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News Bulletin

26th to 31st October 2019

Produced by Unit for Science Dissemination, CSIR, Anusandhan Bhawan, 2 Rafi Marg, New Delhi

CSIR-NCL

31st October, 2019

4 research institutes to look for alien life

NCCS, Pune among institutes to be part of study

EXPRESS NEWS SERVICE
PUNE, OCTOBER 30

FOUR MAJOR research institutions in biology, astronomy and space science are preparing to undertake advanced studies to trace life in space. The institutions plan to use new high-end instrumentation facilities to seek answers on the origin of life.

"We are nearly ready with the advanced instrumentation facility that will help study microbes in atmosphere. Institutes like the Indian Space Research Organisation (ISRO), Tata Institute of Fundamental Sciences (TIFR) and National Centre for Cell Science (NCCS) plan to embark on new research next year," said Yogesh Shouche, senior scientist at NCCS.

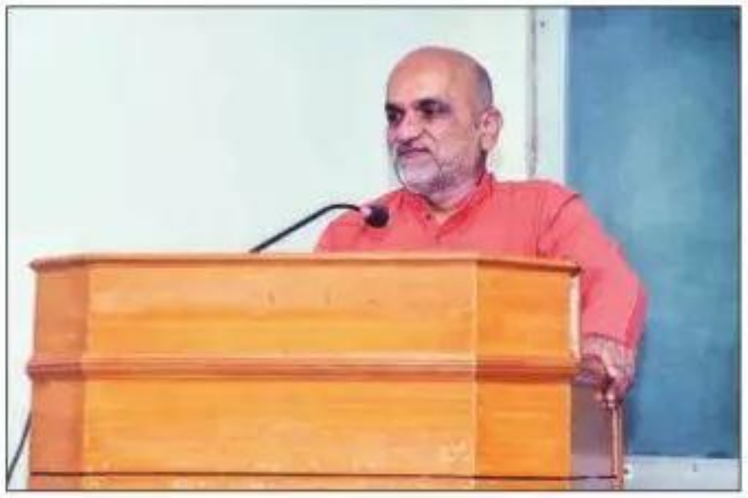
Shouche was speaking on 'Search for Life in Space: A Microbial Perspective', at an event organised at CSIR-NCL on Wednesday as a prelude to the India International Science Festival (IISF).

Even though Earth remains the only planet known to harbour life, scientists have not ruled out the possibility of life elsewhere as there are species found even on Earth that are capable of withstanding extreme heat, cold and acidic conditions.

"The origin of life may not be carbon-based in some other planetary body and Earth-like living conditions cannot be expected there. But what forms the foundation of any life form is the presence of water, which alone permits biochemical reactions," said Shouche.

Four prominent Pune-based scientific institutions will be a part of the fifth edition of IISF this year, which will be organised in Kolkata next week.

Research from CSIR-National Chemical Laboratory (NCL), Agharkar Research Institute, Indian Institute of Tropical Meteorology and NCCS will feature in the science festival, which will be held between November 5 and November 8.



Yogesh Shouche of NCCS at the event on Wednesday. *Express*

"We are nearly ready with the advanced instrumentation facility that will help study microbes in atmosphere. Institutes like the Indian Space Research Organisation (ISRO), Tata Institute of Fundamental Sciences (TIFR) and National Centre for Cell Science (NCCS) plan to embark on new research next year...The origin of life may not be carbon-based in some other planetary body and Earth-like living conditions cannot be expected there"

— YOGESH SHOUCHE

Published in:
The New Indian Express

NML holds outreach programme of IISF 2019

CSIR-NML 31st October, 2019

As part of the fifth India International Science Festival (IISF-2019) Celebrations, CSIR-National Metallurgical Laboratory, Jamshedpur, organised an Outreach Programme of IISF 2019. The thematic choice of this exhibition rests on 'Technologies, Products & Technological Services'. The contributions of CSIR-NML in the context of nation building were showcased in this exhibition under the broad headings of 'Mining, Minerals & Materials', 'Engineering & Infrastructure', 'Ecology & Environment'.

During this programme, CSIR-NML open their lab & facilities to students, public and local media. The objective of this outreach programme is to disseminate the knowledge in terms of Achievements, Technologies developed, Products & Technological Services of CSIR-NML as a whole to attract Academia, Industries, R&D fraternity and common people of India to know the contributions of CSIR-NML since 69 years of its journey towards the development of New & Digital India and also to get an insight into the work life of researchers.

The exhibition may provide an ample opportunity to know the latest development of CSIR-NML in the field of Science & Technology and also, it may encourage the industries in the long run Dr. I. Chattoraj, Director NML welcomed the Chief Guest CK Asnani, Chairman & Managing Director, Uranium Corporation of India Ltd., Jadugoda, students, teachers of local schools and colleges of Jamshedpur, Scientists and Team CSIR-NML. He has also briefed the ideas and objectives of the outreach programme of IISF 2019. Dr. Arvind Sinha, Chairman, NASI Jharkhand Chapter delivered a lecture on "Ethics in Science" and he differentiated between "Ethics in Science" and "Ethics of Science". Surprisingly, both the events, Vigilance Awareness Week and outreach programme of IISF 2019 coincide.

CK Asnani as Chief Guest delivered an entertaining deliberation on two counts, one for young minds of schools, colleges and other for the people those who are employed. Lecture contained the educative values and also, it has impressed a lot to the students as well as the audience in general.

Over 350 students from BPM 10+2 High School, Adivasi High School-Sitaramdera, Baldwin Farms House, Central School, UCIL, Jadugoda, Chaibassa College, NTTF Golmuri and TSTI, Burmamines participated in this Outreach programme of IISF 2019. After the inaugural session, the students from various schools, colleges & technical institutions visited Posters stalls, Exhibition stalls & various laboratory & facilities of CSIR-NML.

Few schools & colleges with a group of four students demonstrated their Exhibit / models during this event. All the students expressed their happiness and showed the excitement of scientific and industrial development of CSIR-NML.

Published in:
The Pioneer

CSIR-IITR

30th October, 2019

पटाखों ने बिगाड़ी राजधानी की सेहत, जहरीली हुई हवा

अलीगंज, विकासनगर और इंदिरानगर में हवा बहुत ज्यादा हुई खराब

कई जगहों पर दीवाली के प्रदूषण की वजह से छाई रही धुंध

पटाखों के धुएं ने सेहत बिगाड़ी, एयर क्वालिटी इंडेक्स 500 के करीब पहुंचा

पिछले साल के मुकाबले इस बार पटाखों का इस्तेमाल कुछ कम किया गया

डेली न्यूज नेटवर्क

लखनऊ। राजधानी के लोगों को प्रदूषण की तनिक भी परवाह नहीं है। सुप्रीम कोर्ट के आदेशों और तमाम अपीलों को दरकिनार करते हुए लोगों ने रात भर पटाखे छुड़ाएं। शायद यही कारण है कि राजधानी में इस बार भी दीवाली की रात पिछले वर्ष की तुलना में दोगुना अधिक और मानकों से 12 से 15 गुना अधिक प्रदूषण का स्तर रहा। सबसे अधिक अलीगंज, विकासनगर और इंदिरा नगर 10 से 12 गुना अधिक प्रदूषित रहे। भारतीय विष विज्ञान अनुसंधान संस्थान (सीएसआईआर, आईआईटीआर) की ओर से दिवाली के एक दिन पहले, दिवाली के दिन और दिवाली के एक दिन बाद वायु और ध्वनि प्रदूषण के सर्वे पर ये भयावाह जानकारी सामने आई है।

दिवाली के पटाखों ने यूपी के कई शहरों की हवा को जहरीला कर दिया है। कई जगहों पर दिवाली के प्रदूषण की वजह से धुंध छा गई। सुप्रीम कोर्ट ने दिवाली पर पटाखा छोड़ने के लिए दो घंटे की सीमा तय की थी, लेकिन लोगों ने इसके अलावा भी पटाखे छोड़े। पटाखे के धुंए से लखनऊ की सेहत बिगाड़ दी। लखनऊ का एयर क्वालिटी इंडेक्स दिवाली के दिन 500 के करीब पहुंच चुका गया और दिवाली के एक दिन पहले 200 और दिवाली के अगले दिन सोमवार को 300 माइक्रोग्राम प्रति मीटर क्यूब के करीब रहा। दिवाली के अगले दिन यानी सोमवार सुबह करीब 10.38 पर लखनऊ का क्वालिटी इंडेक्स 294 रिकॉर्ड किया गया जो कि बहुत खराब है। वैसे तो जिला प्रशासन ने इस बार पटाखों की बिक्री से उनको जलाने तक तमाम निर्देश दिए लेकिन ये सभी हवा-हवाई साबित हुए। जिला प्रशासन ने दीवाली में रात 8 से 10 तक पटाखे चलाने की अनुमति दी थी लेकिन रात 12 बजे के बाद भी पटाखे चलते रहे। इसके अलावा चटाई और लगातार बजने वाले पटाखों पर प्रतिबन्ध के बावजूद भी इनका जमकर इस्तेमाल किया गया। सुबह 10.38 पर गोमतीनगर और तालकटोरा में सबसे खराब क्वालिटी इंडेक्स रिकॉर्ड हुआ। दोनों जगह एयर क्वालिटी इंडेक्स 340 रिकॉर्ड हुआ। हालांकि पिछले साल के मुकाबले इस बार पटाखों का इस्तेमाल कुछ कम जरूर नजर आया। गौरतलब है कि शून्य से 50 के बीच के एक्यूआई को अच्छा, 51 से 100 को संतोषजनक, 101 से 200 को मध्यम, 201 से 300 को खराब, 301 से 400 को बहुत खराब और 401 से 500 को गंभीर और 500 से ऊपर को अति गंभीर आपात स्थिति की श्रेणी में रखा जाता है।

नौ इलाकों में एयर क्वॉलिटी सर्वे

सीएसआईआर-इंडियन इंस्टीट्यूट ऑफ टॉक्सिकोलॉजी रिसर्च की एनवॉयर्नमेंट मानीटरिंग डिवीजन ने दीपावली के दौरान राजधानी के नौ अलग-अलग इलाकों में एयर क्वॉलिटी सर्वे किया। आरपीबीडी (अनुसंधान योजना एवं व्यापार विकास प्रभाग) के प्रमुख डॉ. केसी खुल्बे ने बताया कि दीपावली से पहले, दीपावली के दिन और दीपावली के बाद भी प्रदूषित कणों की मात्रा वायु में मानकों से कहीं अधिक मिली है।

सभी इलाकों में बढ़ा प्रदूषण

सीएसआईआर के वैज्ञानिकों के अनुसार दिवाली की रात पीएम 2.5 का औसत स्तर 170 से बढ़कर 679.1 माइक्रोग्राम प्रति मीटर क्यूब तक पहुंच गया। अगले दिन यह कम होकर 265.6 मापा गया। ऐसे ही पीएम 10 का औसत स्तर भी 262 से बढ़कर दिवाली के दिन 989.5 और एक दिन बाद 385.6 माइक्रोग्राम प्रति घन मीटर रहा।

पटाखों का धुआं रहा मुख्य कारण

वैज्ञानिकों के अनुसार प्रदूषण का स्तर बढ़ने का प्रमुख कारण पटाखों का धुंआ है। क्योंकि दिवाली की रात में ट्रैफिक बहुत कम होने से इस प्रदूषण में इनका योगदान न के बराबर रहा। दिवाली की छुट्टियों में फैक्ट्री और दुकानें भी इस रात बंद रहती हैं। दिवाली की रात औसत रूप से पीएम 2.5 की मात्रा में करीब 299.5 परसेंट और पीएम 10 की मात्रा में 277.7 परसेट की बढ़ोत्तरी रही। पीएम 2.5 और पीएम 10 की मात्रा भी क्रमश: 46 परसेंट और 49 परसेंट तक बढ़ी रही। रिपोर्ट के अनुसार सल्फर डाई आक्साइड और नाइट्रोजन डाई आक्साइड सहित अन्य प्रदूषकों की मात्रा भी काफी बढ़ी रही।

क्या है पीएम 2 .5

ये हवा में फैले अति सूक्ष्म खतरनाक कण हैं जो हमारे फेफड़ों में प्रवेश कर जाते हैं। इन 2.5 माइक्रोग्राम से छोटे कणों को पर्टिकुलेट मैटर 2.5 या पीएम 2.5 कहा जाता है। प्रत्येक क्यूबिक मीटर हवा में पीएम 2.5 कणों का स्तर जानकर प्रदूषण का आकलन किया जाता है। ऐसे ही पीएम 10 माइक्रोग्राम से छोटे कणों को पीएम 10 कहा जाता है।

पीएम10 स्तर - (मानक 100)

एरिया	26 अक्टूबर दिन-रात	27 अक्टूबर दिन-रात	28 अक्टूबर दिन-रात
अलीगंज	103.30-198.28	142.15-528.66	267.37-394.66
विकास नगर	163.85-175.14	211.47-586.75	305.28-351.58
इंदिरा नगर	120.42-171.01	213.75-517.18	284.13-302.82
गोमती नगर	110.36-316.28	245.00-498.61	189.96-307.31
चारबाग	160.75-306.51	383.28-656.11	216.94-281.13
आलमबाग	184.76-000	171.83-489.73	255.20-259.42
अमीनाबाद	216.28-226.46	193.91-549.92	289.83-363.65
चौक	219.82-310.70	172.39-553.66	162.94-298.61
अमौसी	175.62-168.78	248.02-447.48	110.20-210.09

दीवाली की रात औसत स्तर

वर्ष	पीएम 10	पीएम 2.5
2014	514	423
2015	424	275
2016	824	672
2017	515	316
2018	989.5	679.1
2019	536.5	346.5

(पीएम 10 व पीएम 2.5 के सभी आंकड़े माइक्रोग्राम प्रति घनमीटर में)

अलीगंज सबसे अधिक प्रदूषित

मानकों के अनुसार पीएम 10 का स्तर हवा में 100 होना चाहिए। लेकिन दीपावली की रात पटाखों से अलीगंज सबसे अधिक प्रदूषित रहा। अलीगंज इलाके में पीएम 10 स्तर दिवाली की रात 528.66 माइक्रोग्राम प्रति घनमीटर मापा गया। जबकि दूसरे नंबर पर विकास नगर में 566.75 और तीसरे नंबर पर इंदिरानगर 517.18 व चौथे नंबर पर गोमतीनगर 498.61 के साथ अमीनाबाद 549.92 भी प्रदूषित रहे। इसके अलावा आलमबाग, चौक, अमौसी सहित अन्य इलाकों में भी प्रदूषण का दिवाली की रात 8 से 10 गुना तक अधिक बढ़ा रहा।

चौक में सबसे अधिक पटाखों का शोर

रिपोर्ट के अनुसार पटाखों से दीपावली की रात ध्वनि प्रदूषण का स्तर काफी बढ़ गया। शाम सात बजे से लेकर आधी रात तक अलग-अलग एरिया में इसे मापा गया और अधिकतम चौक में सबसे अधिक 86.9 रहा। सबसे कम 77.6 डेसिबल अमीनाबाद में रहा। वैज्ञानिकों के अनुसार यह बहुत खतरनाक स्थिति है। वैज्ञानिकों के अनुसार 80 से ऊपर शोर का स्तर होने पर सुनने की क्षमता में कमी या बहरेपन की समस्या हो सकती है। साथ ही चिड़चिड़ाहट, हाइपरटेंशन, एंजाइटी, स्ट्रेस, सिर दर्द, नींद न आने की प्रॉब्लम भी सामने आ सकती है।

ध्वनि प्रदूषण का स्तर (डेसिबल में)

एरिया	27 अक्टूबर	28 अक्टूबर
चारबाग	71.8	81.8
चौक	71.2	86.9
अलीगंज	66.4	83.9
विकास नगर	65.8	86.5
इंदिरा नगर	66.4	85.9
गोमती नगर	68.6	77.6

सामान्य दिनों की तरह ध्वनि प्रदूषण

राज्य प्रदूषण नियंत्रण बोर्ड ने पटाखों के कारण वायु और ध्वनि में हुए प्रदूषण का अध्ययन कराया है। बोर्ड की रिपोर्ट के मुताबिक दीपावली के दिन राजधानी में कई चौक, चौराहों पर छह बजे सुबह से दोपहर दो बजे तक 125 प्रति घन मीटर पीएम-10 पाए गए। वहीं दो बजे से लेकर रात के बजे तक 135 प्रति घन मीटर तथा रात के 10 बजे से लेकर सुबह छह बजे तक 173 प्रति घन मीटर पीएम-10 पाया गया। जांच के दौरान औसतन 144 प्रति घन मीटर पीएम-10 पाया गया। सामान्य आबोहवा के लिए 100 घन मीटर पीएम-10 सामान्य माना जाता है।

इस बार कम फोड़े गए पटाखे

क्षेत्रीय प्रदूषण नियंत्रण अधिकारी अशोक वर्मा के अनुसार इस बार पिछले साल की तुलना में काफी कम ध्वनि प्रदूषण हुआ है। इसके कई कारण रहे, मौसम के साथ-साथ लोगों ने घर से बाहर कम ही पटाखा फोड़ा। यूपी प्रदूषण नियंत्रण बोर्ड का कहना है कि पिछले साल की अपेक्षा प्रदूषण के आंकड़ों में इस बार गिरावट है। कोर्ट की ओर से पटाखों पर लगाए गए प्रतिबंध का असर नजर आ रहा है। यह भी काफी है। अशोक वर्मा ने बताया कि प्रदूषण का स्तर सामान्य स्तर पर आने में अभी दो से तीन दिन का वक्त लगेगा।

Published in:
Daily News

Produced by Unit for Science Dissemination, CSIR, Anusandhan Bhawan, 2 Rafi Marg, New Delhi

CSIR-IITR

30th October, 2019

IITR report shows dip in pollution levels

PIONEER NEWS SERVICE ■ LUCKNOW

The IITR report on the assessment of pre-Diwali and post-Diwali ambient air quality this year shows a significant decrease in air pollution as compared to last year. This year's report shows a 46 per cent dip in PM10 levels and 49 per cent decrease in PM2.5 levels as compared to last year. However, the values of PM 10 and PM 2.5 levels were still very high.

According to head of IITR's Environmental Division SC Burman, the decrease in the pollution levels is good news but "we have a long way to go". "The concern over air pollution has been the reason for decrease in the use of crackers this year," he added.

IITR conducted the air quality survey at nine locations, including Aliganj, Vikas Nagar, Indira Nagar, Gomti Nagar, Charbagh, Aminabad, Chowk, Alambagh and Amausi to assess the impact of fireworks on environment. The pre-Diwali and post-Diwali respirable particulates were well above the National Ambient Air Quality Standards of 60 µg/m3 and 100 µg/m3 for PM2.5 and PM10 respectively.

The mean levels of PM 10 on Diwali night were recorded at 528.66 µg/m3 in Aliganj, 586.75 µg/m3 in Vikas Nagar, 517.18 µg/m3 in Indira Nagar, 498.61 µg/m3 in Gomti Nagar, 656.11 µg/m3 in Charbagh, 489.73 µg/m3 in Alambagh, 549.92 µg/m3 in Aminabad, 553.66 µg/m3 in Chowk, and 447.48 µg/m3 in Amausi.

The mean levels of PM 2.5 recorded on the day of Diwali were recorded at 279.81 µg/m3 in Aliganj, 433.33 µg/m3 in Vikas Nagar, 346.82 µg/m3 in Indira Nagar, 298.12 µg/m3 in Gomti Nagar, 486.98 µg/m3 in Charbagh, 310.11 µg/m3 in Alambagh, 386.76 µg/m3 in Aminabad, 322.07 µg/m3 in Chowk, and 254.24 µg/m3 in Amausi.

On Diwali night, the mean level of PM2.5 increased from 159.2 µg/m3 to 346.5 µg/m3 over the pre-Diwali night and reduced to 190.7 µg/m3 during the post-Deepawali night.

Similarly, the level of PM10 on Diwali night increased from 234.1 µg/m3 to 536.5 µg/m3 over the pre-Diwali night and reduced to 307.7 µg/m3 during the post-Deepawali night.

The IITR scientist said that the bursting of crackers was responsible for the increasing trend of particulate levels as other sources such as traffic and industrial activities were minimal due to holidays.

In case of SO2, the mean level was found to be within prescribed limits. However, the mean level of SO2 on Diwali night increased from 12.9 µg/m3 to 35.7 µg/m3 while the post-Deepawali mean SO2 level was 27.0 µg/m3.

The mean level of NO2 was found to be within prescribed limits. On Diwali night, the mean NO2 value increased from 31.6 µg/m3 to 100.7 µg/m3 over the pre-Diwali night. The post-Diwali mean level of NO2 increased to 59.3 µg/m3 from 31.6 µg/m3.

"The pollution levels were found to be lower this year as compared to 2018. Reduction in particulate matter PM10 and PM2.5 from last year was found to be about 46 per cent and 49 per cent respectively," he added.

On the weather conditions, the scientist said that besides sources of pollutants, the air quality depends on meteorological factors like temperature, wind speed and wind direction, relative humidity. "To represent the weather condition, we have collected temperature, relative humidity, wind speed and wind direction data from CPCB online monitoring station at Talkatora Industrial Centre from October 26 to 28," he said.

Burman said fireworks also affect surface soil quality, ultimately leading to water pollution and generation of huge quantity of additional solid waste. "Therefore, the storage, sale and use of crackers creating noise more than the prescribed levels and emitting toxic smoke and fumes should be checked as per guidelines. As far as possible, the use of fire crackers should be discouraged and minimised to maintain clean air quality in the festival season," he added.

Kids seem to be having fun with firecrackers in Lucknow on Diwali — Pioneer

Indira Nagar noisiest, Aminabad quietest

PIONEER NEWS SERVICE ■ LUCKNOW

Noise level was recorded during Pre-Deepawali, Post-Deepawali and On-Deepawali night to observe the impact of firecrackers at seven locations by Indian Institute of Toxicology. The noise levels recorded this year were slightly less this year as compared to last year.

Head of IITR's Environment Division SC Burman said that the monitoring was carried out from 7 pm till midnight. The maximum noise level 82.1 dB(A) was recorded in Indira Nagar area whereas the minimum at 71.3 dB(A) in Aminabad on Diwali night. Other locations included Charbagh 80.2 decibels, Chowk 78.5 decibels, Aliganj 78.9 decibels, Vikas Nagar 76.8 decibels, and Gomti Nagar 75.7 decibels.

"The sound waves generated from the bursting of crackers at a level higher than 80 dB(A) may damage eardrums and induce temporary or permanent deafness. Exposure to high levels of noise may trigger problems like annoyance, irritation, hypertension, stress, hearing loss, headache and sleep disturbance," Burman said.

He said IITR is constantly working to take forward its mission of clean environment through programmes like 'Outreach' & 'Jigyasa', and exhibitions. "Efforts are made to connect the citizens, particularly students, to the cause of clean environment. The campaign to minimise the use of firecrackers in light of the adverse health effects of noise and air pollution has been taken up under these awareness programmes," he said.

Published in:
The Pioneer

Venkaiah to open international symposium in NEERI today

CSIR-NEERI 30th October, 2019

VICE-President of India Venkaiah Naidu will inaugurate International symposium organised by CSIRNational Environmental Engineering Research Institute (CSIR-NEERI) on Wednesday at 10 am at NEERI auditorium. The theme of symposium is 'Metal Ions and Organic Pollutants in Biology and Medicine and Environment'.

Dr Rakesh Kumar, Director of NEERI; Dr Sunali Khanna, Symposium Chair; Dr Dileep Mhaisekar, Vice Chancellor, Maharashtra University of Health Sciences, Prof Paul Tchounwou, Professor and Associate Dean, Jackson State University, Mississippi, USA; Dr K Krishnamurthi, Chief Scientist, CSIR-NEERI will receive Vice-President. Vice-President will launch Jagruti programme 'Ek Samaj Ek Lakshya' by pressing the button and then deliver address. Earlier, Dr Dileep Mhaisekar and Dr Tchounwou will deliver the speech.

Published in:
The Hitvada

Madras high court asks expert to inspect toilet complex of city school

CSIR-SERC

29th October, 2019

Concerned over a dispute raised by the management of Sacred Heart Matriculation School on Church Park School campus, Anna Salai, against a private construction company regarding the structural stability of a newly built massive toilet facility in the school, the Madras high court has ordered an inspection by CSIR- Structural Engineering Research Centre. “It is of great concern that 100% safety of thousands of girl students studying Class LKG to Class XII in the school is to be ensured. No iota of doubt shall be permitted to prevail in the mind of the school management and therefore, in order to have the complete confidence, they need the best services in this field,” Justice R Suresh Kumar said, passing the order.

The issue pertains to a civil suit moved by Jude’s Infra Technologies Pvt, a Chennai-based construction company against the management of the school — Society of Sisters of the Presentation of the Blessed Virgin Mary — for recovery of pending payment for constructing a massive two-storey toilet building meant to be used by more than 2,000 students of the school. Opposing the suit, the school management raised serious concern about the structural stability of the building, pointing out waterlogging and other issues. They also relied on two expert opinions by two consultants, who opined that the building was structurally weak.

However, the school’s request to appoint an expert from the IIT-M or CSIR-SERC to inspect the building and provide an opinion was denied by a city civil court, which appointed an advocate commissioner to inspect the building along with the PWD engineer. Challenging the order, the school has moved the present revision plea.

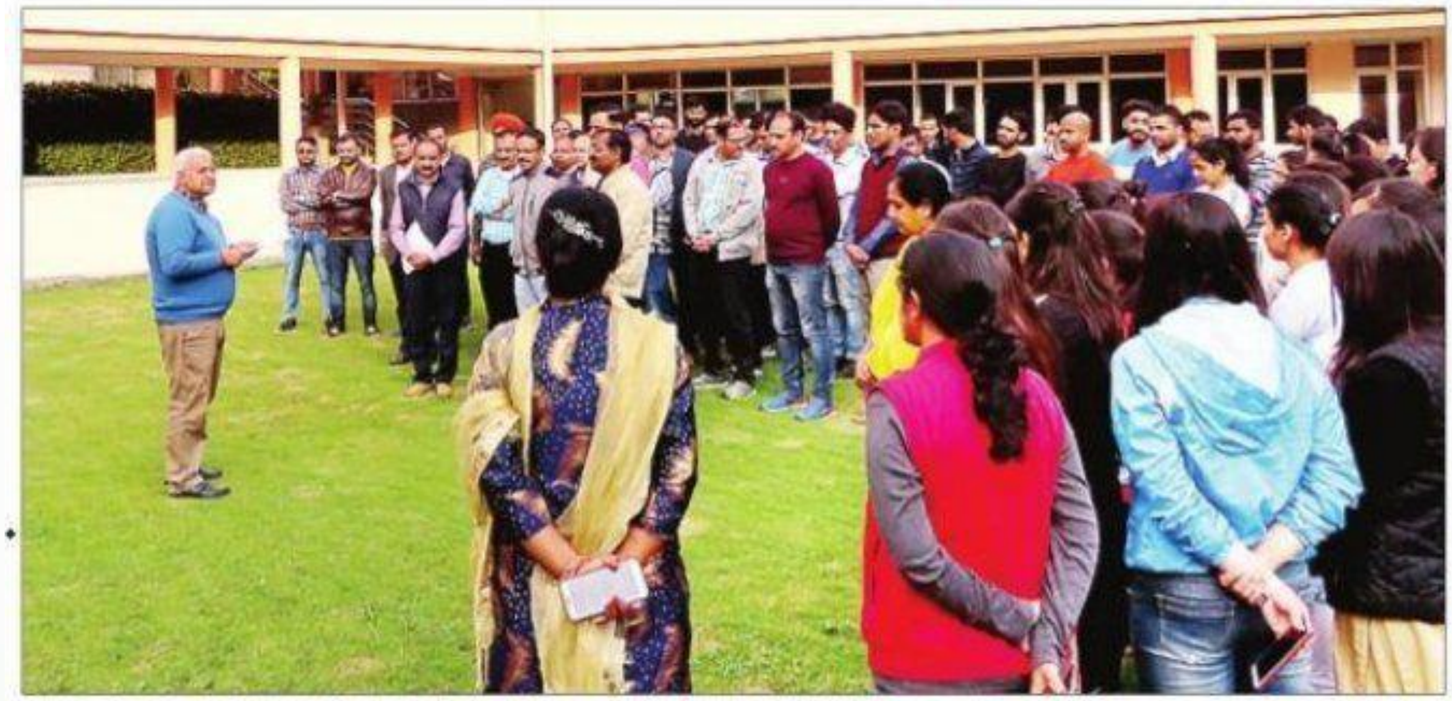
Allowing the plea moved by the school, Justice Suresh Kumar modified the order of the civil judge and directed the advocate commissioner to inspect the school with an expert from the CSIR-SERC and the PWD and file a report to the court. "The only request on the part of the defendants before the court below was that, since the magnitude of the alleged structural instability of the building is concerned, as per the structural stability assessment as well as the stability report submitted by two such technical experts, unless a thorough report from a well-reputed expert is obtained, the real picture will not come into light.

The chance of making rectifications and taking remedial measures, enabling the school to put the building in use for students, may not be possible. Only in that context, they had been very particular to avail services of the IIT-Madras or CSIR-SERC," Justice Suresh Kumar said.

Published in:
The Times of India

CSIR-IHBT

28th October, 2019



पालमपुर : हिमालय जैवसंपदा प्रौद्योगिकी संस्थान में सतर्कता जागरूकता शपथ दिलवाते निदेशक डा. संजय। (ब्यूरो)

आई.एच.बी.टी. में सतर्कता जागरूकता सप्ताह आरंभ

पालमपुर, 28 अक्तूबर (ब्यूरो): सी.एस.आई.आर.-हिमालय जैवसंपदा प्रौद्योगिकी संस्थान पालमपुर में सतर्कता जागरूकता सप्ताह का शुभारंभ हुआ। संस्थान के निदेशक डा. संजय कुमार ने सभी कार्मिकों एवं शोधार्थियों को सतर्कता जागरूकता शपथ दिलाई तथा आह्वान किया कि वे अपने जीवन के प्रत्येक क्षेत्र में सत्यनिष्ठा तथा ईमानदार कार्य संस्कृति को प्रोत्साहित करें। इस वर्ष के सतर्कता जागरूकता सप्ताह की थीम ईमानदारी-एक जीवनशैली रखी गई है।

सार्वजनिक जीवन में सत्यनिष्ठा, पारदर्शिता एवं जवाबदेही की संस्कृति को मजबूत बनाने के लिए संस्थान इस सप्ताह के दौरान विभिन्न कार्यक्रमों तथा गतिविधियों को आयोजित करेगा। संस्थान द्वारा इस सप्ताह के दौरान स्थानीय विद्यालयों एवं पंचायतों में सतर्कता जागरूकता शिविरों का आयोजन किया जाएगा, मानव श्रृंखला बनाई जाएगी, साथ ही पोस्टर एवं अन्य सामग्री को भी प्रदर्शित किया जाएगा।

Published in:
Punjab Kesari

Varying shades of ‘green’ crackers

CSIR-NEERI

27th October, 2019

An investigation reveals differences in their emission levels

This Deepavali, the only crackers that are legal are those that bear a sticker indicating lower pollution levels. While these crackers are indeed less polluting than regular ones, an investigation by *The Hindu* reveals that the pollution level among ‘green’ crackers varies.

Various brands of ‘green’ crackers seem to have been able to bring down noise and dust particle levels to varying levels when compared to regular crackers. The ‘green’ crackers themselves are the result of a Supreme Court directive to reduce pollution levels during Deepavali. *The Hindu*, along with a team of researchers from EnviTran, a startup of the IIT Madras Incubation Cell, tested two brands of crackers that had the ‘green’ certification — Krishna and Standard. The results, after an hour-and-a-half of bursting both ‘green’ and regular crackers, during which ambient air quality and sound levels were recorded, showed that the former had varying levels of particulate matter. In the case of Krishna, the box had the ‘green’ emblem on it but not the individual cracker packs. This brand emitted more particulate matter than Standard, which had the emblem on the individual packs. The Krishna brand of ‘green’ crackers recorded a PM10 level of 187.07 micrograms/cubic metre whereas the Standard brand recorded 157.56 micrograms/cubic metre. The noise level too was 99.90 decibels for the first pack and 88.47dB for the second. With regard to PM2.5 levels, the two boxes released 91.33 micrograms/cubic metre and 78.51micrograms/cubic metre respectively

Crackers that were burst during the tests included bullet bombs, small flower pots, small *chakra*, ‘electric’ crackers and twinklers.

The tests were conducted at the office of the Srinivasa Young Men's Association in Triplicane. The regular crackers recorded much higher levels of pollution — 201.34 micrograms/cubic metre and 99.03 micrograms/cubic metre. Their noise level too came in at 101.68 dB. The ambient noise level in the area was recorded 54.50 dB and the PM10 and PM2.5 levels were 55.56 microgram/cubic metre and 37.76 microgram/cubic metre — meaning it was a reasonably clean neighbourhood. The inference after 10-minute-long monitoring sessions given by R. Krishnaraj, director (operations), EnviTran, were that 'green' crackers had less particulate matter when compared to normal crackers. The CSIR-NEERI had announced that the 'green' crackers developed by it would bring down the pollution by 30% compared to regular crackers.

S.M. Shiva Nagendra, professor, Environmental and Water Resources Engineering Division, IIT Madras, said the whole exercise of reducing bursting time and introduction of 'green' crackers was aimed at bringing down pollution levels. "Even though Chennai is a coastal city, due to lack of winds during Deepavali, dispersion does not take place, sometimes leading to heavy pollution. Due to expansion of cities and an increase in population, the number of persons bursting crackers has increased and, correspondingly, pollution too. Green crackers do not have certain chemicals, which is why colour-emitting crackers are very less this year," he said.Ecologist Sultan Ahmed Ismail said that this trend of manufacturers shifting to 'green' crackers and people purchasing them was a positive one, which was good for the environment, animals and humans.

The Union government should form a panel and fix a range for PM2.5, PM10, gases emitted and sound produced by such crackers, he added.

Published in:
The Hindu

Curtain raiser event of 5th IISF held at IIIM

CSIR-IIIM

26th October, 2019

To mark the celebrations of 5th Edition of India International Science Festival (IISF) 2019, an annual event organised jointly by Science & Technology related ministries and Departments of the Government of India and Vijnana Bharati being held this year at Biswa Bangla Convention Centre and Science City in Kolkata during November 5 to 8, the CSIR-Indian Institute of Integrative Medicine Jammu today organized day long Public Outreach Programme. Dr. Shekhar C. Mande, Director General, Council of Scientific and Industrial Research (CSIR), & Secretary, DSIR, Government of India joined the proceeding of this event through video conferencing and also addressed the participants. During his address he informed the gathering that the theme for this year's festival is RISEN India – Research, Innovation, and Science Empowering the nation. Dr Ram Vishwakarma, Director, CSIR-IIIM, while welcoming the chief guest, students and other dignitaries said that young minds should think critically and challenge conventional set of thinking. He also pressed for the need to develop scientific temper among students for transformation of the youth and country. Dr Vishwakarma wished the budding scholars for successful scientific endeavour. Dr Dhiraj Vyas, Nodal Scientist of IISF-2019 Out Reach Programme in his presentation gave detailed account of activities conducted during the event and informed that more than 35 schools with about 1,100 students, scholars, educationists and scientists across Jammu participated in this event. Prof. Rajni Kant, president VIBHA, J&K and Director, Distance Education, Jammu University highlighted the significant achievements of VIBHA since its inception.

A video presentation of VIBHA was also screened to inspire young students. On the occasion, the institute observed open day for students and various competitions like quiz, extempore and science models were organized for the students. Prof Manish Gulati, Principal Happy Model School Udhampur delivered popular science talk to the students.

Later Prof. Rajni Kant also gave prizes to the winners of various science competitions held earlier in forenoon. Deepika Singh conducted the proceedings of the event while Er. Rajneesh Anand, Chief Scientist presented vote of thanks. Other dignitaries who attended the function included Dr. D.M.Mondhe, Sr. Principal Scientist & Head, Cancer Pharmacology, Er. Abdul Rahim, Senior Principal Scientist & Head, PME & IT, Dr. I.A.Khan, Senior.

Principal Scientist & Head Clinical Microbiology, Dr. Zabeer Ahmed, Senior Principal Scientist & Head, Inflammation Pharmacology & ESD and Pankaj Bahadur, Controller of Administration.

Published in:
Daily Excelsior

CSIR offers free mapping of Indian genomes

CSIR-IGIB, CCMB

26th October, 2019

There is already a backlog of at least 400 individuals for the project

Anyone looking for a free mapping of their entire genome can sign up for the IndiGen initiative, a programme managed by the CSIR-Institute of Genomics and Integrative Biology (IGIB) and the CSIR-Centre for Cellular and Molecular Biology (CCMB). Those who do get their genes mapped this way will get a card and access to an app, which will allow them and doctors to access "clinically actionable information" on their genomes. The programme is a culmination of a six-month project by the CSIR in which 1000 Indians, had their genomes scanned in detail.

They were chosen from across the land to represent the width of genetic variability. The aim of the exercise was twofold: To test if it's possible to rapidly and reliably scan several genomes and advise people on health risks that are manifest in their gene and, understand the variation and frequency of certain genes that are known to be linked to disease. Not everyone who signs up will be guaranteed a scan. There's already a backlog of at least 400 individuals and in a year or so, CSIR scientists say, partnerships it is negotiating with several pathological laboratories, will see such scans being performed by companies for a price. "As of today anyone can apply via our website," said Vinod Scaria, a senior scientist at the CSIR-IGIB who's associated with the initiative. "But there are already several to be scanned. Eventually the idea is that people will connect with laboratories via their doctors who will interpret their test for them. Much like a CT scan, for instance." Private laboratories say that they see potential from the results of the genome mapping to translate into affordable genetic tests. "By partnering with IndiGen

1000 genome project we wish to bring accurate diagnostics to the people of India at an affordable price," Dr. Vandana Lal, Executive Director, LalPathLab Ltd said in a statement. A genetic test, which is commercially available at several outlets in the country, usually involves analysing only a portion of the genome that's known to contain aberrant genes linked to disease. A whole genome sequencing is more involved and expensive — it's about ₹100,000 and a single person's scan take a whole day — and generally attempted only for **research** purposes. The human genome has about 3.2 billion base pairs and just 10 years ago cost about $10,000. Now prices have fallen to a tenth.

"The outcomes of IndiGen will have applications in a number of areas including faster and efficient diagnosis of rare genetic diseases," said Union Science Minister, Harsh Vardhan, at a press conference, "The IndiGenome card and app ensures privacy and data security, which is vital for personal genomics to be implemented at scale."

The CSIR exercise ties into a larger programme coordinated by the Department of Biotechnology, which plans to scan nearly 20,000 Indian genomes over the next five years, in a two-phase exercise, and develop diagnostic tests that can be used to test for cancer.

Published in:
The Hindu

CSIR-IHBT

26th October, 2019

इंडिया इंटरनैशनल साइंस फैस्टिवल का आगाज

• फैस्टिवल का उद्देश्य आम जनता को एक मंच पर लाना : डा. संजय कुमार

पालमपुर, 25 अक्तूबर (जसवंत कठियाल) : सीएसआईआर-आईएचबीटी, पालमपुर के निदेशक डा. संजय कुमार ने इंडिया इंटरनैशनल साइंस फैस्टिवल 2019 के पांचवें संस्करण के बारे में मीडिया को बताया की इस फैस्टिवल का आयोजन 5 से 8 नवंबर, 2019 को कोलकाता में किया जा रहा है। इंडिया इंटरनैशनल साइंस फैस्टिवल एक अनूठा प्लैटफार्म है जो कि भारत सरकार के विज्ञान और प्रौद्योगिकी मंत्रालय तथा पृथ्वी विज्ञान मंत्रालय ने विज्ञानभारती के साथ मिलकर बनाया है। इस फैस्टिवल का मुख्य उद्देशय छात्रों, शोधार्थियों, इन्नोवेटर्स, आर्टिस्ट्स और आम जनता को एक मंच पर लाना तथा भारत द्वारा विज्ञान तथा प्रौद्योगिकी के क्षेत्र में हासिल की गई उप्लब्धियों को सेलिब्रेट करना है। साथ ही में छात्रों के बीच विज्ञान के प्रति लगाव को बढ़ावा देना तथा विज्ञान को जन आन्दोलन बनाना है। इस बार का विषय रिसर्च, इन्नोवेशन और साइंस एम्पावरिंगदनेशन इंडिया है। उन्होंने बताया कि इस फैस्टिवल की शुरुआत 2015 में हुई थी और पहला तथा दूसरा फैस्टिवल नई दिल्ली में,तीसरा चेन्नई और चौथा संस्करण लखनऊ में आयोजित किया गया। विगत वर्षो की तरह इस वर्ष भी सीएसआईआर-आईएचबीटी, पालमपुर में भी इंडिया इंटरनेशनल साइंस फेस्टिवल-2019 बड़ी धूमधाम से मनाया जाएगा। इंडिया इंटरनैशनल साइंस फैस्टिवल के माध्यम से विभिन्न विद्यालयों, महाविद्यालयों व विश्वविद्यालयों के छात्र व शिक्षक संस्थान में हो रहे कार्यो के बारे में जानकारी प्राप्त कर रहे हैं। संस्थान द्वारा विकसित उत्पादों, टैक्नोलोजीस के प्रदर्शन, प्रयोगशाला भ्रमण, तथा विभिन्न गतिविधियों के आयोजन के माध्यम से छात्रों मेंविज्ञान के प्रति रुचि पैदा की जा रही है। अध्यापकों के लिए भी संस्थान वर्कशॉप्स व अन्य कार्यकर्मो का आयोजन करता है,ताकि वो अपने विध्यार्थियों को विज्ञान के नवीनतम अनुसंधानों से अवगत करा सकें। इस वर्ष अब तक 2000 से अधिक छात्र व शिक्षक संस्थान में हो रहे अनुसंधान की जानकारी प्राप्त कर चुके हैं।

निदेशक डॉ संजय कुमार ने बातचीत में बताया कि 5-8 नवम्बर के दौरान सीएसआईआर-आईएचबीटी, पालमपुर में इंडिया इंटरनैशनल साइंस फैस्टिवल के अंतर्गत विशेष कार्यक्रमों का आयोजन किया जाएगा। इसमें संस्थान द्वारा विकसित उत्पादों, टेक्नोलोजीस के प्रदर्शन के अलावा प्रयोगशाला भ्रमणतथा विभिन्न गतिविधियों का आयोजन किया जाएगा ताकि अधिक से अधिक छात्र इसका लाभ उठा सकें।

Published in:
Dainik Sawera

CSIR-NBRI

26th October, 2019

शोध

सीएसआईआर-एनबीआरआई के 66वें वार्षिक दिवस पर संस्थान के निदेशक प्रो.एसके बारिक ने दी जानकारी

हर्बल नैनो फ्लोर कीटाणुनाशक और क्लीनर बाजार में जल्द

■ एनबीटी, लखनऊ: सीएसआईआर-राष्ट्रीय वनस्पति अनुसंधान संस्थान (एनबीआरआई) ने शुक्रवार को अपने 66वें वार्षिक दिवस पर दो नए उत्पाद लॉन्च किए। इसमें हर्बल टूथपेस्ट 'जैन्थोपेस्ट' और हर्बल नैनो फ्लोर कीटाणुनाशक और क्लीनर को शामिल हैं। बाजार में जल्द ही यह बिक्री के लिए उपलब्ध होंगे। बतौर मुख्य अतिथि राष्ट्रीय पादप जीनोम अनुसंधान संस्थान नई दिल्ली के निदेशक डॉ. रमेश वी सोन्ती मौजूद रहे।

संस्थान के निदेशक प्रो.एसके बारिक ने बताया कि संस्थान की ओर से तैयार किया गया हर्बल टूथपेस्ट वैज्ञानिक रूप से मान्य है। यह दांतों में कैविटी रोकता है। 100 ग्राम टूथपेस्ट की कीमत ₹6.50 तय की गई है। इसी तरह हर्बल नैनो फ्लोर कीटाणुनाशक और क्लीनर भी तैयार किया गया है। लॉन्चिंग से पहले उन्होंने वर्ष 2018-19 की वार्षिक प्रगति रिपोर्ट प्रस्तुत की। कार्यक्रम में संस्थान के प्रधान सूचना प्रमोद ए शिर्के, विधु ए साने मौजूद रहे।

कार्यक्रम में वर्ष 2018-19 की वार्षिक प्रगति रिपोर्ट भी प्रस्तुति की गई।

दिसंबर-जनवरी तक आएगा ग्रीन फायर क्रैकर्स

संस्थान जल्द ही ग्रीन फायर क्रैकर्स लॉन्च करेगा। संस्थान के निदेशक प्रो. बारिक ने बताया कि यह सामान्य पटाखों से कम आवाज वाला होगा। इससे प्रदूषण में कम होगा। जल्द ही नागपुर में इसकी टेस्टिंग की जाएगी। वहां से हरी झंडी मिलते ही दिसंबर-जनवरी तक यह बाजार में आ जाएगा।

पौधों में बढ़ाई जा सकती है रोग प्रतिरोधकता

समारोह में 'पादक-रोगजनक संबंधों में पादप जन्मजात प्रतिरोधकता' विषय पर डॉ. रमेश वी सोन्ती ने कहा कि पौधे लगातार अपने ऊपर कई तरीके के रोगजनकों के आक्रमण का सामना करते रहते हैं, लेकिन उनमें जंतुओं की तरह कोशिकीय प्रतिरोधक तंत्र नहीं होता। उन्होंने 18 अक्टूबर तक हुई वार्षिक खेलकूद प्रतियोगिता के विजेताओं को पुरस्कृत किया।

भारतीय अंतरराष्ट्रीय विज्ञान महोत्सव 5 से

विज्ञान एवं प्रौद्योगिकी मंत्रालय एवं विज्ञान भारती के संयुक्त तत्वाधान में इस बार भारतीय अंतर्राष्ट्रीय विज्ञान महोत्सव-2019 कोलकाता में 5 से 8 नवंबर तक होगा। इसमें 28 इवेंट्स होंगे। इसकी पूरी डिटेल वेबसाइट www.scienceindiafest.org पर उपलब्ध करवा दी गई है।

Published in:
Navbharat Times

CSIR-NBRI

26th October, 2019

Next Diwali: NBRI's low-emission aromatic crackers to hit market

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LUCKNOW: The National Botanical Research Institute (NBRI) has developed a range of aromatic crackers that not only pollute less but also give out an aroma. Officials working at the NBRI, part of the Council of Scientific and Industrial Research (CSIR), said that a patent would be filed next year and the crackers would hit the market by Diwali 2020.

Unlike the previous version of the green cracker developed by the CSIR and several of its labs, including the one at the NBRI, in collaboration with the National Environment Engineering Research Institute (NEERI), last year, this aromatic avatar has been developed by the NBRI alone.

"Our scientists have developed our own green cracker, which is not only low-emission but also aromatic," said SK Barik, director, NBRI, Lucknow.

"The product is in the testing phase. The institute will file a patent once it gets a nod from the petroleum and explosives safety organisation (PESO) after safety checks. These crackers have been made to cut down the pollution level by up to 40% when compared to the regular products," he said while highlighting the properties of the new crackers.

Green crackers on sale at Aishbagh, Lucknow. DEEPAK GUPTA/HT

> The aromatic crackers have been made by replacing chemicals with plant-based materials. Thus, when the cracker goes off, there's not as much pollution.
> DR OP SIDDHU, sr principal scientist

Dr OP Siddhu, senior principal scientist and the brain behind the innovation, said, "The aromatic crackers have been made by replacing chemicals with plant-based materials. Be it the oxidising agent, the chemical salts or other substances -- all are plant-based. Thus, when the cracker goes off, there's not as much pollution."

Dr Siddhu said he had been working on the project for a year. He also said that while the cracker would produce lower emissions, there "won't be any dip" in its noise level.

Published in:
Hindustan Times

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