

Seminar on
**Contaminants in
Food and Beverages**

October 06, 2007

Venue

Thorale Bajirao Peshwe Sabhagruha
'Jnanadweepa', Thane College Campus,
Chendani, Bunder Road, Thane (W) 400 601.

Edited by

V. S. Burkule



Organized by

Department of Chemistry

Vidya Prasarak Mandal's

B.N. Bandodkar College of Science

(NAAC Accredited B⁺⁺)

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From Chairman's Desk

I have great pleasure in presenting the proceedings of the seminar “**Contaminants in Food and Beverages**” to you. The subject of the seminar was announced an year back and the response was overwhelming. We also conducted two workshops since the announcement last year on the same subject.

The importance of this subject needs no introduction. Food is vital for our survival and its contamination free consumption is a prerequisite for sound health. In spite of being so important to our lives, unfortunately there are no guarantees that the food we eat is safe and free of all contaminations. The source of contamination can be from seed to dish. It can be unintentional or it can be an outcome of human greed. Independent of its causes or reasoning we should make all efforts to see that our food and beverages are safe to consume. It is very simple to say so but it is a very complex process. Education plays a very important and vital role in this process. One of the important component of education is information.

Ever since human beings learnt farming techniques, the agriculture has come a long way now. Production, storage and distribution have seen radical shift in its practices. At every stage we have introduced a possibility of contamination. In an effort to grow more we started using pesticides and insecticides. The earliest whistle blower of misuse of chemical fertilisers was Rachel Carson. She was attacked by chemical industry and was dubbed as an hysterical woman. We all owe our debt to her for having warned us about such contaminations and dangers it posed, not only to human but also to animal kingdom. It seems we have not learned enough lessons yet. We have a crop of regulations paralysed by corrupt bureaucracy. We can change this scenario if we have will and determination to do so. I am sure this seminar will strengthen our commitment to help deliver contamination free food and beverages in the interest of our own good.

Thanking you

Dr. Vijay V. Bedekar
Chairman,
Vidya Prasarak Mandal, Thane

From Principal's Desk

It gives me a great pleasure to give one more volume of the proceeding in your hands as our yearly rituals.

One year back October 06, 2007 was booked for the National Conference on “Contaminants in Food and Beverages” Prior to the conference we conducted two workshops on the theme of conference on January 16, 2007 and July 27, 2007. The eminent speaker like Dr. R. K. Shastri had come to deliver his keynote address. Popular teachers and scientists had come to deliver their lectures in these workshops but in addition to this I am happy and proud to say that nine students of our college from S.Y.B.Sc. and T.Y.B.Sc. Classes presented their presentations on the topic of the theme like contaminants in milk, eggs, water, oil, meat etc.

Such presentations in National Conferences give them not only confidence, courage but in addition to all this in depth knowledge of the subject. Participation in conference helps to inculcate scientific awareness among the students along with the habits of reading scientific journal, news that changes overall personality of the student.

I am happy for all the efforts taken by Chemistry Department, teaching as well as non-teaching staff, to make this conference a great success.

I appreciate the help rendered by all Departments, Office, and students of the college and especially by Department of Information Technology to make conference successful. It's worth mentioning the invaluable support rendered by our parents body Vidya Prasarak Mandal for the workshops, conferences and every such activity throughout the year.

Let us meet on the same platform next year to discuss about ‘wonderful world of insects’.

Dr. (Mrs.) M.K. Pejaver

Convener

Principal, B.N. Bandodkar College of Science, Thane

Secretary's Note

August 05 , 2003 a report published by India's Center for Science and Environment [CSE] a Non Government Organization [NGO] made newspaper headlines across the Country.

- The report indicated that 12 major brands of soft drinks sold in the country's capital New Delhi contained high levels of four pesticides which were well known to cause illnesses ranging from cancer to brain damage.

In August 2006, Center for Science and Environment published another report Soft drinks – Hard Truths II.

How food becomes contaminated ?

Contaminants are substances that are not intentionally added to food but those substances get mixed up in food at various stages like production, packaging , transport and storage.

Many of the naturally occurring contaminants in food are of microbiological origin and consist of harmful bacteria, bacterial toxins and fungal toxins. (for example Aflatoxin a contaminant of peanuts and grains is an example of a fungal toxin or mycotoxin).

The second category of contaminants. includes organic chemicals, metals and their complexes and radio-nuclides. Chemicals contaminate foods through different routes depending on the chemical and its physical properties, its use, and the source or mechanism. The routes include the atmosphere, soil and surface or ground water. Environmental contaminants introduced into food as a result of human activities such as agriculture, mining and industry

Since contamination has a negative impact on the quality of food and human body can tolerate these contaminants to a certain level, but when the intake goes beyond the limit the hazardous effects are seen.

The Department of Chemistry of B. N. Bandodkar College of Science, selected the theme for the Seminar :- Contaminants in Food and Beverages to create awareness in this subject.

To create awareness in this subject in the students, two preparatory workshops were held on 16 Jan 2007 and 27 July 2007. It should be noted, 09 students responded for presentation in these workshops.

I am thankful to all, who extended their hands of help to me in this effort.

V.S. Burkule
Organizing Secretary

Message

I, welcome an idea of “Seminar on Contaminants in Food and Beverage” organised by B.N. Bhandarkar College of Science, Thane

Now a days adulteration of food articles such as milk, edible oils, etc, is major problem which needs to be curbed by joint efforts of Govt. Agencies, N.G.O., Social Workers, educational institutions like your college, active consumers association and public. This problem can not be solved merely by prosecuting offenders involved in adulteration but need to educate consumer & awareness of consumer about adulteration is also important. In this context I appreciate an effort of arranging seminars & workshop by your college and its organizing committee and advisory committee.



H.D. Salunkhe

Joint Commissioner (Konkan Division)
Food and Drug Administration, M.S., Thane

V.P.M's
B.N. Bandodkar College of Science, Thane
Department of Chemistry
Seminar on Contaminants in Food and Beverages
October 06, 2007
Time:- 9.00 to 5.30 p.m
Venue:- Thorale Bajirao Peshwe Sabhagruha, Thane College Campus, Thane

Programme

09 .00 a.m. -9.30 a.m.	Registration	
9.30 a.m.	Saraswati Vandana	Mrs. Sindhu Tayade
9.35 a.m. - 9.40 a.m	Inauguration and	Dr. A.D. Sawant
9.45 a.m. - 10.30 a.m	Key note Address	Pro-Vice-Chancellor University of Mumbai, Mumbai 400 032
10.30 a.m. - 10.50 a.m.	Tea Break	
First Session		
10.50 a.m.– 11.40 a.m.	Contaminants in Food and Beverages	Dr. Ranjan Shastri Advisor - Technology Agrochemical; Analytical and Environmental Science
11. 40 a.m. – 12.30 p.m.	Heavy Metals and Radioactive Contamination in food	Dr. R.S. Lokhande Professor & Research Guide, Department of Chemistry, University of Mumbai
12.30 p.m.– 1.15 p.m.	Roll of FDA in prevention of Food Adulteration	Mr. H.D. Salunkhe Joint Commissioner, Kokan Division Food & Drug Administration (Maharashtra)
1.15 p.m.– 2.15 p.m.	Lunch Break	

Second Session

Session Chair Person : **Dr. R.S. Lokhande**

2.15 p.m. – 3.00 p.m.	Organic Contaminants in Thane creek Water and their concentrations	Dr. R.P. Chavan Reader, Dept of Chemistry Dnyasadhana College, Thane
3.00 p.m. – 3.30 p.m.	Environmental Cleanup Extractive Separation and Estimation of Toxic Metals	Dr. Yogesh V. Ghalsasi Dept. of Chemistry K.J.Somaiya College of Science and Commerce , Vidyavihar, Mumbai 400 077
3.30 p.m. – 4.00 p.m.	A Brief Review of Mycotoxins as Contaminants in Foods with Special Reference to Aflatoxins	Dr. Moses J. Kolet Department of Botany B.N. Bandodkar College of Science, Thane
4.00 – 4.15	Tea Break	

Third Session

4.15 p.m.– 5.00 p.m.	Presentation by College Teacher and Students	
4.15 p.m. – 4.35 p.m.	Contamination of Food and Water due to Biomedical Waste : How to manage?	Dr. S.D. Joshi Department of Biology B.N. Bandodkar College of Science, Thane
4.35 p.m.– 4.45 p.m.	Contaminants in Meat	Mr. Rughnuth Sakha T.Y.B.Sc (Chemistry)
4.45 p.m.– 4.55 p.m.	Contaminants in oil (Edible Oil)	Miss Pooja Dandekar T.Y.B.Sc (Chemistry)
4.55 p.m.– 5.05 p.m.	Heavy Metal Contamination in Vegetables	Mr. Saud Deshmukh T.Y.B.Sc (Chemistry)
5.05 p.m. – 5.15 p.m.	Contaminants in Beverages	Miss Sonal Salvi T.Y.B.Sc (Zoology) & General Secretary B.N.Bandodkar College of Science, Thane
5.00 p.m.— 5.15 p.m.	Valedictory Function	
5.15 p.m.– 5.20 p.m.	Vote of Thanks	V.S. Burkule Organizing Secretary
5.20 p.m.– 5.25 p.m.	Pasayadan	Mrs. Sindhu Tayade

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