
GUIDELINES FOR DISPOSAL OF CIGARETTE/BIDI BUTTS



NOVEMBER 1, 2022

CENTRAL POLLUTION CONTROL BOARD

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1.0 Introduction

Tobacco product waste, especially cigarette/bidi waste, poses a major environmental problem as butts of trillions of cigarettes/bidis smoked worldwide are disposed of in open areas including streets, roads, drains and landfills etc. It is one of the most common finds during beach clean-up. With up to two-thirds of every smoked cigarette discarded, an estimated 340 and 680 million kilograms of waste tobacco is littered across the globe. In India, during the year 2021-22 approximately 113 billion cigarette sticks were produced and more than 100 Billion cigarette butts were disposed into the environment. With an average cigarette butt weighing 0.17 gm, this amounts to annual generation of approximately 17 million kg of tobacco product waste being disposed into the environment in the Country. The corresponding quantity of bidis is estimated to be much higher, considering the fact that legal cigarettes constitute only ten percent of the market share of tobacco products in the country.

Report of SUP prepared by Expert Committee constituted by Deptt. of Chemicals & Petrochemicals has identified Cigarette butts as one of the problematic Single Use Plastic items having low utility and high adverse environmental impact.

Hon'ble NGT, in the matter of Doctors For You vs. MoEF&CC&Ors (O.A No. 433/2015) vide order dated 09.09.2020 directed CPCB to lay down guidelines for disposal of cigarette/bidi butts, These Guidelines have been prepared by CPCB in compliance with Directions issued by Hon'ble NGT.

2.0 Information on Cigarette &BidiButts

2.1 Bidi/Cigarette Composition

Cigarette: These butts are made of synthetic polymer called Cellulose Acetate, which is slow/non-biodegradable plastic. Cellulose acetate is made by esterifying bleached cotton or wood pulp with acetic acid. The filter of a filter-tipped cigarette is composed of cellulose acetate fibers. These fibers, each approximately 20 µm in diameter, are treated with titanium dioxide (a delustrant) and over 15,000 of them are packed tightly together, using triacetin (glycerol triacetate) as a binding agent, to create a single filter.

Bidi: A bidi is a hand-made smoking article made by rolling the tobacco filler consisting of air-cured, sun-cured and/or other suitable tobacco variety in Tendu (*Diospyrus* spp.) or Ashriti (*Bauhinia* spp.) leaf. The wrapper leaf is a forest product. Nearly 50 % of the weight of a bidi is contributed by the non-tobacco leaf wrapper. A filter bidi will have a filter plug on one end. The components of bidis (tobacco filler and non-tobacco wrapping leaf) are natural products.

2.2 Functionality

In the past, cigarettes were unfiltered, but in the 1950s the tobacco industry started marketing filtered cigarettes as a “healthier” alternative to unfiltered cigarettes. This shift altered the market forever and made filtered cigarettes the bestselling tobacco product. As per WHO report, claims that filtered cigarettes were “healthier” are not correct. The filters only make the smoking easier and less harsh, increasing both the risk of addiction for smokers and increase in the overall burden of tobacco waste.

2.3 Toxicity

CPCB had assigned the project to Indian Institute of Toxicology Research (IITR) to study whether the cigarette and Bidi butts fall within the category of toxic waste or not in compliance of Directions of Hon'ble NGT, in the matter of Doctors For You vs. MoEF&CC&Ors (O.A No. 433/2015). As per the IITR Report to Hon'ble NGT (**Annexure I**), concentration of various parameters analyzed in the Cigarette/bidi butts were found to be lower than the prescribed limits and the same would not be toxic to human & environment. However, degradation studies for Cellulose Acetate, indicated that it persisted for a longer duration and the degradation studies under natural environmental conditions and laboratory simulating was required to conclude safety/ toxicity of cigarette butts to further correlate with human health risk assessment

As per WHO report, tobacco product waste contains over 7000 toxic chemicals, including known human carcinogens, which leach into and accumulate in the environment. Harmful chemicals leached from discarded butts, which include nicotine, arsenic and heavy metals, can be acutely toxic to aquatic organisms; Cellulose acetate-based cigarette filters do not biodegrade under most circumstances because of their compressed make up and the presence of acetyl molecules. However, under specific circumstances (with sunlight and moisture), the cigarette filters may break into smaller plastic pieces containing and eventually leaching out some of the 7000 chemicals contained in a cigarette. Many of these chemicals are themselves environmentally toxic, and at least 50 are known human carcinogens. Studies have also shown that harmful chemicals such as nicotine, arsenic, polycyclic aromatic hydrocarbons (PAHs) and heavy metals leach from discarded tobacco product waste, and can be acutely toxic to aquatic organisms such as fish.¹

Further, study has been conducted using US Environmental Protection Agency standard acute fish bioassays test. Cigarette butt-derived leachate was analysed for aquatic toxicity. Survival was the single endpoint and data was analysed using Comprehensive Environmental Toxicity Information System to identify the LC50 of cigarette butt leachate to fish in the study. Smoked cigarette butts (SCB) (smoked filter + tobacco), smoked cigarette filters (SF) (no tobacco) and unsmoked cigarette filters (USF) (no tobacco) were all found to be acutely toxic to representative marine and freshwater fish.²

2.4 Legal Framework

The Indian Parliament passed the Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Bill, 2003 in April 2003. This Bill became an

¹ <https://apps.who.int/iris/bitstream/handle/10665/255574/9789241512497-eng.pdf>

² <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3088407/>

Act on 18 May 2003 – COTPA. The Act is applicable to all products containing tobacco in any form, and extends to the whole of India.

Provisions in COPTA Rule, 2003 include the following:

- Prohibition of smoking in public places (including indoor workplaces).
- Prohibition of advertisement, direct and indirect (point-of-sale advertising is permitted), sponsorship and promotion of tobacco products.
- Prohibition of sales to minors (tobacco products cannot be sold to children less than 18 years of age and cannot be sold within a radius of 100 yards of any educational institutions).
- Regulation of health warning in tobacco products packs. English and one more Indian language to be used for health warnings on tobacco packs. Pictorial health warnings also to be included.
- Regulation and testing of tar and nicotine contents of tobacco products and declaring on tobacco products packages.
- Whoever contravenes the above provisions shall be punishable with fine which may extend to two hundred rupees

An offence under this section shall be compoundable and shall be tried summarily in accordance with the procedure provided for summary trials in the Code of Criminal Procedure, 1973 (2 of 1974). Details of the provision is enclosed as **Annexure-II**.

2.5 Recycling of Cigarette Butts

As per available information, following are the possible measures for utilization of cigarette butts:

- a. The cigarette butts can be chemically processed to remove impurities and later can be recycled into a variety of industrial products, such as plastic pallets. (Processing Steps involved: Cleaning, melting, pelletizing through extrusion). The cellulose acetate pellets can be combined with other plastics such as polyethylene or polypropylene for making of new plastic

products. (Ref: <https://earth911.com/how-to-recycle/cigarette-waste-recycling/>)

- b. Cigarette butts can be used for making acoustic absorbing materials. Materials made from used cigarette butts would have potential use for noise barriers. Absorption efficiency depends upon the length and density of cigarette butts used.³
- c. Cigarette butts can be used for production of clay fired bricks. Significant amount of firing energy can be saved for bricks with cigarette butt's content. The density of the brick becomes lighter with an increase in the CB content. Lower density bricks are beneficial in construction due to their ability to reduce the dead load in the structure. They are lighter and easier to handle, which reduces transport costs. They have a lower thermal conductivity that determines the heat loss of a building.⁴
- d. Cellulose acetate in discarded cigarette filters can be converted into a high-performing material that could be integrated into computers, handheld devices, electrical vehicle and wind turbines to store energy. These materials have demonstrated superior performance as compared to commercially available carbon, graphene and carbon nano tubes.

2.6 Alternatives to Cigarette butts

- a. Plant based filters can be made of a blend of all-natural, food-grade fibers utilizing a starch-based binder, a sustainable alternative to synthesized cellulose acetate. The plant-based filter material will have bio-degradability characteristics and hence will degrade in compost within a number of days. This as opposed to cellulose acetate which has been shown to take 10-15 years to degrade. Polyactic fiber can be used instead of cellular acetate for manufacturing of the cigarette butt.⁵

³ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6720946/>

⁴ <https://www.re-thinkingthefuture.com/rtf-fresh-perspectives/a1071-alternative-materials-bricks-made-out-of-cigarette-butts/>

⁵ <https://www.greenbutts.com/>

3.0 Key Recommendations

- a. Creating public awareness on adverse impact of littering of cigarette butts. Cigarette manufacturers to supply timely and regular information and data on the environmental and health risks of littering of cigarette butts throughout their distribution channel. **(Action: Cigarette /Bidi manufacturers)**
- b. Smoking in public area, outdoor, indoor and workplace areas to be strictly prohibited. Fine to be imposed on violators by the local authorities. Provisions for the same may be included in the local byelaws. **(Action: Local Authorities)**
- c. Littering of cigarette butt to be strictly prohibited. Provision for levying & enforcement of fine to be made for littering of cigarette butts. Adequate provision to be included in the local bye-laws. **(Action: Local Authorities)**
- d. Specific smoking areas to be created in commercial establishments and institutions with adequate arrangements for disposal and collection of cigarette butts. The same to be included as a mandatory condition while grant of commercial license to the commercial establishments. **(Action Local Authorities)**
- e. Dedicated smoking area or space be made in Hotels, Restaurants, and Airports etc. with a easy access to the bins. Adequate signage to be provided to direct smokers to the designated area. Further a feedback mechanism from smokers to create and improve the area be developed which would encourage them to use the area and build the social impact. **(Action Commercial Establishment/ Institutions)**
- f. Domestic smokers to segregate the cigarette butts along with the dry waste. **(Action: Domestic Smokers)**
- g. Disposal of cigarette butts shall either be through recycling or through end of life methods such as waste to energy or co-processing. **(Action Commercial Establishment/ Institutions, Local Authorities)**
- h. Instructions for safe disposal of cigarette butts to be clearly provided on each cigarette packet. **(Action: Cigarette/Bidi manufacturers)**

4.0 Way Forward

The following options may be explored for effective management of Cigarette/Bidi butts:

- a. To assess if single use cigarette filters can be included in the list of banned Single Use Plastic items / covered under Extended Producer Responsibility under Plastic Waste Management Rules.
- b. To explore alternatives for elimination of single use filters to reduce post-consumption waste
- c. To consider levying litter fees on cigarette manufactures to pay for clean-up and anti-tobacco product waste educational and advocacy programmes.
- d. To analyse recycle/ reuse /alternative options listed in Section 2.5& 2.6
- e. To explore possibility for providing compartment for discarded cigarette butts in cigarette packs and monetary reimbursement of deposition of filters.

ANNEXURE-I

**BEFORE THE NATIONAL GREEN TRIBUNAL,
Principal Bench, New Delhi
Original Application No. 433/2015**

In the Matter of:

Doctors for You

Applicant(s)

Vs.

MoEF & CC & Ors.

Respondent(s)

INDEX

| Sr. No. | Particulars | Page No. |
|----------------|---|-----------------|
| 1. | Status report in the matter of O.A No. 433/2015 titled as Doctors for You Vs. MoEF & CC and Ors. in compliance of Hon'ble NGT order dated 03.02.2020. | |
| 2. | Annexure – I & II Letter dated 12.03.2020 & email dated 19.02.2020 issued by CPCB to CSIR (Lucknow)-Indian Institute of Toxicology Research regarding Final report on "whether cigarette and bidi butts fall within the category of toxic waste or not" submitted by IITR. | |
| 3. | Annexure – III E-mail dated 14.08.2020, sent to IITR for submission of revised final report. | |
| 4. | Annexure - IV: IITR report dated 17.08.2020. | |
| 5. | Annexure - V: Hon'ble NGT order dated 03.02.2020. | |


(Divya Sinha)
Scientist-E

Central Pollution Control Board,
Parivesh Bhawan, East Arjun Nagar,
Delhi- 110032

Place: Delhi
Date: 20.08.2020



SPEED-POST

Annexure-I
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केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय भारत सरकार
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE GOVT. OF INDIA

F. No. B-11011/UPC-II/MSW/2019-20

Dated: 12-03-2020

To,

Director,
CSIR-Indian Institute of Toxicology Research,
Vishvigyan Bhawan, 31, Mahatma Gandhi Marg,
Post Box No. 80, Lucknow-226001

Kind attention: Dr. K.C. Khulbe, Head-RPBD

Sub: - Final report on "whether cigarette and bidi butts fall within the category of toxic waste or not" submitted by IITR-reg.

Sir,

Report on "whether cigarette and bidi butts fall within the category of toxic waste or not" submitted by IITR, has been examined and it is observed that report has only focused on analysis of compound as per schedule II of Hazardous and Other Wastes Rules.

However, as per clause 1 of MoU signed between IITR and CPCB "*CSIR-IITR shall collect samples of cigarette and bidi butts and analyze the same and throw light on the status of toxic and other substances in the said samples and place the report before Hon'ble NGT with copies to MOEFCC and CPCB.*"

In view of above, the report may be reviewed to include the status of toxic and other substances in the samples of cigarette and bidi butts to meet the objective of study and comments be sent to CPCB within 7 days as next date of hearing is 25th Mar, 2020.

Yours faithfully

✓ Divya Sinha

Addl. Director & I/c, UPC-II

Final report on "whether cigarette and bidi butts fall within the category of toxic waste or not" submitted by IITR-reg

pankaj agarwal <pankajcpb@gmail.com>

Thu, Mar 19, 2020 at 7:30 PM

To: RPBD IITR <rpbd@iitrindia.org>

Cc: DIVYA SINHA <divyasinha.cpcb@nic.in>, Director IITR <director@iitrindia.org>, divya sinha <divsinha@yahoo.com>

Sir,

I am directed to inform that report is to be reviewed as per provisions of Schedule II of Hazardous and Other Wastes (Management & Transboundary Movement) Rules, **2016**, as mentioned in clause 2.2.1 Collection & Analysis of sample of MOU.

Further the report is also to be reviewed to include status of toxic and other substances present in samples of cigarette and bidi butts to meet the objective of study as per clause 1 of MOU. Letter on the same was emailed to IITR on 12th March, 2020.

Comments may be sent by tomorrow as next date of hearing in Hon'ble NGT is on 25th March, 2020

regards

Pankaj Agarwal
Scientist "E",
Central Pollution Control Board
(Ministry of Environment, Forests and Climate Change)
Parivesh Bhawan
East Arjun nagar
Delhi- 110032

[Quoted text hidden]

Email

pagarwal.cpcb@gov.in

Re: NGT matter related to report titled "Whether cigarette & bidi butts fall within the category of toxic wastes or not"

From : rpbd@iitrindia.org

Mon, Aug 17, 2020 05:30 PM

Subject : Re: NGT matter related to report titled "Whether cigarette & bidi butts fall within the category of toxic wastes or not"

1 attachment

To : DIVYA SINHA <divyasinha.cpcb@nic.in>

Cc : director@iitrindia.org, Member Secretary CPCB <mscb.cpcb@nic.in>, Prashant Gargava <prashant.cpcb@gov.in>, Pankaj Agarwal <pagarwal.cpcb@gov.in>

डॉ के सी खुल्बे
वरिष्ठ प्रधान वैज्ञानिक एवं
प्रभारी, आरपीबीडी

सीएसआईआर-आईआईटीआर/998/2020
दिनांक: अगस्त 17, 2020

सेवा में,
डा दिव्या सिन्हा
अतिरिक्त निदेशक एवं प्रमुख यूपीसी-II
केन्द्रीय प्रदूषण नियंत्रण बोर्ड,
परिवेश भवन, पूर्वी अर्जुन नगर
दिल्ली : 110032

Sub: "Final report titled "Whether cigarette & bidi butts fall within the category of toxic wastes or not"
महोदया,

कृपया संलग्न फ़ाइनल रिपोर्ट (Final report) नंबर सीएसआईआर-आईआईटीआर/998/2020 शीर्षक "Whether cigarette & bidi butts fall within the category of toxic wastes or not" in compliance of Hon'ble NGT's order dated 2nd August, 2019 & 12th April, 2019 in OA 433/2015 आपके रिकार्ड के लिए भेजा जा रहा है।

सीएसआईआर-भारतीय विष विज्ञान अनुसंधान संस्थान, लखनऊ एवं केन्द्रीय प्रदूषण नियंत्रण बोर्ड, नई दिल्ली के मध्य हुए सहमति ज्ञापन के अनुसार इस अध्ययन के अंतर्गत, विभिन्न ब्रांडों की सिगरेट एवं बीड़ी के टुकड़ों (जले हुए और बिना जले हुए) दोनों का केवल अनुसूची II [देखें नियम 3(1)] (वर्ग ए एवं वर्ग बी के कचरा घटकों की सूची) में उल्लिखित रासायनिक/तात्विक संघटक हेतु विश्लेषण किया गया था।

यह अध्ययन सांकेतिक है अतः सुरक्षा निश्चित करने तथा सिगरेट एवं बीड़ी के टुकड़ों (बडस) के सुरक्षित निपटान हेतु दिशा - निर्देश तैयार करने के लिए और अधिक विश्लेषण की आवश्यकता है।

कृपया पावती भेजने की कृपा करें।

धन्यवाद।

भवदीय,

संलग्नक: उपरोक्त।

(के सी खुल्बे)

On Fri, Aug 14, 2020 at 5:39 PM DIVYA SINHA <divyasinha.cpcb@nic.in> wrote:

Sir ,

This has reference to the telephonic conversation with you today and other correspondence on the matter.

The report submitted by IITR vide letter dated July 09, 2020 has been examined by CPCB has been

(51)

examined and it is observed that the Analysis report of samples is still based on HW(MH & TM) Rules 2008 and not on HW Rules 2016. Also, final conclusion regarding toxicity of cigarette butts/ bidi has not been included in the report.

It is requested that the final report be revised to include the above and the same be mailed to CPCB by Forenoon of August 17, 2020. It may be noted that the matter has been scheduled for hearing on August 19, 2020

Divya Sinha
Divisional Head- UPC II
CPCB

----- Original Message -----

From: "DIVYA SINHA" <divyasinha.cpcb@nic.in>

To: "Pankaj Agarwal" <pagarwal.cpcb@gov.in>

Subject: Fwd: Final report titled "Whether cigarette & bidi butts fall within the category of toxic wastes or not"

--

डॉ. के.सी. खुल्बे

Dr KC Khulbe

प्रमुख, अनुसंधान योजना एवं व्यापार विकास प्रभाग

Head, Research Planning & Business Development Division

सीएसआईआर- भारतीय विषविज्ञान अनुसंधान संस्थान

CSIR-INDIAN INSTITUTE OF TOXICOLOGY RESEARCH

विषविज्ञान भवन, 31, महात्मा गांधी मार्ग, लखनऊ-226001, भारत

Vishvigyan Bhawan, 31, Mahatma Gandhi Marg, Lucknow-226001, India

Tel: +91-522-2628228; Fax: +91-522-2628227; www.iitrindia.org

 **Final NGT report dt.17.8.2020.pdf**

5 MB

From : DIVYA SINHA <divyasinha.cpcb@nic.in>

Fri, Aug 14, 2020 05:39 PM

Subject : NGT matter related to report titled "Whether cigarette & bidi butts fall within the category of toxic wastes or not"

To : director@iitrindia.org

Cc : rpbd@iitrindia.org, Member Secretary CPCB <mscb.cpcb@nic.in>, Prashant Gargava <prashant.cpcb@gov.in>, Pankaj Agarwal <pagarwal.cpcb@gov.in>

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Divya Sinha
Divisional Head- UPC II
CPCB

Central Pollution Control Board, Delhi

Dated: 18/08/2020

Status report in the matter of Doctors for You Vs MoEF &CC and Ors (OA no. 433/2015)

1.0 Background: -

Hon'ble NGT vide order dated 3rd Feb., 2020 in OA 433/2015 directed as follows

The Learned Counsel for CPCB submits that as per the directions of the Tribunal dated 04.11.2019 the fee amount for testing etc. has been deposited with CISR-IITR, Lucknow. Further, he submits that the institute has started work by collecting samples etc. However, it is submitted by the counsel for the CPCB that the report shall be submitted by the institute by 20.02.2020. The learned counsel is directed to supply a copy of the report in advance to the other side.

2.0 Action Taken Report: -

a) In compliance of aforesaid direction of Hon'ble NGT, IITR-Lucknow submitted the report on "**Whether cigarette and bidi butts fall within the category of toxic waste or not**" on 3rd March, 2020.

b) Report was examined by CPCB and it was observed that it did not include the following

- Analysis of the parameters as per provisions of schedule II of Hazardous and other wastes (management and transboundary movement) Rules, 2016

- It did not confirm whether cigarette and bidi butts fall within the category of toxic waste or not.

Accordingly, email dated March 12, 2020 and March 19, 2020 (**Annexure I and Annexure II**) was written to IITR.

c) IITR vide letter dated July 09, 2020 submitted the revised report on the matter. However, the report still did not include:

- Analysis of the parameters as per provisions of schedule II of Hazardous and other wastes (management and transboundary movement) Rules, 2016.
- Conclusion regarding toxicity of cigarette/bidi butts.

Vide e-mail dated 14.08.2020, IITR was requested to include the above (**Annexure III**).

d) IITR has submitted the revised report vide e-mail dated August 17, 2020. The report is placed at **Annexure IV**. As per the IITR report, following are the conclusion:

- i. The analysis of the cigarette/bidi butts reflect that as per the concentration of various parameters analyzed are lower than the prescribed limits and will not be toxic to human & environment.
 - ii. Cellulose Acetate is a major component of the cigarette/bidi butts and its degradation studies show that it will persist for a longer duration. The degradation studies under natural environmental conditions and laboratory simulating conditions will be required to conclude safety/toxicity of cigarette butts to further correlate with human health risk assessment.
-



सीएसआईआर-भारतीय विषविज्ञान अनुसंधान संस्थान
CSIR-INDIAN INSTITUTE OF TOXICOLOGY RESEARCH



वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद्
COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH

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Annexure IV

डॉ के सी खुल्बे
वरिष्ठ प्रधान वैज्ञानिक एवं
प्रभारी, आरपीबीडी

सीएसआईआर-आईआईटीआर/998/2020

दिनांक: अगस्त 17, 2020

सेवा में,
डा दिव्या सिन्हा
अतिरिक्त निदेशक एवं प्रमुख यूपीसी-II
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परिवेश भवन, पूर्वी अर्जुन नगर
दिल्ली : 110032

Sub: "Final report titled "Whether cigarette & bidi butts fall within the category of toxic wastes or not"

महोदया,
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"Whether cigarette & bidi butts fall within the category of toxic wastes or not" in
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वर्ग बी के कचरा घटकों की सूची) में उल्लिखित रासायनिक/तात्विक संघटक हेतु विश्लेषण किया गया
था।

यह अध्ययन सांकेतिक हैं अतः सुरक्षा निश्चित करने तथा सिगरेट एवं बीडी के टुकड़ों (बडस) के सुरक्षित
निपटान हेतु दिशा - निर्देश तैयार करने के लिए और अधिक विश्लेषण की आवश्यकता है।

कृपया पावती भेजने की कृपा करें।

धन्यवाद।

संलग्नक: उपरोक्त।

भवदीय,
17/8/2020
(के सी खुल्बे)

विषविज्ञान भवन, 31, महात्मा गाँधी मार्ग
पोस्ट बॉक्स नं० 80, लखनऊ-226001, उ.प्र. भारत
VISHVIGYAN BHAWAN, 31, MAHATMA GANDHI MARG
POST BOX NO 80, LUCKNOW-226001, U.P., INDIA

Phone: +91-522-2627586, 2614118, 2628228 Fax: +91-522-2628227, 2611547
director@iiindia.org www.iiindia.org



एनएबीएल द्वारा रासायनिक एवं
जैविक परीक्षण हेतु प्रत्यापित
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Toxicity Testing: GLP Test Facility

Final

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report of

“Whether cigarette and bidi butts fall within the category of toxic wastes or not”

In compliance of Hon’ble NGT’s order dated 2nd August, 2019 & 12th April, 2019 in OA 433/2015

under MoU signed between

Central Pollution Control Board, New Delhi

and

CSIR-Indian Institute of Toxicology Research, Lucknow

August 17, 2020

Ansari

Cigarette butts (CBs) are the most common type of litter on earth, with an estimated 4.5 trillion discarded annually around the globe. (PLOS ONE | DOI:10.1371/journal.pone.0117393 January 27, 2015) [1]. Most of the CBs are discarded in the dustbins, roadside, beaches or other public places. When disposed of in the environment, they pose a major threat to living organisms and ecosystem health. Smoked CBs besides nicotine, retain many compounds derived from tobacco combustion viz., hydrogencyanide, ammonia, acetaldehyde, formaldehyde, benzene, phenols and pyridines. Some of the studies reported that CBs are toxic to microbes and cladocerans, insects, and fish etc.

From the proximate analysis only it cannot be specified if the cigarette and bidi butts fall within the category of toxic wastes or not. In compliance of Hon'ble NGT's order dated 2nd August, 2019 & 12th April, 2019 in OA 433/2015, a Memorandum of Understanding was signed on 30th October, 2019 between Central Pollution Control Board, New Delhi and CSIR-Indian Institute of Toxicology Research, Lucknow. This MoU was aimed to analyse chemical/elemental composition of various brands of cigarettes and bidi butts (both burnt and un-burnt) and to see if they meet the required parameters of Schedule-II as specified under the terms of agreement.

List of Parameters to be analysed as per Schedule II according to MOU between CSIR-IITR and CPCB dated: 30.10.2019

List of Waste Constituents and their code with Concentration Limits as per Schedule II [See rule 3(i)] 2016

| Name of respective compound and code as per 2016 | Concentration mg/L as per 2016 | Method Detection Limit |
|--|--------------------------------|------------------------|
| CLASS A | | (mg/Kg) |
| A1 Arsenic | 5.0 | 0.0050 |
| A3 Cadmium | 1.0 | 0.0200 |
| A4 Chromium and/or Chromium (III) compounds | 5.0 | 0.1064 |
| A5 Lead | 5.0 | 0.0345 |
| A7 Mercury | 0.2 | 0.0001 |
| A8 Selenium | 1.0 | 0.0056 |
| A9 Silver | 5.0 | 0.0543 |
| A20 Benzene | 0.5 | 30.00 |
| A21 Benzo (a) pyrene | 0.001 | 0.050 |
| A33 Napthalene | 5.0 | 0.0500 |
| A43 Alpha HCH | 0.001 | 0.050 |
| A45 Beta HCH | 0.004 | 0.050 |
| A47 Chlordane | 0.03 | |
| A48 Chlorpyrifos | 9.0 | 0.050 |
| A49 Delta HCH | 0.004 | 0.050 |
| A50 Endosulfan (alpha+beta+sulphate) | 0.04 | 0.005 |

| | | |
|--|-------------|----------------------------|
| A51 Endrin | 0.02 | 0.005 |
| A52 Ethion | 0.3 | 0.0500 |
| A53 Heptachlor (and its epoxide) | 0.008 | 0.0500 |
| A55 Lindane | 0.4 | 0.0500 |
| A56 Malathion | 19 | 0.0500 |
| A60 Phorate | 0.2 | 0.0350 |
| A63 Beryllium | 0.75 | 0.0034 |
| A64 Chromium (VI), A4 Chromium and/or Chromium (III) compounds | 5.0 | 0.1064 |
| A65 Cobalt | 80.0 | 0.0995 |
| A66 Copper | 25.0 | 0.0723 |
| A67 Molybdenum | 350 | 67.2000 |
| A68 Nickel | 20.0 | 0.0842 |
| A73 Aldrin | 0.14 | 0.010 |
| A74 Dichlorodiphenyltrichloroethane (DDT), Dichlorodiphenyldichloroethylene (DDE), Dichlorodiphenyldichloroethane(DDD) | 0.1 | 0.0500 0.0500 0.0030 |
| A75 Dieldrin | 0.8 | 0.0600 |
| A78 polychlorinated biphenyls | 5.0 | 0.0030 |
| CLASS C | | |
| Class - C (3) Amines | # | 0.0200 |
| Class-C (4) Anthracene | # | 0.0500 |
| Class C (5) Aromatic compounds other than those listed in Class A | 5,000 mg/kg | 0.0030 0.0080 |
| Class C- (30) Organo- Tin Compounds | | 0.0025 |
| Class C- (31) Organo nitro-and nitroso compound | | 0.0500 |
| Class -C (33) Phenanthrene | | |

Collection of Cigarette and Bidi samples:

Ten different brands of cigarettes and two brands of Bidi were procured in bulk from the local market. The following four types of samples were prepared as follows

1. Burnt Cigarette butts of 10 different brands
2. Unburnt Cigarette butts of 10 different brands
3. Burnt Bidi butts of 2 different brands
4. Unburnt Bidi butts of 2 different brands

A smoking setup for the Cigarette and Bidi was made using the vacuum pump attached to separating funnel holder fitted with thermocol disc having capacity to hold 36 cigarette/ bidi. Through the vacuum the smoke was absorbed in the filtration flask having distilled water. This setup simulated the smoking regime.

The whole setup was installed under a fume hood so as not to pollute the laboratory environment and expose the people therein to the smoke. The safety protocol (lab coat, gloves and safety glasses etc.) was adhered by every personnel involved in the process.

Amari

Preparation of cigarette / bidi butt for Toxicity Characteristic Leaching Procedure (TCLP):

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- Unburnt butt sample of the cigarette and bidi was prepared by cut just above the filter in the case of cigarette only, whereas in bidi approximately same length was cut.
- Burnt Cigarette and Bidi butts sample were prepared by subjecting them to the smoking set. In all, approximately 300 cigarettes/bidis were burnt individually using this setup for each brand to yield approximately 65 g of each cigarette/bidi butt samples.
- Leachates of the burnt and unburnt butt samples were prepared (in triplicate) following the TCLP of USEPA (Method 1311 of July 1992).
- Once the leachates for each brand of cigarette/bidi butts was prepared, it was extracted, and the final extracts were analysed on sophisticated analytical instruments and quantified using reference standards is given in table 1.

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Table 1. Details of extraction methods and instruments

| Name of the analyte | Extraction method | Instrument Used | Make and model |
|--|--------------------|-----------------|--|
| CLASS A | | | |
| A2 Arsenic A3 Cadmium A8 Selenium | Filtrated leachate | AAS | PE, PinAAcle 900F |
| A5 Lead A4 Chromium and/or Chromium (III) compounds and A64 Chromium (VI), A9 Silver A65 Cobalt A66 Copper A67 Molybdenum A68 Nickel A63 Beryllium | Filtrated leachate | AAS | Analytic Jena, Zeenit 700 |
| A7 Mercury | Filtrated leachate | DMA | Milestone, DMA 80 |
| A20 Benzene | LLE | GC-FID | Agilent, 7890A |
| A21 Benzo (a) pyrene A33 Napthalene | LLE | HPLC | WATERS 1525, PDA |
| A43 Alpha HCH A45 Beta HCH A47 Chlordane A48 Chlorpyrifos A49 Delta HCH A50 Endosulfan (alpha+beta+sulphate) A51 Endrin A52 Ethion A53 Heptachlor (and its epoxide) A55 Lindane A56 Malathion A60 Phorate A73 Aldrin A74 Dichlorodiphenyltrichloroethane(DDT), Dichlorodiphenyldichloroethylene(DDE), Dichlorodiphenyldichloroethane(DDD) A75 Dieldrin | LLE | GC-MS/MS | Thermo scientific, Trace 1300, TSQ 8000EvoMS |
| A78 Polychlorinated biphenyls | LLE | GLC-micro ECD | Agilent, 7890B |
| CLASS C | | | |
| C (4) Anthracene C (33) Phenanthrene | LLE | HPLC | WATERS 1525, PDA |
| C (3) Amines C (5) Aromatic compounds other than those listed in Class A, C- (30) Organo- Tin Compounds | LLE | LC-MS/MS | Sciex, API 4000 |
| C- (31) Organo nitro-and nitroso compound | LLE | GC-MS/MS | Thermo scientific, Trace 1300, TSQ 8000EvoMS |

Conclusion:

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The level of individual chemical analytes in TCLP leachates for Class A and Class C are reported as the mean concentration of triplicate for each sample in mg/L or Below Detection Limit (BDL)

Class A:

- The class A chemicals concentration in unburnt cigarette butts were detected in the concentration range of BDL-0.001 mg/L for mercury, BDL-1.071mg/L for copper and BDL-0.263 mg/L for nickel, while all other chemicals were BDL, whereas in unburnt bidi butts all were BDL. **(Annexure-I)**
- The class A chemicals in burnt cigarette butts were detected in the range of BDL-0.028 mg/L for cadmium, BDL-0.062 mg/L for selenium, BDL-0.065 mg/L for endosulfan, BDL-2.808 mg/L for copper, BDL-0.087 mg/L for nickel, BDL-0.016 mg/L for polychlorinated biphenyls whereas in burnt bidi butts were in the range of 0.022-0.028 mg/L for cadmium, BDL-0.008 mg/L for selenium, 0.084-0.115 mg/L for copper **(Annexure-II)**
- The levels found for class A chemicals (reported in the Annexure I and II) were below their respective concentration limit, as per schedule II 2016 except endosulfan was found higher in one brand of cigarette

Class C:

- The class C chemicals in unburnt cigarette butts were detected in the concentration range of BDL-0.012 mg/kg for organotin compounds and BDL-0.024 mg/kg for organo nitro and nitroso compounds, whereas in unburnt bidi butts were in the range of 0.039-0.041 mg/kg for organotin compounds. **(Annexure-III)**
- The class C chemicals in burnt cigarette butts were in the range of BDL-0.323 mg/kg for aromatic compounds, BDL-0.025 mg/kg for organotin compounds, BDL-0.067 mg/kg for organo nitro and nitroso compounds and BDL-0.009 mg/kg for phenanthrene whereas in burnt bidi butts were in the range of BDL-0.035 mg/kg for aromatic compounds and 0.122-0.173 mg/kg for organo nitro and nitroso compounds. **(Annexure-IV)**
- The levels found for class C analytes (reported in the Annexure III and IV) were below their respective concentration limit as per schedule II 2016.

Other additional chemicals analysed for unburnt and burnt cigarette and bidi butts are also listed separately in (Annexure V).

The level of class A and C chemicals listed in schedule II is lower than the prescribed limit in the small sample size. The cigarette butt material is non-degradable, and this may be considered during the formulation of the waste disposal plan.

Anwar

The levels of chemicals listed in class 'A' of schedule II 2016 Government of India Ministry of Environment, Forest and Climate Change were either below the level of detection or many fold lower than the threshold value, except the endosulfan (in one brand). The levels of chemicals listed in class 'C' of Schedule-II 2016 Government of India Ministry of Environment, Forest and Climate Change were either below the level of detection or many fold lower than the threshold value. In summary, the levels of class 'A' and 'C' chemicals listed in Schedule-II 2016 Government of India Ministry of Environment, Forest and Climate Change are lower than the prescribed limits under the experimental conditions with limited sample size. The analysis reflects that the concentrations detected will not be toxic to the human and environment. Cellulose acetate is a major component (95%) of the cigarette butts along with the wrapping paper and rayon. In general, the toxicity data are not available for cellulose acetate. Whatever studies carried out so far, reported cellulose acetate non-toxic up to 5000 mg/ Kg body weight in subchronic studies of 96 days through oral administration in rat models [2]. The degradation studies carried out on cigarette butts shown only 37.8% degradation in two years in the soil under ambient conditions [1]; hence it will persist in soil for a longer duration. The data are not available on the cigarette butts or cellulose acetate (a major component of cigarette butts) mediated human health risk assessment and toxic responses, and response on microflora in the soil. The degradation studies under natural environmental conditions and laboratory simulating conditions will be required to conclude the safety/ toxicity of cigarette butts to further correlate with human and environmental health risk assessment. Recycling of cellulose acetate after recovery from the cigarette butts may be suggested as one among the immediate solution to the problem until the degradation and safety data are generated.

Citation

1. G Bonanomi, G Incerti, G Cesarano, SA Gaglione, V Lanzotti (2015) Cigarette butt decomposition and associated chemical changes assessed by ^{13}C CPMAS NMR. PLoS ONE 10(1):e0117393. doi:10.1371/journal.pone.0117393
2. W.C.Thomas, L.F.McGratha, K.A.Baarsona, C.S.Auletta, W.Daly, R.F.McConnell (1991). Subchronic oral toxicity of cellulose acetate in rats. Food and Chemical Toxicology.29(7), 1991, 453-458.

1. The report pertains to the sample tested only.
2. This report shall not be used or produced in fragments.
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Dr Nasreen Ghazi Ansari
Co-PI

ANNEXURE -I

| List of Waste Constituents | Concentration Limit* | Concentration in different brands of unburnt cigarette and bidi (mg/L) | | | | | | | | | | | |
|--|----------------------|--|-----|-----|-----|-----|-----|-------|-----|-----|-----|-----|-----|
| Class A | mg/L | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | B1 | B2 |
| A1 Arsenic ✓ | 5.0 | BDL | BDL | BDL | BDL | BDL | BDL | 0.015 | BDL | BDL | BDL | BDL | BDL |
| A3 Cadmium ✓ | 1.0 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A4 Chromium and/or Chromium (III) compounds and A64 Chromium (VI), A4 Chromium and/or Chromium (III) compounds ✓ | 5.0 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A5 Lead | 5.0 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A7 Mercury ✓ | 0.2 | 0.001 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A8 Selenium ✓ | 1.0 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A9 Silver ✓ | 5.0 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A20 Benzene ✓ | 0.5 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A21 Benzo (a) pyrene ✓ | 0.001 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A33 Napthalene ✓ | 5.0 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A43 Alpha HCH | 0.001 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A45 Beta HCH | 0.004 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A48 Chlorpyrifos | 9.0 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A49 Delta HCH | 0.004 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A50 Endosulfan (alpha+beta+sulphate) | 0.04 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A51 Endrin | 0.02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A52 Ethion | 0.3 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A53 Heptachlor (and its epoxide) | 0.008 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A55 Lindane | 0.4 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |

BDL: Below detection limit

C: Cigarette and B: Bidi

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ANNEXURE - II

| List of Waste Constituents | Concentration Limit* | Concentration in different brands of burnt cigarette and bidi (mg/L) | | | | | | | | | | | |
|--|----------------------|--|-------|-------|-------|-------|-------|-------|-----|--------|--------|-------|-------|
| | mg/L | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | B1 | B2 |
| Class A | | | | | | | | | | | | | |
| A1 Arsenic | 5.0 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A3 Cadmium | 1.0 | 0.028 | 0.024 | BDL | 0.031 | BDL | BDL | BDL | BDL | 0.0233 | 0.0233 | 0.022 | 0.026 |
| A4 Chromium and/or Chromium (III) compounds and A64 Chromium (VI), A4 Chromium and/or Chromium (III) compounds | 5.0 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A5 Lead | 5.0 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A7 Mercury | 0.2 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A8 Selenium | 1.0 | 0.062 | 0.007 | 0.007 | 0.007 | 0.009 | BDL | 0.006 | BDL | BDL | 0.006 | BDL | 0.008 |
| A9 Silver | 5.0 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A20 Benzene | 0.5 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A21 Benzo (a) pyrene | 0.001 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A33 Naphthalene | 5.0 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A43 Alpha HCH | 0.001 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A45 Beta HCH | 0.004 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A48 Chlorpyrifos | 9.0 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A49 Delta HCH | 0.004 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A50 Endosulfan (alpha+beta+sulphate) | 0.04 | 0.065 | BDL | BDL | BDL | BDL | 0.047 | BDL | BDL | BDL | BDL | BDL | BDL |
| A51 Endrin | 0.02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A52 Ethion | 0.3 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A53 Heptachlor (and its epoxide) | 0.008 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A55 Lindane | 0.4 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A56 Malathion | 19 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A60 Phorate | 0.2 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |

| | | | | | | | | | | | | | |
|---|------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|
| A63 Beryllium | 0.75 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A65 Cobalt | 80.0 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A66 Copper | 25.0 | 1.307 | 2.808 | 2.534 | 0.628 | 0.840 | 0.115 | BDL | 0.477 | 0.603 | 1.246 | 0.084 | 0.115 |
| A67 Molybdenum | 350 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A68 Nickel | 20.0 | BDL | BDL | BDL | BDL | 0.058 | 0.087 | BDL | BDL | BDL | BDL | BDL | BDL |
| A73 Aldrin | 0.14 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A74 Dichlorodiphenyltrichloroethane (DDT), Dichlorodiphenyldichloroethylene (DDE), Dichlorodiphenyldichloroethane(DDD) | 0.1 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A75 Dieldrin | 0.8 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| A78 polychlorinated biphenyls | 5.0 | BDL | BDL | 0.003 | BDL | BDL | 0.004 | BDL | 0.016 | BDL | BDL | BDL | BDL |

BDL: Below detection limit

C: Cigarette and B: Bidi

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ANNEXURE - III

| List of Waste Constituents | Concentration Limit* | Concentration in different brands of unburnt cigarette and bidi (mg/Kg) | | | | | | | | | | | |
|---|----------------------|---|-------|-------|-----|-------|-------|-----|-----|-------|-------|-------|-------|
| Class C | mg/Kg | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | B1 | B2 |
| C (3) Amines | # | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| C (4) Anthracene | # | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| C (5) Aromatic compounds other than those listed in Class A | 5000 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| C- (30) Organo- Tin Compounds | ✓ | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| C- (31) Organo nitro-and nitroso compound | | 0.006 | 0.008 | 0.008 | BDL | 0.009 | 0.024 | BDL | BDL | 0.012 | 0.010 | 0.039 | 0.041 |
| C- (33) Phenanthrene | ✓ | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |

Answer

*Concentration limit as per schedule II, 2016
 # Limit not defined in schedule II, 2016
 BDL: Below detection limit
 C: Cigarette and B: Bidi

ANNEXURE - IV

| List of Waste Constituents | Concentration Limit* | MDL | Concentration in different brands of burnt cigarette and bidi (mg/Kg) | | | | | | | | | | | | | |
|---|----------------------|---------|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|
| Class C | mg/Kg | (mg/Kg) | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | B1 | B2 | | |
| C (3) Amines | # | 0.0200 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | | |
| C (4) Anthracene | # | 0.0500 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | | |
| C (5) Aromatic compounds other than those listed in Class A | 5000 | 0.0030 | 0.032 | 0.044 | 0.069 | 0.007 | 0.087 | BDL | 0.323 | 0.015 | BDL | 0.011 | 0.035 | 0.031 | | |
| C- (30) Organo- Tin Compounds | | 0.0080 | 0.024 | 0.013 | 0.016 | 0.020 | 0.015 | 0.018 | 0.018 | BDL | 0.025 | 0.023 | BDL | BDL | | |
| C- (31) Organo nitro-and nitroso compound | | 0.0025 | 0.013 | 0.017 | BDL | 0.107 | 0.043 | 0.038 | 0.056 | 0.010 | 0.067 | 0.144 | 0.173 | 0.122 | | |
| C- (33) Phenanthrene | | 0.0500 | 0.009 | BDL | BDL | BDL | 0.055 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | | |

*Concentration limit as per schedule II, 2016
 # Limit not defined in schedule II, 2016
 BDL: Below detection limit
 C: Cigarette and B: Bidi

ms

| List of Waste Constituents* | MDL | Concentration in different brands of unburnt cigarette and bidi (mg/L) | | | | | | | | | | | |
|--|--------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | (mg/L) | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | B1 | B2 |
| Chrysene, benzo(a)anthracene, fluoranthene, benzo(K)fluoranthene, indeno(1,2,3-cd) pyrene and benzo(ghi) perylene | 0.0500 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Halogenated compounds of aromatic rings, e.g. polychlorinated biphenyls, polychloroterphenyls and their derivatives & Halogenated aromatic | 0.0030 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Organochlorine | 0.0500 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Organo phosphorus | 0.0500 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |

| List of Waste Constituents* | MDL | Concentration in different brands of burnt cigarette and bidi (mg/L) | | | | | | | | | | | |
|--|--------|--|-----|--------|-----|--------|-----|-------|-----|-----|-----|-----|-----|
| | (mg/L) | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | B1 | B2 |
| Chrysene, benzo(a)anthracene, fluoranthene, benzo(K)fluoranthene, indeno(1,2,3-cd) pyrene and benzo(ghi) perylene | 0.0500 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Halogenated compounds of aromatic rings, e.g. polychlorinated biphenyls, polychloroterphenyls and their derivatives & Halogenated aromatic | 0.0030 | BDL | BDL | 0.0035 | BDL | 0.0044 | BDL | 0.017 | BDL | BDL | BDL | BDL | BDL |
| Organochlorine | 0.0500 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Organo phosphorus | 0.0500 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |

*Additional Chemical parameter analysed

MDL: Method Detection Limit

BDL: Below detection limit

ANNEXURE B

Item No. 04

Court No. 1

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

(By Video Conferencing)

Original Application No. 433/2015

(With report dated 20.08.2020)

Doctors For You

Applicant(s)

Versus

MoEF & CC & Ors.

Respondent(s)

Date of hearing: 09.09.2020

**CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE S. P. WANGDI, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER**

| | |
|----------------|---|
| Applicant(s): | Mr. Jaideep Singh, Advocate |
| Respondent(s): | Mr. Raj Kumar, Advocate for CPCB |
| | Mr. Mukul Singh, Advocate for MoEF&CC |
| | Mr. Ravi Shankar S.S., Advocate for R-6 |
| | Mr. Anand Varma, Advocate for R-7 |

ORDER

1. This application was filed on 23.09.2015 with a prayer to direct regulation of disposal of cigarette and bidi butts, apart from prohibiting consumption of tobacco in public places. Notice was issued on 28.09.2015 to the Ministry of Environment, Forest & Climate Change (MoEF&CC), Ministry of Health and Family Welfare, Ministry of Commerce and Industry, Central Pollution Control Board (CPCB), Tobacco Board and other respondents.

2. The response of MoEF&CC was that cigarette and bidi butts were not listed as hazardous. The cellulose acetate, which is prepared by converting cellulose into an acetic acid ester, is essentially a

biodegradable substance. However, the biodegradability of cellulose acetate is not necessarily satisfactory in practice. Any individual issues are to be handled at the level of the District Magistrate or the Municipal Authority.

3. The Federation of All India Farmers Association also filed a reply opposing the application. The Verve Foundation Trust filed an application for impleadment to support the applicant. The Tobacco Institute of India has also opposed the application. The All India Bidi Industry Federation also filed a reply opposing the application.

4. The Ministry of Health in its response submitted that Tobacco was detrimental to health. The cigarette and bidi butts were not biodegradable. There was no thorough research on the effect of such butts. The Ministry of Health has enacted the Cigarettes and other tobacco products (Prohibition of Advertisements and Regulations of Trade and Commerce Production, Supply and Distribution Act 2003 (COTPA) and also framed rules. The Ministry has also launched the National Tobacco Control Programme (NTCP) with the aim and objective of creating awareness about the harmful effect of tobacco consumption, reducing production and supply of tobacco products, ensuring effective implementation of the provision of COTPA, 2003 and helping the people to quit tobacco use through Tobacco Cessation Centers. The WHO Framework Convention on Tobacco Control (FCTC) is created to implement methods to reduce tobacco consumption and protecting present and future generations from devastating health, social, environmental and economic consequences of tobacco consumption and exposure to tobacco smoke. The salient features of FCTC are as follows:

“

1. **Measures relating to the reduction of demand for tobacco (Article 6-14):**

- i) Price and tax measures for reducing tobacco use.
- ii) Non price measures to reduce the demand for tobacco namely:

- Protection from exposure to tobacco smoke
- Regulation of contents of tobacco products
- Regulation of tobacco product disclosures
- Packing and labeling of tobacco products
- Education , communication , training and public awareness
- Tobacco advertising promotion and sponsorship:
- Demand reduction measures concerning tobacco dependence and cessation

2. **Measures relating to the reduction of supply of tobacco (Articles 15-17)**

- Preventing illicit trade in tobacco products:
- Prohibiting sales to and by minors:
- Supporting economically viable alternative activities to tobacco
- **Protection of the environment and the health of persons in relation to the environment in respect of tobacco cultivation and manufacture."**

5. Inter-Ministerial Committee of Secretaries (COS) at the national level has been constituted to review and develop a comprehensive policy on tobacco and related issues. As per the GATS-2 India 2016-17, the estimated number of tobacco users India are 26.7 crores with 16.73 crores users of only smokeless tobacco, 6.74 crores only smokers and 3.21 crores users of both smoking and smokeless tobacco Overall tobacco use among males was 48% and 20% among females as per the Global Youth Tobacco Survey, 2009, 9% students in the age group 13-15 use smokeless tobacco products with figures of 11% among boys and 6% among girls.

6. The Ministry of Health and Family Welfare in consultation with the National Institute of Health and Family Welfare (NIHFW) has compiled a Health Report on the contents and harmful effects of consumption of gutkha, chewing-tobacco pan masala and similar smokeless-tobacco-

manufacturer in the country. The major carcinogens in smokeless tobacco are N-Nitrosamines (TSNA) and there is no safe level of this chemical that has been ascribed so far.

7. Smokeless tobacco is being used by about 300 million or about 26% of the Indian population and majority of them spit it in public places Global Adult Tobacco Survey (GATS), India: Ministry of Health, Government of India, 2009-2010. Spitting of such saliva in a public place contributes in spreading of several communicable diseases e.g. Tuberculosis, H1N1 (Swine Flu), Avian-Flu, Pneumonia and gastro-intestinal-diseases, thus endangering the life of persons visiting a public place. **Tsuge K, Kataoka M, Seto Y. Cyanide and Thiocyanate levels in blood and saliva of healthy adult volunteers. J Health Sci 2000; 46 (5): 343-50).**

8. The Food safety and Standards Act 2006 (enacted by the Government of India with the objective to fix food standards and regulate/ monitor the manufacturing, import, processing, distribution and sale of food to ensure safe and wholesome food to the people) has defined the word food as any substance whether processed, partially processed or unprocessed which is intended for human consumption. Further in the case of **Godawat Pan Masala Products I.P Ltd. & Another v Union of India & Others, 2004 7 SCC 68**, the Hon'ble Supreme Court has held that pan masala and gutkha are food products. The Hon'ble Allahabad High Court in **Manohar Lal V State of U.P**, Criminal Revision No. 318 of 1982 and in **Khedan Lal And Sons Vs State of U.P and Ors**, 1980 CriLJ 1346 has held chewing tobacco as an article of food.

9. Based on the aforementioned Judgments, the provisions of the Food safety & standards Act 2006 and the Regulation 2.3.4, the Ministry issued letters dated 08.05.2012, 27.08.2012, 21.11.2012 and 06.08.2014 to the principal Secretaries (Health) , Chief Secretaries and Chief Ministers of all States/UTs, to consider issuing necessary orders for restricting the sale of food items having tobacco and nicotine as their ingredients such as gutkha, pan masala (containing tobacco and nicotine), zarda and flavoured/scented chewing tobacco under Regulation 2.3.4 Further, in the year 2016, letters were issued to Chief Secretaries of all States except Bihar, Karnataka, Mizoram, Kerala and Madhya Pradesh to pass necessary orders in Compliance of the Hon'ble Supreme Court order dated 23.09.2016 and ensure that the manufacture, storage, distribution or sale of gutka and panmasala (containing tobacco or nicotine) and any other products marketed separately having tobacco or nicotine in the final product by whatever name called, whether packaged or un-packaged and/or sold as one product, or though packaged as separate products, sold or distributed in such a manner so as to easily facilitate mixing by the consumer is prohibited in the jurisdiction of the respective States. The Ministry is making earnest efforts to curb tobacco use in the country. The Ministry of Health and Family Welfare is in agreement with the applicant that an Inter -Ministerial /Departmental Committee should be constituted to consult at the national level for conducting an **impact study** of discarded cigarette and bidi butts and spitting of tobacco products in public places. The inter -Ministerial Departmental Committee based on the findings of the impact study can frame a **comprehensive policy** on discarded cigarette and bidi butts and for prohibiting spitting of tobacco products in public places.

10. Vide order dated 12.04.2019, the Tribunal directed that a study be conducted by the Indian Institute of Toxicology Research (IITR) on the question whether the cigarette and bidi butts fall within the category of toxic waste or not. The CPCB assigned the project to the IITR on 30.10.2019. On 03.02.2020, the Tribunal was informed that the IITR will give its report by 20.02.2020.

11. Accordingly, the CPCB has filed its report on 20.08.2020 *inter-alia* as follows:-

"2.0 Action Taken Report: -

a) In compliance of aforesaid direction of Hon'ble NGT, IITR-Lucknow submitted the report on **"Whether cigarette and bidi butts fall within the category of toxic waste or not "** on 3rd March, 2020.

b) Report was examined by CPCB and it was observed that it did not include the following

- Analysis of the parameters as per provisions of schedule II of Hazardous and other wastes (management and transboundary movement) Rules, 2016

- It did not confirm whether cigarette and bidi butts fall within the category of toxic waste or not.

Accordingly, email dated March 12, 2020 and March 19, 2020 (Annexure I and Annexure II) was written to IITR.

c) IITR vide letter dated July 09, 2020 submitted the revised report on the matter. However, the report still did not include:

- Analysis of the parameters as per provisions of schedule II of Hazardous and other wastes (management and transboundary movement) Rules, 2016.
- Conclusion regarding toxicity of cigarette/bidi butts.

Vide e-mail dated 14.08.2020, IITR was requested to include the above (Annexure III).

d) IITR has submitted the revised report vide e-mail dated August 17, 2020. The report is placed at Annexure IV. As per the IITR report, following are the conclusion:

- i. The analysis of the cigarette/bidi butts reflect that as per the concentration of various parameters analyzed are lower than the prescribed limits and will not be toxic to human & environment.
- ii. Cellulose Acetate is a major component of the cigarette/bidi butts and its degradation studies show that it will persist for a longer duration. The degradation studies under natural environmental conditions and laboratory simulating conditions will be required to conclude safety/toxicity of cigarette butts to further correlate with human health risk assessment."

12. The conclusions in the report are as follows:

"The level of individual chemical analytes in TCLP leachates for Class A and Class C are reported as the mean concentration of triplicate for each sample in mg/L or Below Detection Limit (BDL)

Class A:

- The class A chemicals concentration in unburnt cigarette butts were detected in the concentration range of BDL-0.001 mg/L for mercury, BDL-1.071mg/L for copper and BDL-0.263 mg/L for nickel, while all other chemicals were BDL, whereas in unburnt bidi butts all were BDL. (Annexure-I)
- The class A chemicals in burnt cigarette butts were detected in the range of BDL-0.028 mg/L for cadmium, BDL-0.062 mg/L for selenium, BDL-0.065 mg/L for endosulfan, BDL-2.808 mg/L for copper, BDL-0.087 mg/L for nickel, BDL-0.016 mg/L for polychlorinated biphenyls whereas in burnt bidi butts were in the range of 0.022-0.028 mg/L for cadmium, BDL-0.008 mg/L for selenium, 0.084-0.115 mg/L for copper (Annexure-II)
- The levels found for class A chemicals (reported in the Annexure I and II) were below their respective concentration limit, as per schedule II 2016 except endosulfan was found higher in one brand of cigarette

Class C:

- The class C chemicals in unburnt cigarette butts were detected in the concentration range of BDL-0.012 mg/kg for organotin compounds and BDL-0.024 mg/kg for organo nitro and nitroso compounds, whereas in unburnt bidi butts were in the range of 0.039-0.041 mg/kg for organotin compounds. (Annexure-III)
- The class C chemicals in burnt cigarette butts were in the range of BDL-0.323 mg/kg for aromatic compounds, BDL-0.025 mg/kg for organotin compounds, BDL-0.067 mg/kg

for organo nitro and nitroso compounds and BDL-0.009 mg/kg for phenanthrene whereas in burnt bidi butts were in the range of BDL-0.035 mg/kg for aromatic compounds and 0.122-0.173 mg/kg for organo nitro and nitroso compounds. (Annexure-IV)

- The levels found for class C analytes (reported in the Annexure III and IV) were below their respective concentration limit as per schedule II 2016.

Other additional chemicals analysed for unburnt and burnt cigarette and bidi butts are also listed, separately in (Annexure V).

The level of class A and C chemicals listed in schedule II is lower than the prescribed limit in the small sample size. The cigarette butt material is non-degradable, and this may be considered during the formulation of the waste disposal plan.

The levels of chemicals listed in class 'A' of schedule II 2016 Government of India Ministry of Environment, Forest and Climate Change were either below the level of detection or many fold lower than the threshold value, except the endosulfan (in one brand). The levels of chemicals listed in class 'C' of Schedule-II 2016 Government of India Ministry of Environment, Forest and Climate Change were either below the level of detection or many fold lower than the threshold value. In summary, **the levels of class 'A' and 'C' chemicals listed in Schedule-II 2016 Government of India Ministry of Environment, Forest and Climate Change are lower than the prescribed limits under the experimental conditions with limited sample size. The analysis reflects that the concentrations detected will not be toxic to the human and environment. Cellulose acetate is a major component (95%) of the cigarette butts along with the wrapping paper and rayon. In general, the toxicity data are not available for cellulose acetate. Whatever studies carried out so far, reported cellulose acetate nontoxic up to 5000 mg/ Kg body weight in subchronic studies of 96 days through oral administration in rat models [2]. The degradation studies carried out on cigarette butts shown only 37.8% degradation in two years in the soil under ambient conditions [1]; hence it will persist in soil for a longer duration. The data are not available on the cigarette butts or cellulose acetate (a major component of cigarette butts) mediated human health risk assessment and toxic responses, and response on microflora in the soil. The degradation studies under natural environmental conditions and laboratory simulating conditions will be required to conclude the safety/ toxicity of cigarette butts to further correlate with human and environmental health risk assessment. Recycling of cellulose acetate after recovery from the cigarette butts may be suggested as one among the**

immediate solution to the problem until the degradation and safety data are generated."

13. In view of above, while tabaco is undoubtedly harmful and the concerned authorities are seized of the remedial action, the Tribunal is mainly concerned with the manner of disposal of cigarette/bidi butts. An expert study has been conducted. We do not find any valid reason to reject the expert report. Accordingly, we direct that the CPCB may lay down guidelines for disposal of cigarette/bidi butts, in the interest of environment, within three months.

The application is disposed of.

A copy of this order be forwarded to the CPCB by e-mail for compliance.

Adarsh Kumar Goel, CP

S. P. Wangdi, JM

Dr. Nagin Nanda, EM

September 09, 2020
Original Application No. 433/2015
SN

ANNEXURE-II

THE CIGARETTES AND OTHER TOBACCO PRODUCTS (PROHIBITION OF
ADVERTISEMENT AND REGULATION OF TRADE AND COMMERCE, PRODUCTION,
SUPPLY AND DISTRIBUTION) ACT, 2003

ARRENGEMENT OF SECTIONS

SECTIONS

1. Short title, extent and commencement.
2. Declaration as to expediency of control by the Union.
3. Definitions.
4. Prohibition of smoking in a public place.
5. Prohibition of advertisement of cigarettes and other tobacco products.
6. Prohibition on sale of cigarette or other tobacco products to a person below the age of eighteen years and in particular area.
7. Restrictions on trade and commerce in, and production, supply and distribution of cigarettes and other tobacco products.
8. Manner in which specified warning shall be made.
9. Language in which the specified warning shall be expressed.
10. Size of letters and figures.
11. Testing laboratory for nicotine and tar contents.
12. Power of entry and search.
13. Power to seize.
14. Confiscation of package.
15. Power to give option to pay costs in lieu of confiscation.
16. Confiscation not to interfere with other punishments.
17. Adjudication.
18. Giving opportunity to the owner of seized packages.
19. Appeal.
20. Punishment for failure to give specified warning and nicotine and tar contents.
21. Punishment for smoking in certain places.
22. Punishment for advertisement of cigarettes and tobacco products.
23. Forfeiture of advertisement and advertisement material.
24. Punishment for sale of cigarettes or any other tobacco products in certain places or to persons below the age of eighteen years.
25. Prevention, detention and place of trial of offences under sections 4 and 6.

SECTIONS

- 26. Offences by companies.
- 27. Offences to be bailable.
- 28. Composition of offences.
- 29. Protection of action taken in good faith.
- 30. Power to add any tobacco products in the Schedule.
- 31. Power of Central Government to make rules.
- 32. Act not to apply to cigarettes of other tobacco products which are exported.
- 33. Repeal and savings.

THE SCHEDULE.

THE CIGARETTES AND OTHER TOBACCO PRODUCTS (PROHIBITION OF
ADVERTISEMENT AND REGULATION OF TRADE AND COMMERCE, PRODUCTION,
SUPPLY AND DISTRIBUTION) ACT, 2003

ACT NO. 34 OF 2003

[18th May, 2003.]

An Act to prohibit the advertisement of, and to provide for the regulation of trade and commerce in, and production, supply and distribution of, cigarettes and other tobacco products and for matters connected therewith or incidental thereto.

WHEREAS, the Resolution passed by the 39th World Health Assembly (WHO), in its Fourteenth Plenary meeting held on the 15th May, 1986 urged the member States of WHO which have not yet done so to implement the measures to ensure that effective protection is provided to non-smokers from involuntary exposure to tobacco smoke and to protect children and young people from being addicted to the use of tobacco;

AND WHEREAS, the 43rd World Health Assembly in its Fourteenth Plenary meeting held on the 17th May, 1990, reiterated the concerns expressed in the Resolution passed in the 39th World Health Assembly and urged Member States to consider in their tobacco control strategies plans for legislation and other effective measures for protecting their citizens with special attention to risk groups such as pregnant women and children from involuntary exposure to tobacco smoke, discourage the use of tobacco and impose progressive restrictions and take concerted action to eventually eliminate all direct and indirect advertising, promotion and sponsorship concerning tobacco;

AND WHEREAS, it is considered expedient to enact a comprehensive law on tobacco in the public interest and to protect the public health;

AND WHEREAS, it is expedient to prohibit the consumption of cigarettes and other tobacco products which are injurious to health with a view to achieving improvement of public health in general as enjoined by article 47 of the Constitution;

AND WHEREAS, it is expedient to prohibit the advertisement of, and to provide for regulation of trade and commerce, production, supply and distribution of, cigarettes and other tobacco products and for matters connected therewith or incidental thereto:

BE it enacted by Parliament in the Fifty-fourth Year of the Republic of India as follows:—

1. Short title, extent and commencement.—(1) This Act may be called the Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003.

(2) It extends to the whole of India.

(3) It shall come into force on such date¹ as the Central Government may, by notification in the Official Gazette, appoint and different dates may be appointed for different provisions of this Act.

2. Declaration as to expediency of control by the Union—It is hereby declared that it is expedient in the public interest that the Union should take under its control the tobacco industry.

1. 1st December, 2007, sub-sections (1), (2), (3) and (4) of sec. 7, ss. 8, 9, 10 and 20, *vide* notification No. S.O. 1955(E), dated 16th November, 2007, *see* Gazette of India, Extraordinary, Part II, sec 3(ii).

3. Definitions.—In this Act, unless the context otherwise requires,—

(a) "advertisement" includes any visible representation by way of notice, circular, label, wrapper or other document and also includes any announcement made orally or by any means of producing or transmitting light, sound, smoke or gas;

(b) "cigarette" includes,—

(i) any roll of tobacco wrapped in paper or in any other substance not containing tobacco,

(ii) any roll of tobacco wrapped in any substance containing tobacco, which, by reason of its appearance, the type of tobacco used in the filter, or its packaging and labelling is likely to be offered to, or purchased by, consumers as cigarette, but does not include *beedi*, cheroot and cigar;

(c) "distribution" includes distribution by way of samples, whether free or otherwise;

(d) "export", with its grammatical variations and cognate expressions, means taking out of India to a place outside India;

(e) "foreign language" means a language which is neither an Indian language nor the English language;

(f) "import", with its grammatical variations and cognate expressions, means bringing into India from a place outside India;

(g) "Indian language" means a language specified in the Eighth Schedule to the Constitution, and includes any dialect of such language;

(h) "label" means any written, marked, stamped, printed or graphic matter, affixed to, or appearing upon, any package;

(i) "package" includes a wrapper, box, carton, tin or other container;

(j) "prescribed" means prescribed by rules made under this Act;

(k) "production", with its grammatical variations and cognate expressions, includes the making of cigarettes, cigars, cheroots, *beedis*, cigarette tobacco, pipe tobacco, *hookah* tobacco, chewing tobacco, *pan masala* or any chewing material having tobacco as one of its ingredients (by whatever name called) or snuff and shall include—

(i) packing, labelling or re-labelling, of containers;

(ii) re-packing from bulk packages to retail packages; and

(iii) the adoption of any other method to render the tobacco product marketable;

(l) "public place" means any place to which the public have access, whether as of right or not, and includes auditorium, hospital buildings, railway waiting room, amusement centres, restaurants, public offices, court buildings, educational institutions, libraries, public conveyances and the like which are visited by general public but does not include any open space;

(m) "sale", with its grammatical variations and cognate expressions, means any transfer of property in goods by one person to another, whether for cash or on credit, or by way of exchange, and whether wholesale or retail, and includes an agreement for sale, and offer for sale and exposure for sale;

(n) "smoking", means smoking of tobacco in any form whether in the form of cigarette, cigar, *beedis* or otherwise with the aid of a pipe, wrapper or any other instruments;

(o) "specified warning" means such warnings against the use of cigarettes or other tobacco products to be printed, painted or inscribed on packages of cigarettes or other tobacco products in such form and manner as may be prescribed by rules made under this Act;

(p) "tobacco products" means the products specified in the Schedule.

4. Prohibition of smoking in a public place.—No person shall smoke in any public place:

Provided that in a hotel having thirty rooms or a restaurant having seating capacity of thirty persons or more and in the airports, a separate provision for smoking area or space may be made.

5. Prohibition of advertisement of cigarettes and other tobacco products.—(1) No person engaged in, or purported to be engaged in the production, supply or distribution of cigarettes or any other tobacco products shall advertise and no person having control over a medium shall cause to be advertised cigarettes or any other tobacco products through that medium and no person shall take part in any advertisement which directly or indirectly suggests or promotes the use or consumption of cigarettes or any other tobacco products.

(2) No person, for any direct or indirect pecuniary benefit, shall—

(a) display, cause to display, or permit or authorise to display any advertisement of cigarettes or any other tobacco product; or

(b) sell or cause to sell, or permit or authorise to sell a film or video tape containing advertisement of cigarettes or any other tobacco product; or

(c) distribute, cause to distribute, or permit or authorise to distribute to the public any leaflet, hand-bill or document which is or which contains an advertisement of cigarettes or any other tobacco product; or

(d) erect, exhibit, fix or retain upon or over any land, building, wall, hoarding, frame, post or structure or upon or in any vehicle or shall display in any manner whatsoever in any place any advertisement of cigarettes or any other tobacco product:

Provided that this sub-section shall not apply in relation to—

(a) an advertisement of cigarettes or any other tobacco product in or on a package containing cigarettes or any other tobacco product;

(b) advertisement of cigarettes or any other tobacco product which is displayed at the entrance or inside a warehouse or a shop where cigarettes and any other tobacco products are offered for distribution or sale.

(3) No person, shall, under a contract or otherwise promote or agree to promote the use or consumption of—

(a) cigarettes or any other tobacco product; or

(b) any trade mark or brand name of cigarettes or any other tobacco product in exchange for a sponsorship, gift, prize or scholarship given or agreed to be given by another person.

6. Prohibition on sale of cigarette or other tobacco products to a person below the age of eighteen years and in particular area.—No person shall sell, offer for sale, or permit sale of, cigarette or any other tobacco product—

(a) to any person who is under eighteen years of age, and

(b) in an area within a radius of one hundred yards of any educational institution.

7. Restrictions on trade and commerce in, and production, supply and distribution of cigarettes and other tobacco products.—(1) No person shall, directly or indirectly, produce, supply or distribute

cigarettes or any other tobacco products unless every package of cigarettes or any other tobacco products produced, supplied or distributed by him bears thereon, or on its label ¹[such specified warning including a pictorial warning as may be prescribed.]

(2) No person shall carry on trade or commerce in cigarettes or any other tobacco products unless every package of cigarettes or any other tobacco products sold, supplied or distributed by him bears thereon, or on its label, the specified warning.

(3) No person shall import cigarettes or any other tobacco products for distribution or supply for a valuable consideration or for sale in India unless every package of cigarettes or any other tobacco products so imported by him bears thereon, or on its label, the specified warning.

(4) The specified warning shall appear on not less than one of the largest panels of the package in which cigarettes or any other tobacco products have been packed for distribution, sale or supply for a valuable consideration.

(5) No person shall, directly or indirectly, produce, supply or distribute cigarettes or any other tobacco products unless every package of cigarettes or any other tobacco products produced, supplied or distributed by him indicates thereon, or on its label, the nicotine and tar contents on each cigarette or as the case may be on other tobacco products along with the maximum permissible limits thereof:

Provided that the nicotine and tar contents shall not exceed the maximum permissible quantity thereof as may be prescribed by rules made under this Act.

8. Manner in which specified warning shall be made.—(1) The specified warning on a package of cigarettes or any other tobacco products shall be—

(a) legible and prominent;

(b) conspicuous as to size and colour;

(c) in such style or type of lettering as to be boldly and clearly presented in distinct contrast to any other type, lettering or graphic material used on the package or its label and shall be printed, painted or inscribed on the package in a colour which contrasts conspicuously with the background of the package or its labels.

(2) The manner in which a specified warning shall be printed, painted or inscribed on a package of cigarettes or any other tobacco products shall be such as may be specified in the rules made under this Act.

(3) Every package containing cigarettes or any other tobacco products shall be so packed as to ensure that the specified warning appearing thereon, or on its label, is, before the package is opened, visible to the consumer.

9. Language in which the specified warning shall be expressed.—(1) Where the language used on a package containing cigarettes and any other tobacco products or on its label is—

(a) English, the specified warning shall be expressed in the English language;

(b) any Indian language or languages, the specified warning shall be expressed in such Indian language or languages;

(c) both English and one or more Indian languages, the specified warning shall be expressed in the English language as well as in such Indian language or languages;

(d) partly English and partly any Indian language or languages, the specified warning shall be expressed in the English language as well as in such Indian language or languages;

1. Subs. by Act 38 of 2007, s. 2, for certain words (w.e.f. 24-9-2007).

(e) any foreign language, the specified warning shall be expressed in the English language;

(f) partly any foreign language and partly English or any Indian language or languages, the specified warning shall be expressed in the English language as well as in such Indian language or languages.

(2) No package of cigarettes or any other tobacco products or its label shall contain any matter or statement which is inconsistent with, or detracts from, the specified warning.

10. Size of letters and figures.—No specified warning or indication of nicotine and tar contents in cigarettes and any other tobacco products shall be deemed to be in accordance with the provisions of this Act if the height of each letter or figure, or both the used on such warning and indication is less than the height as may be prescribed by rules made under this Act.

11. Testing laboratory for nicotine and tar contents.—For purposes of testing the nicotine and tar contents in cigarettes and any other tobacco products the Central Government shall by notification in the Official Gazette grant recognition to such testing laboratory as that Government may deem necessary.

12. Power of entry and search.—(1) Any police officer, not below the rank of a sub-inspector or any officer of State Food or Drug Administration or any other officer, holding the equivalent rank being not below the rank of Sub-Inspector of Police, authorised side by the Central Government or by the State Government may, if he has any reason to suspect that any provision of this Act has been, or is being, contravened, enter and search in the manner prescribed, at any reasonable time, any factory, building, business premises or any other place,—

(a) where any trade or commerce in cigarettes or any other tobacco products is carried on or cigarettes or any other tobacco products are produced, supplied or distributed; or

(b) where any advertisement of the cigarettes or any other tobacco products has been or is being made.

(2) The provisions of the Code of Criminal Procedure, 1973 (2 of 1974), shall apply to every search and seizure made under this Act.

13. Power to seize.—(1) If any police officer, not below the rank of a sub-inspector or any officer of State Food or Drug Administration or any other officer, holding the equivalent rank being not below the rank of Sub-Inspector of Police, authorised by the Central Government or by the State Government, has any reason to believe that,—

(a) in respect of any package of cigarettes or any other tobacco products, or

(b) in respect of any advertisement of cigarettes or any other tobacco products,

the provisions of this Act have been, or are being, contravened, he may seize such package or advertisement material in the manner prescribed.

(2) No package of cigarettes or any other tobacco products or advertisement material seized under clause (a) of sub-section (1) shall be retained by the officer who seized the package or advertisement material for a period exceeding ninety days from the date of the seizure unless the approval of the District Judge, within the local limits of whose jurisdiction such seizure was made, has been obtained for such retention.

14. Confiscation of package.—Any package of cigarettes or any other tobacco products or any advertisement material of cigarettes or any other tobacco products, in respect of which any provision of this Act has been or is being contravened, shall be liable to be confiscated:

Provided that, where it is established to the satisfaction of the court adjudging the confiscation that the person in whose possession, power or control any such package of cigarettes or any other tobacco products is found is not responsible for the contravention of the provisions of this Act, the Court may,

instead of making an order for the confiscation of such package, make such other order authorised by this Act against the person guilty of the breach of the provisions of this Act as it may think fit.

15. Power to give option to pay costs in lieu of confiscation.—(1) Whenever any confiscation of any package of cigarettes or any other tobacco products is authorised by this Act, the court adjudging it may, subject to such conditions as may be specified in the order adjudging the confiscation, give to the owner thereof an option to pay, in lieu of confiscation, costs which shall be equal to the value of the goods confiscated.

(2) On payment of the costs ordered by the court, the seized packages shall be returned to the person from whom they were seized on condition that such person shall, before making any distribution, sale or supply of such packages of cigarettes or other tobacco products, get the specified warning and indication of nicotine and tar contents incorporated on each such package.

16. Confiscation not to interfere with other punishments.—No confiscation made, costs ordered to be paid under this Act shall prevent the infliction of any punishment to which the person affected thereby is liable under the provisions of this Act or under any other law.

17. Adjudication.—Any confiscation of cigarettes or any other tobacco products may be adjudged or costs may be ordered to be paid,—

(a) without any limit, by the principal civil court of original jurisdiction within the local limits of whose jurisdiction such confiscation has been made, costs have been ordered to be paid,

(b) subject to such limits as may be specified by the Central Government in this behalf, by such other court, not below a civil court having pecuniary jurisdiction exceeding rupees five thousand, as the Central Government may, by notification in the Official Gazette, authorise in this behalf.

18. Giving opportunity to the owner of seized packages.—(1) No order adjudging confiscation or directing payment of costs shall be made unless the owner or person in possession of the package of cigarettes or any other tobacco products has been given a notice in writing informing him of the grounds on which it is proposed to confiscate such package, and giving him a reasonable opportunity of making a representation in writing, within such reasonable time as may be specified in the notice, against the confiscation mentioned therein, and, if he so desires, of being heard personally or through a representative in the matter:

Provided that, where no such notice is given within a period of ninety days from the date of the seizure of the package of cigarettes or of any other tobacco products, such package shall be returned, after the expiry of that period, to the owner or the person from whose possession it was seized.

(2) Save as otherwise provided in sub-section (1), the provisions of the Code of Civil Procedure, 1908 (5 of 1908), shall, as far as may be, apply to every proceeding referred to in sub-section (1).

19. Appeal.—(1) Any person, aggrieved by any decision of the court adjudging a confiscation, ordering the payment of costs, may prefer an appeal to the court to which an appeal lies from the decision of such court.

(2) The appellate court may, after giving to the appellant an opportunity of being heard, pass such order as it thinks fit confirming, modifying or reversing the decision or order appealed against or may send back the case with such directions as it may think fit for a fresh decision or adjudication, as the case may be, after taking additional evidence, if necessary:

Provided that an order enhancing any fine in lieu of confiscation or confiscating of goods of greater value shall not be made under this section unless the appellant has had an opportunity of making a representation and, if he so desires, of being heard in person or through a representative in his defence.

(3) No further appeal shall lie against the order of the court of appeal.

20. Punishment for failure to give specified warning and nicotine and tar contents.—(1) Any person who produces or manufactures cigarettes or tobacco products, which do not contain, either on the package or on their label, the specified warning and the nicotine and tar contents, shall in the case of first conviction be punishable with imprisonment for a term which may extend to two years, or with fine which may extend to five thousand rupees, or with both, and for the second or subsequent conviction, with imprisonment for a term which may extend to five years and with fine which may extend to ten thousand rupees.

(2) Any person who sells or distributes cigarettes or tobacco products which do not contain either on the package or on their label, the specified warning and the nicotine and tar contents shall in the case of first conviction be punishable with imprisonment for a term, which may extend to one year, or with fine which may extend to one thousand rupees, or with both, and, for the second or subsequent conviction, with imprisonment for a term which may extend to two years and with fine which may extend to three thousand rupees.

21. Punishment for smoking in certain places.—(1) Whoever contravenes the provisions of section 4 shall be punishable with fine which may extend to two hundred rupees.

(2) An offence under this section shall be compoundable and shall be tried summarily in accordance with the procedure provided for summary trials in the Code of Criminal Procedure, 1973 (2 of 1974).

22. Punishment for advertisement of cigarettes and tobacco products.—Whoever contravenes the provision of section 5 shall, on conviction, be punishable—

(a) in the case of first conviction, with imprisonment for a term which may extend to two years or with fine which may extend to one thousand rupees or with both, and

(b) in the case of second or subsequent conviction with imprisonment for a term which may extend to five years and with fine which may extend to five thousand rupees.

23. Forfeiture of advertisement and advertisement material.—Where any person has been convicted under this Act for the contravention of the provision of section 5, the advertisement and the advertisement material for cigarettes and other tobacco products may be forfeited to the Government and such advertisement and advertisement material shall be disposed of in such manner as may be prescribed by rules made under this Act.

24. Punishment for sale of cigarettes or any other tobacco products in certain places or to persons below the age of eighteen years.—(1) Any person who contravenes the provisions of section 6 shall be guilty of an offence under this Act and shall be punishable with fine which may extend to two hundred rupees.

(2) All offences under this section shall be compoundable and shall be tried summarily in accordance with the procedure provided for summary trials in the Code of Criminal Procedure, 1973 (2 of 1974).

25. Prevention, detention and place of trial of offences under sections 4 and 6.—(1) Notwithstanding anything contained in any other law for the time being in force, the Central Government or the State Government may, by notification in the Official Gazette, authorise one or more persons who shall be competent to act under this Act:

Provided that the person so authorised may, if he has reasonable ground for believing that any person has committed an offence under section 4 or section 6, may detain such person unless the accused person furnishes his name and address, and otherwise satisfies the officer detaining him that he will duly answer any summons or other proceedings which may be taken against him.

(2) Any person detained under sub-section (1) shall forthwith be taken before Magistrate to be dealt with according to law.

(3) Any person committing an offence under section 4 or section 6 shall be liable for such offence in any place in which he may be or which the State Government may notify in this behalf, as well as in any other place in which he is liable to be tried under any law for the time being in force.

(4) Every notification issued under sub-sections (1) and (3) shall be published in the Official Gazette, and a copy thereof shall be exhibited for information to the public in some conspicuous place or places as the State Government may direct.

(5) Every person authorised under sub-section (1) shall be deemed to be a public servant within the meaning of section 21 of the Indian Penal Code (45 of 1860).

26. Offences by companies.—(1) Where an offence under this Act has been committed by a company, every person who, at the time the offence was committed, was in charge of, and was responsible to, the company for the conduct of the business of the company, as well as the company, shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly:

Provided that nothing contained in this sub-section shall render any such person liable to any punishment, if he proves that the offence was committed without his knowledge or that he had exercised all due diligence to prevent the commission of such offence.

(2) Notwithstanding anything contained in sub-section (1), where any offence under this Act has been committed by a company and it is proved that the offence has been committed with the consent or connivance of, or is attributable to any neglect on the part of, any director, manager, secretary or other officer of the company, such director, manager, secretary or other officer shall be proceeded against and punished accordingly.

Explanation.—For the purposes of this section,—

(a) "company" means a body corporate and includes a firm or other association of individuals; and

(b) "director", in relation to a firm, means a partner in the firm.

27. Offences to be bailable.—Notwithstanding anything contained in the Code of Criminal Procedure, 1973 (2 of 1974), an offence punishable under this Act shall be bailable.

28. Composition of offences.—(1) Any offence committed under section 4 or section 6 may either before or after the institution of the prosecution be compounded by such officer authorised by Central Government or State Government and for an amount which may not exceed two hundred rupees.

(2) Where an offence has been compounded under sub-section (1), the offender, if in custody, shall be discharged and no further proceedings shall be taken against him in respect of such offence.

29. Protection of action taken in good faith.—No suit, prosecution or other legal proceeding shall lie against the Central Government or any State Government or any officer of the Central Government or any State Government for anything which is in good faith done or intended to be done under this Act.

30. Power to add any tobacco products in the Schedule.—The Central Government, after giving by notification in the Official Gazette, not less than three months' notice of its intention so to do, may, by like notification, add any other tobacco product in respect of which it is of opinion that advertisements are to be prohibited and its production, supply and distribution is required to be regulated under this Act, and thereupon the Schedule shall in its application to such products be deemed to be amended accordingly.

31. Power of Central Government to make rules.—(1) The Central Government may, by notification in the Official Gazette, make rules to carry out the provisions of this Act.

(2) Without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely:—

(a) specify the form and manner in which warning shall be given in respect of cigarettes or other tobacco products under clause (o) of section 3;

(b) specify the maximum permissible nicotine and tar contents in cigarettes or other tobacco products under the proviso to sub-section (5) of section 7;

(c) specify the manner in which the specified warning shall be inscribed on each package of cigarettes or other tobacco products or its label under sub-section (2) of section 8;

(d) specify the height of the letter or figure or both to be used in specified warning or to indicate the nicotine and tar contents in cigarettes or other tobacco products under section 10;

(e) provide for the manner in which entry into and search of any premises is to be conducted and the manner in which the seizure of any package of cigarettes or other tobacco products shall be made and the manner in which seizure list shall be prepared and delivered to the person from whose custody any package of cigarettes or other tobacco products has been seized;

(f) provide for any other matter which is required to be, or may be, prescribed.

(3) Every rule made under this Act and every notification made under section 30 shall be laid, as soon as may be after it is made, before each House of Parliament, while it is in session, for a total period of thirty days which may be comprised in one session or in two or more successive sessions, and if, before the expiry of the session immediately following the session or the successive sessions aforesaid, both Houses agree in making any modification in the rule or notification or both Houses agree that the rule or notification should not be made, the rule or notification shall thereafter have effect only in such modified form or be of no effect, as the case may be; so, however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule or notification.

32. Act not to apply to cigarettes of other tobacco products which are exported.—Nothing contained in this Act shall apply to any cigarette or other tobacco products or package of cigarettes or other tobacco products which is exported:

Provided that nothing in this section shall be deemed to authorise the export of any package of cigarettes or other tobacco products, not containing the specified warning and indication of nicotine and tar contents to any country if the law in force in that country requires that the same or similar warning and nicotine and tar contents shall be specified on each package of cigarettes or other tobacco products.

Explanation.—For the purpose of this section, any cigarette or other tobacco products or package of cigarettes or other tobacco products shall be deemed to be exported before the commencement of this Act, if the necessary steps for export have already been taken notwithstanding that the actual export has not taken place.

33. Repeal and savings.—(1) The Cigarettes (Regulation of Production, Supply and Distribution) Act, 1975 (49 of 1975), is hereby repealed.

(2) Notwithstanding such repeal, anything done or any action taken under the provisions of the aforesaid Act, shall, in so far as such thing or action is not inconsistent with the provisions of this Act, be deemed to have been done or taken under the provisions of this Act as if the said provisions were in force when such thing was done or such action was taken and shall continue in force accordingly until superseded by anything done or any action taken under this Act.

THE SCHEDULE

[See section 3(p)]

1. Cigarettes
2. Cigars
3. Cheroots
4. *Beedis*
5. Cigarette tobacco, pipe tobacco and *hookah* tobacco
6. Chewing tobacco
7. Snuff
8. *Pan masala* or any chewing material having tobacco as one of its ingredients (by whatever name called).
9. *Gutka*
10. Tooth powder containing tobacco.