DEPARTMENT OF FOOD SAFETY
GOVERNMENT OF NCT OF DELHI
A-20, LAWRENCE ROAD INDUSTRIAL AREA, RING ROAD,
DELHI – 110035.

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Minutes of the Meeting held under the Chairmanship of Commissioner (Food Safety) on 30.07.2013 at 11.30 AM regarding use of Calcium Carbide for artificial ripening of Mangoes

A meeting on "*use of Calcium Carbide for artificial ripening of Mangoes*" was held under the Chairmanship of Commissioner (Food Safety) on 30.07.2013 at 11.30 AM in the Conference Hall of Department of Food Safety. The following were present in the meeting:-

Sl. No.	Name of participating member (S/Shri/Smt.)	Name of Organisation
1.	S.S. Kanawat	Special Commissioner, Deptt. of Food Safety
2.	Dr. Ram Asrey	Principal Scientist, Post Harvest Technology, IARI, New Delhi
3.	Dr. R.K. Sarin	Director, Forensic Science Laboratory, GNCT of Delhi
4.	S.K. Manocha	Asstt. Director, FICCI Research & Analysis Centre
5.	Dr. Sanjay Rajput	Asstt. Director, Shriram Institute for Industrial Research, Delhi
6.	Jitendra Singh	Asstt. Director, Shriram Institute for Industrial Research, Delhi
7.	Dr. K.K. Aggarwal	President, Heart Care Foundation of India
8.	Sh.S.M.Bhardwaj	Food Analyst, Deptt. of Food Safety
9.	Dr. Pramod Kothekar	Designated OfficerHQ), Deptt. of Food Safety

At the outset, the Commissioner welcomed the participants. Commr.(FS) explained that a court case is pending in Delhi High Court regarding presence of pesticides, colouring and Acetylene etc. in the fruits and vegetables beyond the prescribed limits and or prohibited under the Food Safety & Standards (Prohibition and Restrictions of Sales)Regulations, 2011. He further informed that the Hon'ble Lt.

Governor of Delhi has also send a press clipping on the artificial ripening of mangoes which states that artificial ripening of fruits specially mangoes is harmful/unsafe for the human consumption. In this background, the Commissioner requested the gathering to enlighten the department on various aspects of artificial ripening of fruits. He enquired from the gathering whether any technically feasible method is available to detect the presence of acetylene gas and or the residue of acetylene gas in fruits especially mangoes, ripened artificially which makes its consumption unsafe to humans.

Dr.Ram Asrey,, Principal Scientist, Post Harvest Technology, IARI, New Delhi explained that there are two methods used by the farmers/Food Business Operators for artificial ripening of fruits. The first method used in India and also in some developed countries is artificial ripening by using Ethylene. He informed that the artificial ripening using Ethylene is safe for human consumption and is widely accepted method for artificial ripening world over. The another method for artificial ripening of fruits is by use of acetylene gas commonly known as Carbide gas. The second method is unsafe for human consumption as it contains Acetylene, Arsenic and Phosphine which is harmful for human health as reported in various Research Journals. He further stated that the use of Acetylene gas for artificial ripening is generally done at the stage of godown or first packing of fruits at the level of farmers. He also stated that the concentration of acetylene is very low as far as ripening of fruits is concerned He explained that the nature of Acetylene gas is such that within a few seconds it evaporates and it is very difficult to trap the same at the godown level or at the time of unpacking of the fruit boxes. As such, it will be difficult for the Department to collect any such sample containing Acetylene either from the godown or from unpacked fruit boxes.

Sh.S.K.Manocha, Asstt. Director, FICCI Research & Analysis Centre and Dr.R.K.Sareen Director, Forensic Science Laboratory, GNCT of Delhi also agreed to the views expressed by Dr. Ram Asrey. Dr.Sanjay Rajput and Sh.Jitendra Singh from Shriram Institute for Industrial Research also agreed with Dr.Ram Asrey and further stated that the Acetylene evaporates at the temperature of 40 C and it is very difficult to analyse as such.

Commissioner, Food Safety wanted clarification with regard to the carcinogenic effect of such samples which have been ripened through Calcium Carbide/Acetylene. As discussed, very little residue relevance of Arsenic may be detected on analysis. However, participants agreed that this quantity may not be sufficient for proving carcinogenic effect on human body. It was further suggested that we may seek clarification in this regard from Indian Institute of Toxicology Research, Post Box no. 80,Mahatama Gandhi Marg, Lucknow-226001,Lucknow. We may also seek clarification if physical distinction can be drawn between samples which have been subjected to Ethylene gas and Acetylene gas so that consumers can be guided accordingly.

Dr.K.K.Aggarwal, President Heart Care foundation of India requested that the Scientific Forum of experts could generate information with regard to best practices to be adopted for removing residual elements of insecticides, pesticides and ripeners. He also requested that information should be released in the Media periodically to inform and guide common consumers. He also promised that he would involve the experts in various initiatives being taken by the Heart Care Foundation of India so that general public can be informed.

The meeting ended with vote of thanks to the Chair.

06/08/2013.

(Dr. Pramod M. Kothekar)
Designated Officer (HQ)

To

1. Dr. Ram Asrey, Principal Scientist, Post Harvest Technology, IARI, New Delhi
2. Dr. R.K. Sarin Director, Forensic Science Laboratory, GNCT of Delhi
3. S.K. Manocha Asstt. Director, FICCI Research & Analysis Centre
4. Dr. Sanjay Rajput Asstt. Director, Shri Ram Institute, Delhi
5. Sh.Jitendra Singh Asstt. Director, Shri Ram Institute, Delhi
6. Dr. K.K. Aggarwal President, Heart Care Foundation of India
7. Dy. Director (Admn.), Deptt. of Food Safety
8. Shri S.M.Bhardwaj Food Analyst, Deptt. of Food Safety
9. Dr. Pramod Kothekar Designated Officer (HQ), Deptt. of Food Safety
10. Programmer, EDP, Deptt.of Food Safety.
11. PS to Commissioner, Deptt.of Food Safety.for information
12. Guard File.