

INSTITUTE OF WOOD SCIENCE AND TECHNOLOGY, BANGALORE

Azadi ka Amrit Mahotsav

“Sandalwood Oil: Uses, Adulteration and Detection Techniques”

December 24 2021

A Webinar on “Sandalwood Oil: Uses, Adulteration and Detection Techniques” was organized by Institute of Wood Science and Technology, Bengaluru on 24th December 2021. The event was a part of series of events being conducted by Indian Council of Forestry Research and Education, Government of India under **Azadi ka Amrit Mahotsav** celebrating 75 years of India’s Independence.

Dr. Rakesh Kumar, Scientist-E Wood Processing Division IWST Bengaluru welcomed all the participants and briefed about the purpose of the webinar and importance of Sandalwood essential oil, its uses and quality assessment. Sandalwood essential oil, has a long lasting, pleasant, smooth, and woody scent. In the Indian traditional medicine system sandalwood and its oil has largely been used as a demulcent, diuretic, and mild stimulant. Sandalwood oil has been traditionally used for treatment of common colds, burns, headaches, bronchitis, fever, infection of the urinary tract, inflammation of the mouth and pharynx, liver and gallbladder complaints and other maladies. It is being used worldwide mainly for the high valued fragrance, cosmetic, pan masala, mouth freshener and aromatherapy industries. Quality and pleasant characteristic odor of the oil is mainly due to content of major sesquiterpene alcohols i.e., Z- α -santalol and Z- β -santalol and other minor constituents. The Indian standards for sandalwood oil is IS 329: 2004. The webinar was attended by more than 40 participants representing industries, researchers, farmers and students.

In his inaugural address, Dr. M. P. Singh, IFS, Director, IWST Bengaluru stressed on the need for growing of more and more Sandalwood trees for the fulfillment of industrial demand. He highlighted the insufficient availability of the Sandalwood for the industries and consumers. He further stressed that there is a need of involvement of industries for the cultivation of the sandalwood and production of good quality oil because quality of the oil is always a major concern for the users.

Mr. Ramakant Harlalka of Nishant Aroma Pvt. Ltd. Mumbai shared his experiences and also spoke about “**An industrial perspective of Sandalwood and Sandalwood oil**”. He informed the audience that Indian sandalwood is very sacred in the Hindu Ayurveda and is known as “Srigandha” and “chandana”. It has been the most valuable timber in India known for its religious and cultural value since time immemorial. It is deeply associated with the social rituals of Indians and has held a special place in all the major religions of India. He pointed out that getting the genuine piece of sandalwood is very rare in the present time due to its less availability while in older days the genuine sandalwood was available along the road side. Similarly the genuine Sandalwood oil is also very rare and it is not easily available. He further emphasized that the quality of essential oil should be ensured for better products and the oil should conform to the Indian standards.

Dr. S. S. Bisht, Scientist-D, FRI Dehradun made a presentation on **Extraction and quality assessment of Sandalwood oil**. He talked about the different techniques for the extraction of Sandalwood oil and its quality assessment. The oil of Sandalwood obtained by steam distillation of the heartwood and roots of *Santalum album* Linn., should conform to the IS 329: 2004. The parameters for the oil are: colour and appearance, odour, relative density, optical rotation, esters calculated as santalyl acetate (percent by mass), total alcohol calculated as santalols (percent by mass), steam-distillation residue for 10h (percent by mass) and major chemical constituents by GLC analysis for cis α and β santalols. Also he discussed about GC-MS and IR spectroscopic techniques for the quality assessment of the Sandalwood oil.

Dr. B. N. Divakara, Scientist-F, IWST, Bengaluru presented on “**Heartwood estimation in standing trees of *Santalum album* L. using Electric Resistance Tomograph (ERT)**”. He explained about the principle of ERT technology and its application in estimation of the heartwood and sapwood content in standing trees of Sandalwood.

The webinar concluded with vote of thanks by Sri. C. M. Shiva Kumar, CCF & Head Extension Division IWST Bengaluru.

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Speaking: IWST Bengaluru (Host)

		S S Bisht		Chandan Chakravarthy
Deepak	DEEPAK KUMAR	Dr. Priyanka Mishra	Dr.C N Pandey	Dr.siddalingayya Salimath
G.Ravikumar	Garima	Kamal	krishna mohan	lingraj s
M.B.honeuri	Mareshwar Hegde	Priya Bisht	Rakesh Kumar	Richa Bansal
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