



CSIR IN MEDIA

A Daily News Bulletin

25th October , 2016

Page: 1

Indian institute develops new CSDs for industry

CSIR-CFTRI



Technology developed by the Mysuru-based Council of Scientific and Industrial Research-Central Food Technological Research Institute (CSIR-CFTRI), the country's premier food technology laboratory, is being offered to the country's beverage manufacturers.

The CFTRI has created a series of 'healthier' carbonated soft drinks based on grape, pomegranate, sweet lime, sugarcane and neera (coconut palm sap) flavours, which have the potential for commercial production. The claimed juice content is around 20%.

Neil Murray | October 24, 2016

Source: www.agra-net.com/agra/foodnews/beverages/soft-drinks/carbonates/indian-institute-develops-new-csds-for-industry-530654.htm/

CIMAP develops herbal cough syrup

CSIR-CIMAP



A herbal cough syrup, with no alcohol and known to be effective in allergic coughs, was released by Central Institute of Medicinal and Aromatic Plants on Monday.

After four years of research, the institute has come up with the syrup made up of three herbs; Tulsi, Kantakari (known for effective treatment of asthma, cough and chest pain) and Cinnamon, popularly known as Dal Chini.

"The syrup has been made with CIM-Angan, Shyama Tulsi variety of CIMAP that has medicinal properties. It is active against an allergic cough," said senior scientist DN Mani who led the team. "The syrup has been officially released during the CSIR 74th foundation day and will reach the public once the institute offers the technology to a firm that shows interest in the formulation," said scientist Sanjay Kumar.

TNN | October 25, 2016

Source: timesofindia.indiatimes.com/city/lucknow/CIMAP-develops-herbal-cough-syrup/articleshow/55040078.cms/

CSIR's Memorable Mark with Indelible Ink

CSIR-NPL

DO YOU
KNOW ?



THE INDELIBLE INK USED DURING GENERAL ELECTIONS
WAS DEVELOPED IN 1952 BY CSIR

Come elections and a deep purple mark on the voters' left forefinger is a familiar sight. What most of us are, however, not so familiar with is the fact that this inerasable ink mark is a gift of CSIR to the Nation. Once applied, this mark indicates that the voter has cast his/her vote, and thus, prevents that person to vote a second time. Thanks to CSIR scientists working in the National Physical laboratory (CSIR -NPL) New Delhi, for their painstaking efforts that led to devising the chemical formula of indelible ink.

One of the earliest achievements of CSIR, it was to counter the challenge of fraudulent voting that the research work on formulating indelible ink was initiated in 1950's by scientists in the erstwhile Chemical Division and later patented by the National Research Development Corporation (NRDC), New Delhi.

The Mysore Paints & Varnish Ltd., a Karnataka Govt. Undertaking, has been licensed to manufacture the ink. This more than seven decade old Company entered the business of making indelible ink in 1962. Today lakhs of 10 ml bottles are supplied to the State administration.

It is matter of pride that today this innovation of CSIR is going places, as the indelible ink is exported to more than 25 countries that include Canada, Ghana, Nigeria, Mongolia, Malaysia, Nepal, South Africa and the Maldives. However, as different countries follow a different mode for applying the ink, the Company supplies the ink as per customer specifications. For example, in Cambodia and the Maldives, voters need to dip his/her finger into the ink while in Burkina Faso the ink is applied with a brush, and nozzles are used or its use in Turkey.

As the ink is photo-sensitive, it needs to be protected from exposure to direct sun rays. Therefore, amber-coloured plastic containers are must for storing the ink, which in earlier times was stored in brown-coloured glass bottles. On application, the ink remains on the fingernail for at least two days, to even up to a month depending upon the person's body temperature and the environment. The ink contains silver nitrate, which on reaction with the nail and on exposure to light gets darker.

This water-base ink also contains a solvent like alcohol to allow its faster drying, besides having some dyes. The composition of indelible ink is optimized such that it diffuses into the skin spontaneously to give a definite marking which is resistant to chemical and mechanical manipulations. The precise protocol for making this ink including its chemical composition and the quantity of each constituent is, however, not known to many people.

The formulation of indelible ink, based on an age-old process, is truly innovative for the original formula has stood the test of time.

October 21, 2016

Source: blog.mygov.in/csirs-memorable-mark-with-indelible-ink/

Vehicle smoke, road dust add to winter air pollution in Delhi

CSIR-CRRI



In winter, vehicles contribute 25% to PM_{2.5} which could be above 35% at some places, according to a study conducted by IIT Kanpur. (Raj K Raj)

Apart from stubble burning by neighbouring states, the Capital has to battle pollution from millions of vehicles, construction and road dust.

The problem becomes graver during winters. “With winter approaching, Delhi and other parts of north India show a noticeable spike in air pollution,” said Centre for Science and Environment (CSE) executive director Anumita Roychowdhury.

She said Delhi also suffers from the lacklustre attitude of its own authorities and people. “Others (contributors of pollution) are industrial waste and diesel trucks and interstate buses entering the city.”

A study conducted by IIT Kanpur on Delhi’s pollution levels says that emissions from vehicles are the second largest source of particulate matter, especially PM_{2.5}. Construction dust and stubble burning are the other sources.

Vehicular pollution grew from 64% to 72% between 1990 and 2000, the report says. In winter, vehicles contribute 25% to PM_{2.5}. At places, it could be above 35%. It also says that diesel vehicles contribute significantly to PM₁₀ and PM_{2.5}.

Delhi has over 8.9 million registered vehicles. In addition, 570,000 personal and passenger vehicles enter Delhi every day, shows a CSE study in June.

In comparison, a total of 569,000 vehicles were registered in the city in 2014-15, according to the Economic Survey of Delhi. This shows that the number of vehicles coming into Delhi daily is almost equal to the number registered in the city in a year.

“The number of vehicles on the roads is increasing every day, but the space is the same. So, vehicles crawl on the road. With lower speed, engine efficiency reduces and emission levels increase,” said senior principal scientist at CSIR-Central Road Research Institute (CRRI), Dr S Velmurugan.

The city’s average speed has gone down from 20 kilometres an hour to 5 kilometres an hour over five years, he said quoting studies by CSIR-CRRI.

ROAD AND CONSTRUCTION DUST

The daily PM10 and PM2.5 emissions from road dust are 79,626 kilos and 22,165 kilos, respectively. Broken and poorly maintained roads, a regular sight in Delhi, also cause significant non-exhaust road dust emissions.

Also, construction dust contributes to 40% of the city’s total waste generated.

“The most harmful element in construction matter is silica which often escapes the human body’s filter mechanism. Over a period of time, it shrinks lung capacity and makes the person vulnerable to all kinds of infections,” said Dr Neeraj Jain, chest specialist at Ganga Ram Hospital.