Diamond Jubilee Year of SRI

International Conference on

RADIATION PROCESSING :

Value addition for Food, Agro, Healthcare, Polymers and other Industrial Products








December 17-18, 2010

NIC - 2010 DELHI

Shangri-La's - Eros Hotel

Ashoka Road, New Delhi, India

SHRIRAM

Organized by :

Shriram Institute for Industrial Research (SRI), Delhi, India

In Association with :

(NAARRI) (DAE) (BRNS) (BRIT) (MFPI) (DST) (NPCIL) (MOEF) (DBT) (APEDA) (ICAR) (MOH & FW) (WAITRO)

BACKGROUND

Radiation processing has already been established as an environment friendly technology for value addition of various types of materials. While on the one hand, the radiation processing eliminates the bio-burden of all sorts of products, on the other hand, it also promotes polymerization of various monomers. Thus, by processing various types of materials, different industry sectors can be benefited in one way or the other.

In brief, radiation processing covers the peaceful applications of the nuclear radiation. In the developed world, radiation processing technology has already been well received and adopted in different industry sectors. In the developing world, even though there exists an appreciation for the advantages of this technology, there are apparently certain bottlenecks because of which the real potential of radiation processing is yet to be exploited. In India, several irradiators are already in operation at commercial scale; some of them have been in use for over twenty-five years. The major industries which have been benefited from this technology, include food processing, biomedical and polymer industry. For healthcare industry, radiation processing provides a unique advantage. Radiation sterilization of medical products is gaining popularity over other techniques such as ETO sterilization which has a number of limitations. Besides being non-environment friendly, ETO leaves toxic residues in the sterilized products.

With the constant increase in population, demand for food is also on the rise. While we need to produce more to meet this demand, we will also have to ensure that the post harvest losses are minimized. Protection of food against losses due to insect infestation, harmful microorganisms and other putrefying agents remains a challenge, especially for developing countries. Radiation processing can be a useful tool to resolve many such issues related to shelf life, insect infestation and sanitary and phyto-sanitary aspects of food and farm products. The products, which need to be brought under the radiation processing, are agri and herbal products, meat and poultry and marine products (both raw & processed).

Amongst the agri and the herbal products, the major ones are fresh fruits and vegetables, spices, herbal preparations, grains, pulses etc. Amongst the animal and the marine products are the seafood, aqua-culture, meat, poultry (both raw and processed), etc. Another related industry which has been growing at a fast rate pertains to the animal feed including poultry feed.

Radiation processing has wide applications in curing and cross-linking of polymers for enhancement of their physical properties for producing a wide range of industrial and consumer products. Major applications in this respect are cross-linking of the polymeric insulation materials for wires and cables and polymeric materials used in tyre industry for increased performance and life. Environment friendly curing of surface coating by radiaton, specifically by E-beam processing is also an important technology in which there is no evolution of volatiles during the curing process.

Treatment of waste and toxic materials by irradiation processing has a long term potential to mitigate environmental hazards. Radiation processing technology is found to be more competitive and effective in conjunction with other biological processes for treatment of sewage sludge. Irradiation is also used to degrade materials that are not readily broken down by other means. The most widespread use is in the degradation of teflon to enable it to be ground to a fine powder. The opportunities also exist to degrade toxic chemicals using radiation technology.

Radiation processing technology is based on different types of radiation e.g. ultra-violet, e-beam, X-rays, gamma rays etc. Each type of radiation technology has its own positives and negatives. Depending upon the product to be irradiated as also the purpose for which the irradiation is to be done, the radiation source as well as the radiation processing technology is decided.

In order to exploit the potential of radiation processing technology in India, there is a need for:

a) Creating awareness amongst the prospective users of radiation processing.
b) Bringing together the technology providers and the various stake holders on the same platform for facilitating interactions between them.
c) Organizing deliberations between the researchers and the users of the technology.
d) Educating the budding scientists about the latest trends & developments pertaining to state-of-the-art.
e) Creating awareness about safety & regulatory aspects of radiation processing technology.

For all the above, there exists a need for organizing an International conference, where eminent and renowned experts from both India and abroad can present and share their research experiences with various stakeholders. Shriram Institute for Industrial Research has been organizing such programs over the years mainly for the purpose of facilitating the diffusion of technologies (including the radiation processing) in the Indian industries. In that regard Shriram Institute for Industrial Research has decided to organize an International Conference on **RADIATION PROCESSING: Value addition for Food, Agro, Healthcare, Polymers and other Industrial Products** (NIC 2010, Delhi) in association with National Association for Applications of Radioisotopes and Radiation in Industry (NAARRI), Department of Atomic Energy, Board of Radiation in Nuclear Science, Board of Radiation & Isotope Technology, Ministry of Food Processing Industries, Nuclear Power Corporation of India Ltd., Agri &

Processed Food Products Export Development Authority, Deptt. of Science & Technology, Ministry of Environment and Forest, Deptt. of Biotechnology, Indian Council of Agricultural Research and World Association of Industrial and Technological Research Organization. The time of the conference has been astutely chosen to celebrate the Diamond Jubilee of Shriram Institute for Industrial Research.

SCOPE OF THE CONFERENCE

The scope of the conference is to deliberate upon various applications of radiation processing besides creating awareness about the advantages of radiation processing. The conference will showcase various aspects of radiation processing covered under the following topics:

- ★ Radiation processing of industrial materials
- ★ Environmental remediation
- ★ Sterilization of healthcare products
- ★ Cross linking & modification of polymers
- ★ Curing of surface coatings
- ★ Microbial decontamination and disinfestation of raw and processed food
- ★ Enhancement of shelf life of food products
- ★ Value addition of gemstones
- ★ Developments in design and engineering aspects of radiation processing plants
- ★ Radiation safety and regulatory aspects
- ★ Socio-economic importance of radiation technologies

WHO SHOULD ATTEND

- ★ Academicians, Scientists and Research Scholars from Institutions and Universities
- ★ Delegates from Polymer Processing Industries / Wires & Cable industries / Food & Agri-product Processors / Gemstone Processors / Traders / Exporters
- ★ Professionals from Medical and Healthcare industry, Doctors, Radiologists, Scientists
- ★ Regulatory Agencies dealing with radiation safety of food products and health care products
- ★ Technologists & Fabricators involved in designing of radiation processing plant and machinery
- ★ Users of Complementary Technologies, such as Cold and Modified Atmosphere Storage Service Providers

ORGANIZER

Shriram Institute for Industrial Research (SRI)

SRI, founded in 1950 by Lala Shriram, is a premier research organization in the country, engaged in applied research and development work. It is an independent, non-profit, self-supporting contract research organization. SRI is fully equipped with modern state- of - the - art instruments and has got expertise to undertake studies in various fields of Material Sciences, Analytical Sciences, Life Sciences, Toxicology, Environmental sciences and Radiation Technology.

Shriram Applied Radiation Centre (SARC), Delhi was established more than two and a half decades ago with active co-operation and guidance from BRIT / BARC / AERB, Mumbai with an aim to provide radiation sterilization services and research activities in the fields of Polymers, Medical & Herbal products and microbial decontamination of spices.

DURATION

Date	Time
December 17-18, 2010	9.00 AM to 5.30 PM

REGISTRATION FEES PER DELEGATE

- ★ Industry and Private : Rs. 5000/-
- ★ R & D Institutions : Rs. 4000/-
- ★ Academia : Rs. 3000/-
- ★ International : US $ 200/-

The registration fee includes lunch, snacks and conference kit containing background reading material etc.

CONFERENCE SOUVENIR

On the occasion of this Conference, the organizer intend to publish a souvenir, which shall also contain advertisements from various organizations.

The tariff for advertisement in the Souvenir:

Front Page Inside Coloured	(Full)*	:	Rs. 30,000/-
Back Page Cover Coloured	(Full)*	:	Rs. 30,000/-
Back Page Inside Coloured	(Full)*	:	Rs. 25,000/-
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Running Page B/W	(Full)	:	Rs. 10,000/-
Running Page B/W	(Half)	:	Rs. 6,000/-

* One Free Delegate

MODE OF PAYMENT

The registration forms along with registration / advertisement fee payable by cheque / demand draft drawn in favour of SHRIRAM INSTITUTE OF INDUSTRIAL RESEARCH, DELHI, should be sent to the following address :

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Shriram Institute for Industrial Research
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Registration Form

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No. of accompanying persons .....

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