustainable Development – 2024, Colombo, Sri Lanka – 16th – 17th March

Wijesinghe SA, Diyapaththugama DVSS, Chandrasekara A (2024) Effectiveness of a novel horsegram added breakfast cereal in weight loss diets. ICSD 2024, The 1st International Conference on University-Industry Collaborations for Sustainable Development – 2024, Colombo, Sri Lanka – 16th – 17th March

Delabandara R, Chandrasekara A (2023) Navigating the Triple Burden: Bridging Agricultural Gaps for Enhanced Nutrition in Sri Lanka, D4N2023, Delivering for Nutrition 2023, , Nov 1

Wanasundara, J.P.D., Warnakulasuriya, S.N., Tanaka, T. Development of N-lauroyl amino acids with antimicrobial properties from canola meal. 16th International Rapeseed Congress, Sydney, Australia. September 24 – 27, 2023. (Poster)

Senarathne S.M.R.N, Deshan O.P.C, Gunawardhana S.L.A, Warnakulasuriya S.N. Evaluation of Antimicrobial Activity of Mangifera zeylanica Leaves. International Research Symposium, Faculty of Allied Health Sciences, University of Ruhuna, Sri Lanka. November 10, 2023. (Oral)

Communications

Uthayakumar J. T., Chasna M.R.P., Rajawardana D.U., Abesekara, K.S.M., (2024) Development and optimization of coconut and rice milk-based non-dairy beverages with enhanced organoleptic properties, The 2nd International Trainee Symposium in Agri-Food, Nutrition, and Health, January 25-26, Winnipeg, Canada

Achievements

Best Paper Award in Protein & co-products, category of Engineering & Technology, American Oil Chemists' Society, USA – 2024 was presented to Warnakulasuriya, S.N., Tanaka, T., and Wanasundara, J.P.D. for 'Canola meal valorization via acid hydrolysis to generate free amino acids'

COMMUNICATIONS

Good News for the Virgin Coconut Oil Industry

Seed oils, being less expensive, form an important ingredient in ready-to-consume meals and foods. The oils from soybean, corn and canola are identified as seed oils against kernel oils (Olive oil, Coconut oil and Avocado oil). The Seed Oil Alliance in USA (seedoilfreecertified.com) has established a certification scheme where the market oil brands would be tested and certified to be free of seed oils as adulterants. This is good news for the coconut industry to gain new markets for virgin coconut oil and even consider introducing information on the label to indicate it is "not a seed oil".

Kernls Oils

Seeds Oils

Communication by Emeritus
Prof U Samarajeewa

අති-සැකසූ (Ultra-Processed) ආහාර අකැපද?

මානවයා ගොවිතැන් යුගයේ සිට කාර්මික යුගයට පිවිසෙන අතරම, තම ආහාර නිෂ්පාදන කල්තබාගැනීමේ අවශ්‍යතාවය මතු විය. ආරම්භයේදී තාපය මගින් ආහාර ආරක්ෂා කරගැනීමත්, සීනි ද්‍රාවන පැසීමට සැලසීමත් තුලින් බිහිවූ ගෘහ ක්‍රියාකාරකම්, පසු කලෙක විද්‍යාත්මක පදනමකින් ආහාර සැකසීම ලෙස දියුණු වන්නට විය. සැකසූ ආහාර කාලීන ගෝලීය වෙළඳාමේ අවශ්‍යතාවයක් මෙන්ම, පහසු දිවියක් වෙත යොමුවන, කාර්ය බහුල ලෝකයේ වැදගත් අංගයකි. සැකසුම් ක්‍රියාවලිය තුලින් ආහාර වඩාත්ම ආරක්ෂාකාරී කිරීම මෙන්ම, ඉතා කෙටි කාලයක් තුල මහා පරිමාණ නිෂ්පාදන වෙත යොමුවීමේදී, නව තාක්ෂනයන් සීඝ්‍රයෙන් බිහිවෙමින් පවතී. එය ආහාර තාක්ෂණයේ නොනවතින දියුණුවකි. අවාසනාවකට මෙන් සැකසූ ආහාර නිෂ්පාදනයේ තාක්ෂණික පසුබිම හා එමගින් සැපයෙන ආහාර ආරක්ෂිතතාවය අමතක කොට, පෝෂණමය පදනමකින්, අති-සැකසූ ලෙස සාවද්‍යව හඳුන්වමින්, ආහාර දෙස බැලීමට සෞඛ්‍ය ප්‍රජාව නැඹුරුවනු දකිත හැක. ආහාරමය අමුද්‍රව්‍ය සැකසුමට පෙර සම්ප්‍රදායිකව පිළිගත්, සීනි, ලුණු, තෙල් වැනි සැකසූ අමුද්‍රව්‍ය භාවිතයත්, අවදානම් පිළිබඳ විද්‍යාත්මක විශ්ලේෂණයන් පදනම් කොටගෙන අවසර දී ඇති ආහාර ආකලන යෙදීමත්, අති-සැකසුම ලෙස අර්ථකථනය කිරීමටේ පෙළඹී ඇත.

ආහාරයකට එක්කරන විවිධ සංඝටක පාලනය කිරීම වැදගත් අංශයකි. ඒ සඳහා වර්ණ භාවිතයෙන් අධික සීනි, ලුණු හා මේද භාවිතය පිළිබඳව පාරිභෝගිකයන් දැනුවත් කිරීම සාර්ථකව ලොව පුරා සිදුවෙමින් පවතී. නිවසේදී බොහෝවිට සිදුවන මෙම අධික සීනි, ලුණු හා මේද භාවිත මගින් සිදුවන හානිය අඩුකර ගැනීමේ වගකීම පහදා දීම වැදගත්ය. ආහාරයට එක් කරන කොටස් අති-සැකසුම ලෙස අර්ථ කථනය, අවිද්‍යාත්මක ය. ආහාරයක සංයුතිය හා ආහාරයක් අති-සැකසීමේ තාක්ෂණය එකිනෙකට වෙනස්ය. මෙහිදී වැදගත්වන්නේ ආහාරයක් අති-සැකසීමේදී සිදුවිය හැකි, පෝෂණයට අහිතකර සංයුතියෙහි වෙනස් වීම් ය. අති-සැකසීම විවිධ ආකාරයෙන් විද්‍යාත්මකව නිර්වචනය කර ඇත. ඒ පිළිබඳ සම්මතයක් අප අතර තවමත් නොමැත. එම පසුබිම හමුවේ සැකසීම යන වචනයෙන් ඔබ්බට ගොස් වැරදි නිර්වචන යෙදීම ජාතික ආහාර කර්මාන්තයට හානියකි. අධි-පෝෂණීය, අඩු-තන්තුමය, අධි-රසවත් ආහාර, අති-සැකසූ ආහාර ලෙස අර්ථ කථනය කිරීම විද්‍යානුකූල නොවේ. ආහාරයක වැදගත්කම නිගමනය වන්නේ එහි පවතින පෝෂණමය අගය හා සිරුරෙහි පරිවෘත්තීය ක්‍රියාදාමය මතය. පෝෂණමය වටිනාකම රැඳී පවතින්නේ ආහාරමය සංඝටකයන් මතය. අති-සැකසුම හා පෝෂණමය වැදගත්කම අතර ප්‍රබල සම්බන්ධතාවයක් නොමැත. අති-සැකසූ ආහාර පිළිබඳ ඒකමතික නිර්වචනයක් තවමත් නොමැත. මෙය විවිධ අර්ථකතනයන් සඳහා මඟ පාදා ඇත. තාක්ෂණික සංකීර්ණත්වය අනුව හා කල්තබාගැනීමේ අවශ්‍යතාවය අනුව සැකසූ ආහාර පහත දැක්වෙන අයුරු, NOVO වර්ගීකරණයට අනුව කොටස් හතරකට වෙන්කළ හැකිය.

1. සැකසීමට භාජනය නොකළ හෝ අවම ලෙස සැකසූ ආහාර: දින කිහිපයක් පමණක් කල්තබාගැනීම සඳහා සිසිල් කල එළවළු, පළතුරු, බිත්තර, කිරි හා මස් මාළු මෙම ගණයට අයත්ය. මෙයට අමතරව තේ කොළ, කුළුබඩු වැනි ආහාර ආහාර වියලීම, කුඩුකිරීම, ඇසිරීම වැනි භෞතික ක්‍රම මගින් සකස් කර ඇත.

2. සැකසූ ආහාරමය අමුද්‍රව්‍ය: දිනපතා ආහාර පිසීමේදී යොදාගන්නා ලුණු, සීනි, තෙල්, ටින් කල පොල්කිරි, මීපැණි හා බටර් මේ ගණයට ඇතුළු වේ.

3. සැකසූ ආහාර: අමුද්‍රව්‍යයන්ගේ ස්වභාවය මුළුමනින්ම පාහේ වෙනස් කොට නිපදවන හැම්, චීස්, බේකන්, ටින් කල එළවලු, පලතුරු, මස්, සිරප් හෝ ලුණු ද්‍රාවන යොදා සකසන ආහාර මේ ගණයට අයත් වේ.

4. අති-සැකසූ ආහාර: පහසුවෙන් කල්තබා ගතහැකි පාන්, උදය ආහාර සඳහා කාර්මිකව සැකසූ ධාන්‍ය නිෂ්පාදන, කේක්, වහා අනුභව කල හැකි ආහාර පැකට්, පළතුරු-යෝගට්, බිස්කට්, කාබනිකරණය කල බීම, බදින ලද ලුණු යෙදූ ධාන්‍ය හෝ ඇට වර්ග, මාජරින්, නූඩල්ස්, ළදරු ආහාර, හා සොසජස් මේ ගණයට අයත් ය.

කැනේඩියානු වර්ගීකරණයට අනුව ඉහත දැක්වෙන කොටස් 3 හා 4 එක කාණ්ඩයක් ලෙස සැලකේ.

අති-සැකසූ ආහාර හඳුනාගැනීමේදී නිවැරදි දර්ශක භාවිතය වැදගත්ය. ආහාරයෙහි සංඝටක ලැයිස්තුවෙහි දිග එක දර්ශකයක් ලෙස සමහරු යොදාගනිති. නිවසේ පිසින ව්‍යංජනයකට පොල් කිරි, ලුණු, මිරිස්, කහ, දුරු, අඹ, බැදගත් තුනපහ යොදා ගැනේ. ව්‍යංජනයේ පවතින, කාර්බෝහයිඩ්‍රේට, ප්‍රෝටීන, මේද, හා අනිකුත් සංයෝග ගත් කල එම ලැයිස්තුව සැකසූ ආහාරයක ඇති ලැයිස්තුවට වඩා දිගය. වෙනස අප ව්‍යංජනය තුල අතිකොටස් ලැයිස්තුවක් නොසැදීම ය. එහි තිබිය හැකි සවාභාවිකවම පෝෂණමය වශයෙන් හානිකර කොටස් නොතැකීම ය.

ආහාරයක පෝෂණමය හා සෞඛ්‍යමය වැදගත්කම රැඳී පවතින්නේ අවසානයේ එහි ඇති සංයෝග මත මිස, සැකසුම් ක්‍රමය මත නොවේ. සැකසුම් ක්‍රමය වෙත යොදන අවධානය සංඝටක පිළිබඳ අවධානයෙන් ඉවත්වීමේ ක්‍රමයකි.

ඉහත පෙන්නුම් කල පිළිගත් වර්ගීකරණයට අනුව පළමු කාණ්ඩ තුන සැකසුම් ක්‍රියාවලිය පදනම් කොට සකස් වී ඇති නමුත් සිවුවන කාණ්ඩය සකස්වී ඇත්තේ ආහාරයට යොදන සංඝටක අනුව ය. එහි සැකසුම් තාක්ෂණ ක්‍රමයක් සඳහන් නොවේ. පෝෂණමය හීනතාවය සහිත ආහාර හා අති-සැකසූ ආහාර එකම ගණය ලෙස සැලකීම විද්‍යානුකූල නොවේ. ඉහත වර්ගීකරණයට අනුව ආහාර සැකසුම් ක්‍රියාවන් වර්ගීකරණය වෙත යොමුවුවද, අවසානයේ සිදුව ඇත්තේ වෙළඳ පොළට ඉදිරිපත්වන ආහාරයේ සංඝටක අනුව අති-සැකසුම ලෙස හඳුන්වා දීමය. මෙවැනි තාක්ෂණික වශයෙන් දුර්වල වර්ගීකරණයක් පදනම් කොට පෝෂණීය වටිනාකම හෝ ආහාර ආරක්ෂිතතාවය ගොඩනැගීම කොතරම් විද්‍යාත්මකද?

ජාත්‍යන්තර ආහාර විද්‍යා හා තාක්ෂණ ශබ්දකෝෂයට අනුව ආහාර සැකසීම යනු ''අමුද්‍රව්‍යයක් පිලිවෙලින් කෙරෙන ක්‍රියා සමුහයක් හරහා නිශ්චිත අවසාන ඵලයක් ලබා ගැනීම ය''. සම්ප්‍රදායික කාර්මික ආහාර සැකසුම් තාක්ෂණික ක්‍රම අතර තාපය යෙදීම (ජීවානුහරණය, පාස්චරිකරණය), අඩු උෂ්ණත්ව භාවිතය (ශීත කරණය, අධි ශීතකරණය, සීඝ්‍ර අධි ශීතකරණය) pH අගය වෙනස්කිරීම (අම්ල භාවිතයෙන් හා පැසීමෙන්) මගින් ආහාර සැකසුම සිදු කෙරිණ. තාක්ෂණික දියුණුවත් සමග අධි පීඩන සැකසුම - High Pressure Processing, අති ශබ්ද තරංග තාක්ෂණය - Ultrasound Technology, ස්පන්දන විදුලි ක්ෂේත්‍ර යොදාගැනීම - Pulsed Electric Field, සිසිල් ප්ලාස්මා - Cold Plasma, ස්පන්දන ආලෝක ධාරාවන් - Pulsed Light, ඡායාරූප ගතික අක්‍රිය කිරීම - Photodynamic Inactivation, රික්තක පිසීම - Vacuum cooking වැනි නව සැකසුම් තාක්ෂණයන් බිහිවෙමින් පවතී. මෙම අති-සැකසුම් හෝ අධි-සැකසුම් ක්‍රම වඩාත් ආරක්ෂිත ආහාර සැකසීම වෙත යොමුවෙමින් පවතී. ඒ හමුවේ, අති-සැකසුම් ලෙස සංඝටක එක් කිරීමේ ක්‍රියාවන් පටලවා ගැනීම ආහාර විද්‍යාත්මකව අවිද්‍යාත්මක ය. එය පාරිභෝගිකයා අන්ද-මන්ද කරන ක්‍රියාවකි.

සම්මානිත මහාචාර්ය ශූ. සමරජීව

Celebration of World Food Safety Day (WFSD)

World Food Safety Day (WFSD) is celebrated annually on June 7th to highlight the importance of safe food practices and to reduce the burden of foodborne illnesses. This year, the theme is "Food Safety: Prepare for the Unexpected," emphasizing the need for preparedness against unforeseen food safety challenges. IFSTSL engaged in several activities including communication on different aspects of food safety.

World Food Safety Day 2024 - Food Safety: Prepare for the Unexpected

On June 7th, 2024, the Institute of Food Science and Technology (IFSTSL) commemorate the World Food Safety Day with the theme "Food Safety: Prepare for the Unexpected. This was organized by the IFTSL and Sri Lanka Food Processors Association (SLFPA) and the International Union of Food Science and Technology (IUFoST) were the event partners.

The event commenced with the welcome speech by Prof. Anoma Chandrasekera, President of the IFSTSL, who highlighted the importance of the event's theme and set the tone for the day. This was followed by an introduction to the partnership and the objectives of the event from the partner's perspective by Mr. Thusith Wijesinghe, President of SLFPA, who emphasized the critical role of industry-academia collaboration in addressing global food safety challenges.

Prof. Aman Wirakartakusumah, President of IUFoST, delivered the opening remarks, reinforcing the need for a united global effort in ensuring food safety. The series of enlightening speeches that followed provided deep insights into various aspects of food safety:

Prof. Raith Dewanti-Hariyadi, a Senior Scientist at the Southeast Asian Food and Agriculture Science and Technology (SEAFAST) Center, Indonesia, discussed "Food Safety Challenges in South East Asia," shedding light on regional issues and solutions.

Dr. Deirdre Mikkelsen, Senior Lecturer in Food Science at the University of Queensland, Australia, presented on "Food Fraud and its Implications for Food Safety – it's not just a developing world problem," highlighting the global nature of food fraud and its impact on safety.

Dr. Ananda Jayalal the Deputy Director General in the Ministry of Health of Sri Lanka spoke on "Salient Food Safety Issues in Sri Lanka and measures taken to manage," offering a localized perspective on food safety challenges and management strategies.

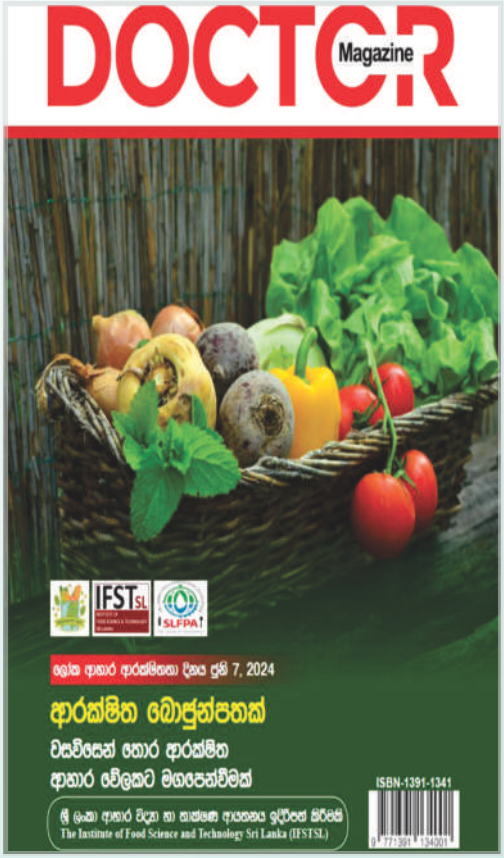
Emeritus Prof. Upali Samarajeewa delivered an insightful speech titled "Food Allergens: Prepare for the Unexpected," focusing on the risks and management of food allergens.

The event concluded with remarks by Prof. Niranjalie Perera, Immediate Past President of IFSTSL, who summarized the day's discussions and reiterated the importance of continuous vigilance and innovation in food safety.

Ms. Malshani Gamage and Mr. Malliek de Alwis, expertly moderated the smooth flow of the event and engaged the audience effectively.

The event attracted over one hundred participants, who made the most of this valuable opportunity to explore into the critical importance of food safety in safeguarding public health. The discussions underscored the necessity for global cooperation and readiness in tackling unexpected food safety challenges. The wealth of knowledge and shared experiences from this gathering will undoubtedly contribute to the advancement of food safety standards worldwide. As a follow up activity, IFSTSL decided to prepare guidelines on food allergen labelling for the Industry. Mr. Thusith Wijesinghe undertook to work on this suggestion through industry. Dr. Ananda Jayalal suggested that it is best for the SLFPA to initiate guidelines. Preparation of the document in English, Sinhala and Tamil is in progress. It would be available by end of August as a service to the Sri Lankan food industry, specially for the exporters.

A special edition of Doctor Magazine was issued in the month of June with the participation of several experts including IFSTSL members and invited writers. This is available on the web http://www.doctormagazine.lk/magazine_view/?magazine=2024_07



Next page

A special article on Food Safety was published in weekend News Paper "Monara" by President IFSTSL on June 7th.

A feature article was done in 'Sathi Aga Aruna' by Mr Sanath Bandara based on the expert perspective on importance of food safety in Sri Lanka. Prof Upali Samarajeewa, Emeritus Professor in Food Science and Technology, University of Peradeniya and president IFATSL Prof Anoma Chandrasekara were the resource persons for the article.


සයිවර් කඩයේ කුස්සියට පැන්න පමණින් ආහාර ආරක්ෂිතතාව රැකෙන්නෙ නැත

A special article on Food Safety was published in" 'Ada" Paper by Prof. Eresha Mendis.

It is with great pleasure and excitement that we introduce to you the inaugural issue July 2024 volume I series 1 of FoodiFlash, the first e-Magazine from IFSTSL (International Food Science and Technology Sri Lanka). This marks a significant milestone in our journey to bring you the latest trends, insights, and innovations in the world of food science and technology. The following topics are embraced in the magazine.

1. A New Era in Food Technology: Precision Fermentation
2. Exploring the Gut Health Revolution: The Health Benefits of Probiotics
3. Heat- induced Food Toxicants: Acrylamides, Nitrosamines and Polycyclic Aromatic Hydrocarbons
4. Impact of foods containing Polyacetylenes on gene expression in reduction and prophylaxis of Cancer
5. A Crunch for Every Palate: Diving into the Diverse World of Alternative Snack Flavors
6. Toxic Glycoalkaloids in potatoes: Are they really a cause for concern?

IFST SL
INSTITUTE OF FOOD SCIENCE & TECHNOLOGY SRI LANKA

SRI LANKA FOOD PROCESSORS ASSOCIATION
SLFPA
The Taste of Excellence

FOOD ALLERGEN LABELLING GUIDELINES FOR THE SRI LANKAN FOOD INDUSTRY

1. Scope: This document provides a proactive approach to manage allergen declarations in all food producing, manufacturing, packaging, marketing, and catering industries in Sri Lanka.

2. Objectives: The guidelines,
a) Intends export promotion,
b) Helps in the creation of food safety awareness of consumers preventing health problems that may occur due to allergens in foods,
c) Ensures correct allergen labels are placed on packed foods,
d) Suggest mechanisms to prevent entry of allergens during food preparation and cooking in the restaurant (catering) sector.

3. Introduction: Food allergies have become an increasing food safety problem in the world affecting certain sensitive individuals, due to abnormal immune responses to foods. The population of consumers showing mild to adverse reactions to food allergens is on the increase globally. As a precautionary measure, food authorities have introduced mechanisms for the consumers to understand their allergic problems and avoid exposure to allergens through food labelling. Food allergen labelling is a mandatory requirement in most countries. Allergen labelling is an obligation towards the consumers to avoid food safety problems in sensitive individuals.

Absence of information of allergens in food labels results in rejection of foods at the entry points or recalls at markets by respective national food authorities. It is therefore important for the food and beverage industries to take up allergen labeling and be aware of offending food, in the catering business to receive the goodwill of the customers. This document provides guidelines to the food industry to modify the food labels by identifying the potential allergens following similar actions practiced in global food trade.

4. Food allergens: All foods and beverages consumed by humans are foreign to their body. The body responds to all ingested foods by accepting them. In some individuals the body refuses certain foods due mostly to the presence of proteins triggering uncomfortable responses. The refusal appears as abnormal responses in the form of skin irritations, red eyes etc. The reactions in humans appear mostly within 2 hours of ingestion of foods. Of more than a hundred constituents in foods with allergenic potential, up to 14 major food allergens are required to be indicated in the labels in the global food trade.

5. Food intolerances: Food intolerances are sometimes misidentified as allergenic responses. Food intolerances occur due to absence of enzymes in human gut necessary to digest the foods [ex: Many Asians suffer from lactose intolerances. They cannot consume cow milk.].[Allergic reactions occur in individuals to cow milk due to whey proteins, which is different from intolerances]. Similarly, some individuals cannot tolerate histamines. They show skin reaction when exposed to high concentrations of histamine in tuna fish and cheese. Food allergies and food intolerances are two separate effects. This document does not address food intolerance.

6. Industry responsibility: Normal processing or cooking of foods does not remove food allergens. Consumer reactions to allergens and their complaints create a negative impact on the food industry resulting in loss of faith and market share. Food labelling helps individuals to avoid particular foods preventing allergic reactions. It is important for the food industry to recognize the raw materials and processes leading to appearance of allergens in the final product with the intention of recognizing them as a part of Good Manufacturing and Good Hygienic Practices, leading to interactions through Hazard Analysis Critical Control Points (HACCP). HACCP is an essential requirement in meeting food exports. Indicating the probable presence of allergens in the food label reduces the risk of consumers getting affected, leading to less complaints against foods, less rejections and recalls of the market foods.

7. Allergic food constituents requiring labelling: There are up to 14 major allergens requiring labelling. Of the 14, eight are identified by all food importing countries as allergens requiring mandatory declaration. The table below indicates the food allergens requiring labelling in different countries. As a general guideline it is suggested to indicate the presence of allergens 1-8 in the table below fulfilling the Codex and USA requirements. However, the industries may decide on labelling to identify all the allergens in the table (items 1 -14) as an easy measure. An allergen may be a minor or trace component in processed food or in mixed spices. However, they need to be indicated on the label. With the influx of tourists, some of whom are concerned on labelling of allergens, and potential local sales to tourists, it is advised to indicate the allergens in the label for the local market in addition to fulfilling all other Sri Lankan labelling requirements.

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	Allergens	Codex	USA	EU	Canada	Japan‡	Australia & NZ	England
1	Wheat, rye, barley, oats (due to gluten) & products*	•	•	•	•	•	•	•
2	Crustaceans, crabs, prawns, lobsters & products	•	•	•	•	•	•	•
3	Egg & egg products	•	•	•	•	•	•	•
4	Fish & fish products	•	•	•	•		•	•
5	Peanuts, Soybeans & products	•	•	•	•	•	•	•
6	Milk & milk products	•	•	•	•	•	•	•
7	Tree nut kernels & products⊗	•	•	•	•		•	•
8	Sulphites more than 10 mg/kg	•		•	•		•	•
9	Sesame and sesame products			•	•			•
10	Mustard and mustard products			•	•			•
11	Celery and celery products			•				•
12	Lupin and lupin products			•				•
13	Molluscans and molluscan products			•				•
14	Sulphur dioxide							•

** The term products may mean foods produced by adding allergenic raw materials or ingredients derived by processing, such as glucose syrups, maltodextrins and dextrose from wheat, or other grains.*
Tree nuts = Most common allergens are Brazil nuts, cashews, hazelnuts, macadamia, pecans, pistachios, and walnuts (Some countries include other nuts too; EU includes almonds)
‡ In Japan: Mandatory labelling (Shrimp, crab, wheat, buckwheat, egg, dairy products, peanut); Recommended labelling (almond, abalone, squid, salmon roe, orange, cashew nut, kiwi fruit, beef, walnut, sesame, salmon, mackerel, soybean, chicken, banana, pork, matsutake mushroom, peach, yam, and gelatin)

The food industry is advised to check the latest information on allergen labelling for the exporting country before printing labels, as the guidelines are revised from time to time by each food authority.

8. The way of declaring allergens in the food labels: Countries vary in the way they expect declaration of allergens in the food labels.
a) Great Britain expects the allergens to be indicated in bold font. ["INGREDIENTS: Sugar, Dried Whole Milk, Cocoa Butter"]
b) Canada expects the allergens to be indicated within parentheses or listing at the bottom of ingredient list under a separate title Allergens. ["flour (wheat)"; "albumin (egg)"]["Contains: wheat, egg, milk; May contain peanuts"]
c) USA expects the allergens to be given in parentheses ["flour (wheat)"] or separately ["Contains wheat"]
d) Australia & NZ expects a separate allergen list along with ingredients ["Contains milk"]. In the ingredients list allergens must be indicated in bold font. Presence of barley, oat, rye, and wheat need to be indicated along with the word ["gluten"]
e) The EU expects the allergens to be identified in the ingredient list using a different font, or letter size or background color. In the absence of an ingredient list, the allergen needs to be indicated as ["Contains milk"]

9. Unintended cross contaminations and labelling: Cross-contamination of allergens is a major problem in the food industry, resulting in frequent market recall of foods. There is a high possibility of cross-contamination of foods during cultivation, harvesting and handling of raw materials, from the processing machinery, vessels and tanks used to store products and through hands of food handlers and conveyors prior to packing. Cross-contamination may even occur in storage systems and in transport vehicles. If the same expeller is used to extract coconut oil, peanut oil and sesame oil, the coconut oil may carry traces of peanut or sesame oil. The same can occur with spice powders and through cooking oils during frying different foods . Sharing equipment for different processes leads to cross-contamination. The allergens, even in trace amounts, get detected in testing. The food industry needs to take proactive steps to prevent cross-contamination at all stages of the food chain. It is recommended to indicate "May contain peanut oil" in case of coconut oil and "May contain mustard" in case of spices, to avoid market recalls due to cross contaminations through machinery and utensils. Each industry needs to consider similar situations.
IFSTSL would be pleased to provide guidance on specific situations to industries individually.

10. Allergens in prepared and catered foods: Food preparation uses a variety of components of which several may be allergenic. A salad may contain fish, egg, milk, and mustard; A sandwich may contain wheat, egg, fish, milk products. It is necessary to inform the consumer of the presence of allergens at serving. As an easy mechanism to recognize the potential problems it is suggested to prepare a chart for the Chef (Chef's Chart) showing pictures of the.14 allergens so that the potential problem remains in the mind of chef and visitors to the food preparation (kitchen) area.

11. Recommendations: Indicate allergens in the ingredient label of food packages using bold font. Create awareness among Chefs and restaurant staff to avoid allergenic reactions among customers.

Drafted by Emeritus Prof U DSamarajeewa

FUTURE ACTIVITIES

1. Activities in parallel with Profood-Propack exhibition

IFSTSL is organizing four activities with the Sri Lanka Food Processors Association (SLFPA) during profood propack exhibition (23rd - 25 th August 2024) to improve the awareness of food industrialists and students on important topics relevant to the food industry for the betterment of the food sector in Sri Lanka.

i. Student Seminar: Future Forward: Unveiling Career Opportunities and Entrepreneurial Ventures

Date and Time: 23rd August 2024, from 9:00 AM to 12:00 noon.
Venue: Mihilaka Medura, BMICH, Colombo 07.
Annually IFSTSL Organized a seminar aimed at university undergraduates following Food Science and Technology / Food Science & Nutrition degree programs parallel to the profood/propack exhibition. The event featured industry experts who provided insights into career opportunities and entrepreneurial ventures.

The resource persons for this event will be the following;
Mr. Janaka Weerasooriya - Global QHES Manager at Jiffy Foods Mr. Dinuka Pattikiriarachchi - Director Human Resources at LAUGH Holdings Mr. Dulanjana Vithanage - Founder/Entrepreneur at Jack Fruit Ceylon Pvt Ltd.

Join us for an insightful seminar where you'll get Career Opportunities in Food Science and Technology and discover the diverse career paths available in the food science sector; Entrepreneurial Ventures in the Industry; Gain insights into starting your own business in the food industry, from identifying market gaps to developing innovative products; Professional Skills Required in the Field to understand the essential skills and competencies needed to succeed in food science and technology, including technical expertise, problem-solving abilities, and leadership qualities. Networking with Industry Leaders and expand your professional network, and explore potential collaboration opportunities.

ii. FoodSci Quest 2024: competition for undergraduate students

Date and Time: 23rd August 2024 from 1.30 pm to 5.30 p.m
Venue: Mihilaka Medura, BMICH - Colombo 07.

FoodSci Quest 2024 is a question-and-answer competition designed for undergraduate students pursuing degrees in Food Science, Food Technology, and Human Nutrition at both state and private universities/institutes Sri Lanka. Individual students are required to register for the competition by completing the application available on the IFSTSL website. Participants will compete individually in FoodSci Quest 2024.

iii. Industrial seminar on Managing Additives and Adulterants in the Food Industry

Date and Time: 24th August 2024 from 9 am to 12-12.30 noon
Venue: Mihilaka Medura , BMICH – Colombo 07.

This seminar aims to provide insights to food industrialists on possible strategies to manage additives and adulterants complying with regulations and standards important for local and export food trade. Prof. Eresha Mendis, Dr. Sumudu Warnakulasuriya, Prof. KKDS Ranaweera, Prof. Ilmi Hewajulige and Dr. Gamini Rajanayake are serving as the speakers. IFSTSL invites food industrialists to join this awareness session to update their knowledge in this important area.

iv. Career Fair 2024: For fresh graduates holding a degree/diploma in Food Science

Date and Time: 24th August 2024 from 2.00 pm to 5.00 pm
Venue: Mihilaka Madura, BMICH – Colombo 07.

In parallel to the ProFood ProPack Exhibition 2024, a Career Fair will be organized by IFSTSL in collaboration with SLFPA to provide fresh graduates holding a degree/diploma in Food Science with an opportunity to unlock the potential of finding their future career in the food industry. This will be a precious opportunity for them to meet with top companies in the food industry and participate in walk-in interviews.

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2. FoodTechno 2024

FoodTechno 2024, The 8th Annual Research Session of IFSTSL will be held on 05th October 2024 at the Renuka Hotel Colombo, 07. The primary objective of this event is to showcase the applied research conducted in universities and other research institutes across Sri Lanka to the food industry, fostering opportunities to leverage this research for industrial benefit. Additionally, it provides a common platform for key stakeholders in Sri Lanka's food sector to engage in research dialogue, paving the way for innovations that contribute to a sustainable future. This session will feature research presentations in the areas of Food Science, Food Technology, Food Safety & Quality, Food & Nutrition, Food Analysis or Allied Fields in both oral and poster formats. This event will include the plenary lectures from the experts in the field and the food industry.

3. Training course - Meeting Safety and Quality in the Export Food Trade

IFSTSL serving as a national training body organizes several awareness sessions and training programs targeting different stakeholder groups of the food sector in Sri Lanka. This current course is also organized by IFSTSL in collaboration with SLFPA mainly targeting Sri Lankan food exporters or any other party who is interested in acquiring related knowledge. This is the first certificate course organized by IFSTSL food quality and food safety requirements for food exports as an online course to provide insights to current food exporters or potential food industrialists who wish to commence exports in the near future on comprehensive knowledge instrumental in meeting the compliance to food quality and safety requirements in the export food trade and applying them in relevant export markets.

This would be conducted as a weekend course, particularly on Saturday evenings which would run for seven weeks. Prof. Upali Samarajeewa, Prof. Eresha Mendis, Prof. Niranjan Rajapakse, Mr. Maliek De Alwis and Mr. Nalin Ariyaratne are serving as resource personnel of the program. IFSTSL invites food industrialists to make use of this great opportunity to gain comprehensive knowledge related to ever changing food export requirements to become successful food exporters.

4. Annual General Meeting (AGM)

Our 13th Annual General Meeting of IFSTSL will be held on 05th October 2024 at the Renuka Hotel Colombo, 07. Reserve the day to meet IFSTSL members and elect office bearers for 2025.

Other Activities

Emeritus Professor Upali Samarajeewa is serving as an International Expert, to upgrade the National Laboratory Center for Agrochemical Analysis at the Agency for Quarantine and Plant Protection in Uzbekistan, in a USAID assisted program. The aim of the project is to enhance import-export activities in Central Asia harmonizing border protection procedures, facilitating trade.

Keynote Address

Chandrasekara A (2024) Keynote address " Nutrition resilience; strategies and innovations in the face of challenging era" at Annual scientific sessions of the Nutrition Society of Sri Lanka, Hotel Ramada, Colombo , Sri Lanka, January 27-28.

Roundtable Discussion

Chandrasekara A (2023) Bioactives of millets in health promotion and wellness at IuFoST Round Table Discussion on Millets for Enhancing Agri-economy, Nutrition, Environmental, and Sustainable Development Goals. March 31

IFSTSL

INSTITUTE OF FOOD SCIENCE & TECHNOLOGY SRI LANKA

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Becoming a Member of IFSTSL

IFSTSL membership is open to all those who are engaged in the food industry. The following membership categories are available for individual applicants and corporate bodies: Fellow members, Associate members, Student members, Corporate members, Associate corporate members, Interim members.

Duly completed applications should be submitted to the IFSTSL office with hard copies of the required documents to the Institute of Food Science and Technology Sri Lanka (IFSTSL), No.21D, Vijaya Kumaratunga Mw (Polhengoda Gardens), Colombo-05, Sri Lanka. Postal submissions should be done only through registered post.

A cheque should be drawn in favor of "Institute of Food Science & Technology Sri Lanka", and cross A/P only or deposit money into the following bank account and send the bank payment slip through registered post with the membership application form.

Bank: National Development Bank (NDB),
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Account Number: 101-000151786
For any clarification, please contact:
Mrs. Sandhya Fernando
Phone: +94 117 548 770 Fax: +94 117 548 771
Email: info@ifstsl.org
For additional information about IFSTSL,
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