

# **How effective is the current procedure of Product Quality Standardization in the Indian market?**

**A Case Study on Bureau of Indian Standards (BIS) - National Standards Body**



Submitted by:

**Vibhir Relhan**

CCS Working Paper No. 281

Summer Research Internship Programme 2012

Centre for Civil Society

## Table of Contents

Abbreviations.....	3
Acknowledgements.....	3
Abstract.....	3
Introduction.....	5
Stakeholders.....	6
Quality Control and its need.....	7
Quality Control in Small Scale Industries (SSI).....	7
Certification Marks in India.....	8
Bureau of Indian Standards (BIS).....	9
Product Certification Scheme.....	10
Ground Reality.....	11
Self-Declaration of Conformity (SDoC) and Registration Procedure.....	13
Gold Hallmarking.....	14
BIS Laboratory Services.....	15
House of Cards.....	16
Role of Non-Governmental Organizations.....	21
Jurisdiction of Consumer Courts.....	23
Spreading Awareness.....	24
The Survey.....	25
Appendix.....	34
References.....	50

## ABBREVIATIONS

BIS- Bureau of Indian Standards

ISI- Indian Standards Institution

ISO- International Organization for Standards

IEC- International Electrotechnical Commission

IS- Indian Standards

FSSAI- Food Standards and Safety Authority of India

FPO- Food Products Order

NABL- National Accreditation Board for Testing and Calibration Laboratories

IECEE-CB - IEC System of Conformity Assessment Schemes for Electrotechnical Equipment and Components- Certification body (ies)

MoU- Memorandum of Understanding

MRA- Mutual Recognition Agreement

CSE- Centre for Science and Environment

CERC- Consumer Education and Research Centre

VOICE- Voluntary Organization in Interest of Consumer Education

## ACKNOWLEDGEMENTS

I thank my research guide Prof Nimish Adhia, Internship Director at Centre for Civil Society (CCS), for continuously encouraging me for the last 6 weeks and being so patient to answer all my queries. I also thank Andrew G Humphries for his valuable insights that gave me a whole new perspective to this research; Anmol Relhan for helping me conduct surveys in Panipat and Nimbri village and all my fellow interns at CCS for indulging in constructive debates and discussions that helped in so many different ways during the course of my research.

## ABSTRACT

It is often pointed out that a man is at maximum a manufacturer of one product or a single service provider. But the very same man is a consumer of more than a 1000 products and services in his daily life. Every person is a consumer. We use thousands of products and pay for hundreds of services that we use for our day-to-day activities. It is obvious in such a scenario that all of us have gone through instances of service or product dissatisfaction. But unless it is something severe in nature, we avoid

getting into the depth of the case. Even in cases where the monetary loss associated with the defective service or product is a reasonable amount, the companies are quick to cover up for it and the issue is settled. But there are cases where we feel cheated and there is no adequate compensation given but we do not have time in our fast moving lives to pursue the case further. The general tendency is to avoid buying the product in future. While this strategy may work in small cases of petty financial loss but when the stake is higher (E.g.-Gold Items, LCD TV, Automobiles), a one-time loss can be too severe to ignore. The speed at which telecom services have grown over the last decade, there is no surprise that a huge number of calls are made by customers alleging fraud by telecom companies to their respective customer helplines.

But there is another side to the story. It is not a very frequent instance that the products we buy turn out to be of sub-standard quality than we expect it to be. This business of sale and purchase is carried out very smoothly every second all over the world. The basis of this smooth transaction is a basic trust which in most cases is upheld as a universal custom all over the world. In a world where selfish interests are a norm of the day, this unnoticed, mysterious form of trust on the product quality that is upheld universally is surely something special. But what is this trust based on? Another interesting phenomenon is the uniformity/similarity in the various brands of the same product available in the market. When one builds a house, the electric wiring and connections are not made on the basis of the brand of switches that he is going to buy. The traffic laws do not define the company whose helmets one must wear. Bolts and Holes for door locks are not made for a particular lock to be used. Yet, one does not face any difficulty while using these equipment because all of them are of a “standardized” form which is taken care of by all the manufacturers involved in the industry. Thus, there exists a form of an unsaid co-ordination between a construction worker, an electrician, an electric switch manufacturing company, a carpenter, a plumber or a lock manufacturer who have never met each other. The search for a detailed answer to these basic questions is what led me into carrying out this research and subsequently, drafting this research paper. While some may point out that this can be credited to “product quality standardization”, but the crux of my question is, “How effective is the current procedure of product quality standardization in the Indian market?” Who is responsible for ensuring an effective process of product quality standardization which is directly related to not only the monetary interest but the safety of the consumer as well? Who are the various stakeholders in this whole process and how efficiently do they perform their roles? What is the incentive that acts as a driving force to these stakeholders and makes them create a situation like the one that exists today in the markets? Over the span of this paper, an attempt to identify the answers to these questions and other similar ones has been made. Results of detailed consumer surveys conducted<sup>1</sup> have thrown a spotlight on the lack of awareness amongst the general public about product quality standardization. Interviews with insiders privy to the tricks of the trade that include Technical heads of Consumer Organizations, retired BIS officials and local suppliers and retailers in the market has provided some valuable insight into the current scenario. This is a world within a world where there are diverse groups pursuing their self-

---

<sup>1</sup> Refer to “The Survey” section of this paper.

interests including manufacturers<sup>2</sup> who lobby their way out of strict legislation while the ordinary consumer, led by consumer organizations which themselves are under the scanner, is the one left protesting and suffering at the end. The paper gives a closer look at the complex judicial process that exists in the country and the problems faced by authorities in bringing offenders to book. A look at the mass awareness campaigns carried out by the concerned authorities in the interest of the consumer is also necessary. The kind of standards that exist in the country, the huge infrastructure that's employed for testing, inspection and enforcement activities all come at a cost that has to be directly borne by the consumer directly or indirectly. So, the obvious question is to find out if the consumers' money is being used efficiently or not and recommend better and effective alternate solutions that is ultimately in the consumers' interest and is convenient to all the stakeholders. Cases about the mafias and repeated offenders who operate in tandem with the authorities via covert agreements reached between them have been discussed. These include from the biggest names in the list of companies out there to petty manufacturers who nobody recognizes. The paper also explains in detail the incentives that exist and that can be created potentially to reach a situation where a better market that works in the favor of all stakeholders exists. The paper tries to identify and fix some responsibility on institutions and companies that are responsible for upholding this trust in the market. This is to ensure that the next time, there is an issue over pesticide content in soft drinks, over false claims by manufacturers in lotteries or similar hoax emails, if doubts over the quality of packaged drinking water is raised or the dire consequences of pesticides sprayed in Kerala or Punjab are pointed out, the general public must know who to catch hold of and ensure that none of the conspirators and offenders evade prosecution. To explain the current market scenario in detail, the various acts and laws in place have been discussed, the institutions that frame and implement these laws have been pointed out and an attempt to identify the root cause of this menace has been made. On the basis of Consumer surveys conducted in various areas and interviews with various stakeholders and people privy to this industry, plausible solutions and reforms have been recommended.

## INTRODUCTION

And whatever happened to the pesticide content found in Bisleri in 2003. In 2003 and 2006, there turned out to be a dramatic fight that saw Pepsi and Coca-Cola joining hands to fight Sunita Narayan of Centre for Science and Environment (CSE) as the whole country looked on concerned about claims, that the Indian Public had been drinking for years, as a mark of celebration, 'drinks' that were claimed to be efficient toilet-cleaners! A rare sight where the stalwarts of the soft drink industry and all-time staunch rivals came together to fight this new menace that posed a serious threat to their credibility. Joint Parliamentary Committees in India is no ordinary thing where scams worth Rs.1,76,000 crores<sup>3</sup> also need a lot of political backing to make a case for themselves in order to have a JPC probe but the soft

---

<sup>2</sup> In this complete paper, the term "Manufacturers" refers to producers of all kinds of goods or articles and service providers.

<sup>3</sup> "JPC set up to probe 2G spectrum, telecom policy," accessed July 26, 2012, <http://www.sify.com/news/jpc-set-up-to-probe-2g-spectrum-telecom-policy-news-national-lcyt4gghbfd.html>

drinks had “been there, done that” in August 2003<sup>4</sup> itself. Old issues like Pesticides used for farming that led to a major health crisis amongst inhabitants of Kerala has got huge ratings for shows like Satyamev Jayate even in 2012. Punjab has the unique privilege of running its very own “Cancer train”. Cylinders, by law, can be sold under ISI certification only<sup>5</sup> and yet reports of accidents of cylinders bursting are not a rarity. In cases as recent as May 2012<sup>6</sup>, even major political leaders like Prakash Karat, general secretary of Communist Party of India(M), presiding over party meetings where over 200<sup>7</sup> party members were sitting, could not evade a LPG cylinder that burst at a distance of few 5 metres from the venue and could have posed a serious threat to life. Children still get shocks from sockets at home while electric switches are under mandatory ISI certification. In Mumbai recently, 643<sup>8</sup> bikers were fined Rs 200/- each for wearing helmets within a span of three days. Does not make any sense, right? Here is the complete story. They were apparently wearing helmets that did not carry ISI logos on them. This group of citizens, that follow traffic laws and wear helmets, is a rare sight in India and it was understandable when they were infuriated with the authorities for penalizing them. But the authorities were authorized by the commissioner to do so under Section 129 of the Motor Vehicles Act<sup>9</sup>. “What is an ISI mark by the way?” is what 40%<sup>10</sup> of Indians might ask you. But as they say, ‘The Khans got around and they also roped in the *Tendulkars* and the *Dhonis* to advertise and the glamour quotient got the poor drinking again’. The public memory is often short-lived and more importantly, has at its peril a lot of other issues to deal with. The attitude of the people is ‘Somebody will take care of that one. *Ye india hai, yaha sab chalta hai.*’ This is in its very true sense “The Great Indian Tragedy”. Everybody knew what the issue was, they got the names right, they drummed up the issue, sparked off the debates but nobody did what was needed- a follow up! And this paper is an attempt to do just that.

## STAKEHOLDERS

There are 4 major stakeholders in this market-

### 1. Manufacturers/Service providers

Manufacturers include domestic producers as well as importers and exporters in the Indian market.

### 2. National Standards Body(BIS) and Various Product Certification Bodies in India

Includes bodies responsible for issuing product quality certification marks such as such as ISI mark, BIS Hallmark, Agmark, FPO mark, etc. for majority of the diverse products present in the market.

### 3. Consumers

Refers to the public that buys products.

<sup>4</sup> “JPC set up to probe soft drinks row,” accessed July 26, 2012,

<http://www.expressindia.com/news/fullstory.php?newsid=24070>

<sup>5</sup> List of items under mandatory ISI certification as dictated by Govt. of India - <http://www.bis.org.in/cert/man.pdf>

<sup>6</sup> “Close shave for Karat as lpg cylinder bursts,” accessed July 26,2012,

<http://www.thesundayindian.com/en/story/close-shave-for-karat-as-lpg-cylinder-bursts/254/34273/>

<sup>7</sup> Ibid.

<sup>8</sup> “Helmet minus ISI mark,” accessed July 26, 2012,

<http://www.mumbaimirror.com/article/2/2011120320111203021542565765706ec/Helmet-minus-ISI-mark-Be-prepared-to-pay-a-fine.html>

<sup>9</sup> Ibid.

<sup>10</sup> Refer to “The Survey” section of this paper

#### 4. Consumer Organizations and Similar institutions

Includes organizations like CERC, Consumer VOICE and CSE.

## QUALITY CONTROL AND ITS NEED

Quality has different meanings subject to different interpretations- it may mean 'hygiene' in health and hospitality, 'safety' in electrical and electronics and in services it may refer to 'speed' and 'reliability'. Cost of a product may also be referred to as a quality measure. But we will refer to quality in the operational context as conformance to established standards. Quality control refers to activities undertaken to maintain specific quality of products within reasonable limits. It involves the determination of quality standards to ensure that the established standards are followed. The aim is to secure a reasonable product quality at a competitive cost level by achieving a systematic control over the variables involved in manufacturing the product.

Maintenance of a satisfactory level of quality is essential for the success and survival of any company. Quality control offers advantages such as improvement in the brand image, facilitation of standardization and cutting down costs by avoiding defective production. It also leads to increase in sales and makes the company competitive by helping in accurate prediction of costs involved.

Methods of Quality Control and Inspection procedure have been explained in the appendix<sup>11</sup> in detail.

### Quality Control in Small Scale Industries (SSI)

It is argued that a small-scale entrepreneur is not usually conversant with such techniques. Exercising control on quality via personal observation and direct intervention is also an option. Small eating joints managers should supervise the ingredients that go into the preparation of food and sample check the dishes before serving personally. But with expansion, the cult of quality must spread to the grass root level within the organization and the entrepreneur should subscribe to quality systems prescribed by International Organization for Standards (ISO) such as ISO-9000. In cases of exporters, this subscription is an absolute necessity. Fostering good management practices is important to attain quality. The entrepreneur may adhere to measures such as quality circles, continuous improvement, benchmarking etc. The mindset that quality is an expensive proposition must be discarded. Quality improvement practices will eventually begin to pay for themselves. In India, the BIS prescribes quality standards for a large number of products and persuades small scale industries to subscribe to these. Discussions and video film shows are also organized by the BIS to promote the concept of standardization and quality systems among SSI, where the participants receive exposure to concepts of standardization, quality system and product certification. The following four parameters are a basis for quality control in small scale industries:

- (a) Indian standards specifications
- (b) Quality marketing schemes

---

<sup>11</sup> Refer to appendix

- (c) Company standards for ancillary units
- (d) Standards specified by government purchasing agencies

The BIS has published various methods of statistical quality control during production and a manual on basic principles of lot sampling along with sampling inspection tables. Several State Governments also operate quality marketing schemes and standards for this industry. The Quality Marketing Centers of the Government stamp the "O" mark on products manufactured in accordance to the standard set which acts as an assurance for the customers.

For a product to be sold in highly competitive international markets, it must not only be cheaper but a certain quality assurance must also be given. The Government of India feels that the standardization of these products may convince the foreign customers better than any sales campaign. It has thus made the inspection of several products manufactured by small-scale industries compulsory for obtaining permission to export. Regional Testing Centres and Field Testing Stations set up under Small Industries Development Organization (SIDO) aim to improve the quality of the products and to provide testing facilities for the small scale sector. Testing facilities for SSI are obtained either from established testing houses, various regional laboratories, including engineering colleges. The Government Test House at Alipore in Calcutta, the Indian Standards Institution's Laboratory at New Delhi and the national laboratories under Central Scientific and Industrial Research Organizations have played a significant role in offering testing facilities to small-scale units. Having said all this, a lot more still needs to be done on the ground for ensuring awareness and access to these testing units.

The associated cost of quality control should account for a relatively small portion of total cost and it depends on various factors such as type of product, its use and hazards involved in its use and the degree of quality awareness prevailing in the enterprise.

## Certification Marks in India

India has a system of product certifications governed by laws made by the Parliament. These certifications hold a mandatory legal status for essential products to an advisory one for others. All certifications related to industrial products are governed by the national standards body- BIS while standards for other areas (like agricultural products) are developed by other agencies.

The Indian Government currently issues several Certification marks that have been discussed in the appendix<sup>12</sup> in detail. Amongst these, the ISI mark and BIS hallmark issued by the BIS are the most significant. Hence, most of this paper revolves around studying laws and Acts related to BIS, its functioning and consumer awareness related to its activities. A case study of the national standards body, BIS, has been done.

**ISI mark** - Certifies that an industrial product conforms to standards laid by the BIS.

It is in effect since 1955 and holds mandatory status for certain items (nearly 80) while advisory for others.

---

<sup>12</sup> Refer to Appendix



**BIS hallmark**- This mark certifies the purity of gold jewellery (since 1999) and silver jewellery (since 2005). It has been made mandatory for Gold since January 2012.

## BUREAU OF INDIAN STANDARDS (BIS)

This section explains the various activities and operations undertaken by the BIS as a part of its responsibility under the BIS Act. It explains what different schemes and sub-institutions set up by the BIS were officially intended to do. A ground analysis of all these activities has been done in the sections- Ground Reality, House of Cards and The Survey.

### General Overview

In the pre-1947 era, standardization activities were largely sporadic and remained limited to a few government purchasing organizations. The Indian government, recognizing the role for standardization in promoting industry to competitive efficiency and quality production, set up the Indian Standards Institution (ISI) "in 1947 under the Resolution of the then Department of Industries and Supplies No. 1 Std.(4)/45, dated 3 September 1946"<sup>13</sup> and was registered under the Societies Registration Act, 1860. The ISI laid down various standards in line with the aim to bring about economic development through coordinated utilization of resources.

Due to the fast changing socio-economic scenario, the government recognized the need for strengthening this National Standards Body and according it a statutory status on 23<sup>rd</sup> December 1986<sup>14</sup> by the Bureau of Indian Standards (BIS) Act 1986<sup>15</sup>. The purpose was to enhance a climate of quality culture and consciousness and greater participation of consumers in formulation and implementation of National Standards.

"The Bureau of Indian Standards (BIS) is a national standards body engaged in the preparation and implementation of standards, operation of certification schemes both for products and systems, organization and management of testing laboratories, creating consumer awareness and maintaining close liaison with international standards bodies"<sup>16</sup>.

The BIS works under the aegis of Ministry of Consumer Affairs, Food & Public Distribution and the Minister in charge of the Ministry or Department is the President of the BIS.(Currently- Prof K V Thomas). The BIS, as a corporate body, has 25 members drawn from Central or State Governments, industry, scientific and research institutions, and consumer organizations. The headquarters of BIS are at Manak Bhavan, 9, Bahadur Shah Zafar Marg, New Delhi with regional offices in Kolkata, Chennai, Mumbai, Chandigarh, Delhi and 20 branch offices spread all over India.

<sup>13</sup> "Bureau of Indian Standards," accessed July 26, 2012, [http://en.wikipedia.org/wiki/Bureau\\_of\\_Indian\\_Standards](http://en.wikipedia.org/wiki/Bureau_of_Indian_Standards)

<sup>14</sup> Ibid.

<sup>15</sup> "Bureau of Indian Standards(BIS) Act," accessed July 26, 2012, <http://www.bis.org.in/bs/bisact.htm>

<sup>16</sup> "Bureau of Indian Standards," accessed July 26, 2012  
[http://india.gov.in/sectors/consumer\\_affairs/index.php?id=13](http://india.gov.in/sectors/consumer_affairs/index.php?id=13))

“Bureau of Indian Standards (BIS) came into existence, with a broadened scope and more powers taking over the staff, assets, liabilities and functions of erstwhile Indian Standards Institution (ISI) with following objectives.

- Harmonious development of activities of standardization, marking and quality certification
- To provide new thrust to standardization and quality control
- To evolve a national strategy for according recognition to standards and integrating them with growth and development of Industrial production and exports.

BIS is involved in multifarious activities like Standards Formulation, Certification, Product/Schemes. Laboratory Services, International Activities, Consumer - related Activities, Promotional Activities, Training Services, Information services, Sale of Standards & Publications.

To gain a detailed insight into these activities, please refer to the appendix<sup>17</sup>.

## PRODUCT CERTIFICATION SCHEME

**Product Certification** acts as a Third Party Guarantee of quality and safety to the customer and the ISI mark is an indicator of conformity to product standards and specifications as laid down by the BIS. The BIS carries out surprise inspections and testing of samples that are drawn both from the market and factory to keep the licensee's performance under check. A detailed insight into the scheme is available in the appendix<sup>18</sup>.

### Resources:

The Bureau is self-sufficient financially. Certification schemes account for over 90 percent of the total revenue. The BIS employs a staff comprising of engineers and scientists who are trained into evaluation and assessment techniques to professional proficiency to look after all its operations. Only qualified personnel carry out inspections. BIS has set up eight laboratories all over India for testing samples collected during inspections. Independent laboratories that have demonstrated capability and a quality system in accordance with ISO/IEC Guide 17025:1999<sup>19</sup> have been additionally accredited for testing of samples.

## PROCEDURE FOR GRANT OF BIS LICENCE FOR DOMESTIC MANUFACTURERS

**i) Normal Procedure** –The manufacturer is asked to submit the application with documents and requisite fee to the nearest BIS branch office. A preliminary factory evaluation is then carried out by a BIS officer to check the capacity of the applicant to produce goods at par with the Indian Standard. The availability of adequate testing facility and competent technical staff is

<sup>17</sup> Refer to Appendix

<sup>18</sup> Refer to Appendix

<sup>19</sup> “Bureau of Indian Standards,” accessed July 26, 2012  
[http://india.gov.in/sectors/consumer\\_affairs/index.php?id=13](http://india.gov.in/sectors/consumer_affairs/index.php?id=13))

ascertained. Samples are then drawn and tested both in the factory and independently as well. If the reports are positive and the manufacturer agrees to implement the Scheme of Testing & Inspection and pays the required marking fee, a license is granted. For details, visit <http://www.bis.org.in/cert/ici.htm>

**ii) Simplified Procedure** – The manufacturer is asked to submit an application along with a test report after getting a sample tested at any of the accredited laboratories. If the report and documents attached are satisfactory, a BIS officer goes for a verification visit and a satisfactory report by him ensures grant of licence. The applicant is also given an option to get the documents certified by a Chartered Engineer. In that case, the licence is granted after scrutiny of that report. The licence is usually granted within 30 days of application.

Note that the Simplified procedure is not applicable for items under mandatory certification like gas cylinders, cement, valves, etc. If a licence granted as per simplified procedure is cancelled due to verification sample failure, the new application is considered as per normal procedure only. It is not applicable on an all India first licence for any service/product.

## GROUND REALITY

Even this “simplified” procedure of obtaining a licence under the Product Certification Scheme is not a convenient deal for any manufacturer in terms of the amount of resources and time spent and the complete licensing fee that also includes marking fee per unit and government taxes applicable. For more details, visit <http://www.bis.org.in/cert/SimplifiedProcedure.htm>

While the product certification scheme procedure looks really effective on paper, there is a stark between the paper and reality on ground. The applicants have to go bear a high cost of obtaining and renewing the license. They often suffer at the hands of red tapism prevailing in the administration at BIS while local competitors usually find their way out by illegal means or covert methods. Add to that low consumer awareness levels amongst the Indian public and their lack of trust in the government product certification schemes. All this is enough to discourage a company to apply for certification unless there is a direct or indirect compulsion for them to do so. While direct compulsion may mean mandatory certification as required by law, indirect compulsions refer to tenders floated by government bodies, PSU's and other firms which ask the applicant to provide certified, standardized products and services only.

Most established companies set high benchmark of quality on their own to ensure growth and expansion in their existing market share. In such a case, it is hard to understand the utility of carrying out this double testing procedure at two different locations, the latter one at BIS labs being redundant. While the criminal law of the land operates on the basis of ‘innocent until proven otherwise’, this law of double-checking at BIS seems to be operating as ‘guilty until proven otherwise’. People surveyed by me have overwhelmingly shown their concern about two factors- the brand of the product they buy and their trust associated with the product manufacturer act as basis for buying a product. Hence, the companies are always under constant pressure to ensure that the product quality and consumer safety are prioritized. This also puts a big question mark on the unnecessary expenditure in licensing since all it does is merely wastage of resources that the common man has to pay for in forms of increased product

prices. If the common man can be trusted to buy uncertified essential products such as food that he consumes daily and electronic products that he/she buys on a regular basis, there is no justified reason that the intellect of the same consumer can't be entrusted in making an intelligent choice in other areas too.

Yes, the government must strive to provide information and carry out mass awareness campaigns to help people make an informed choice. The government may fund and carry out more independent comparative testing of products on the lines of organizations like Consumer VOICE and influence people's choice in their own interest. Comparative testing refers to a procedure where a particular category of products are taken and samples of all brands selling that product in the market are collected. These products are then tested on the lines of standards prescribed and on the basis of these test reports, results mentioning and analyzing the performance of various brands are published.

The legal obstacles involved in the licensing procedure only end up discouraging the industry, reduces the incentive to practice conformity to Indian Standards and yet, the basic aim of safety of the consumer is not satisfactorily achieved. The mafias and other petty offenders often manage to evade the clutches of BIS officials and hence, all this money spent on licensing that acts as a burden on the consumer seems a waste. Also, there is no output analysis done by the government on any quality control order issued by any ministry and hence, there is no hard evidence to show if the safety levels improve after the issuing of a particular Quality control order. Reports of helmets breaking are common, over 85%<sup>20</sup> of them are claimed to be of sub-standard quality in spite of being under mandatory ISI certification, cylinders still continue to burst, water at large is still not safe for consumption. It may sound totally impractical to check the huge boom of refrigerated water sellers (1 Re per glass) on every roadside in the country and ensure safety levels. The laws are such that when investigations are carried out, most of the investigations blame the victim itself and say the accident was caused due to consumer negligence while BIS, the manufacturer or the concerned ministry is not at fault. But we must wait to ponder, "What was the real aim of bringing this legislation in the first place?" It was this very safety and common cases of negligence of the consumer that acted as the basis of the argument in favour of mandatory certification by law. But this guarantee of safety remains elusive. Hence these legislations which have been laid so carefully do not mean anything if the accidents continue while the only result is that the blame has been transferred to the consumer now. That is why huge calls for privatization are made. A glaring example of this is private bodies in India that provide ISO certification which is voluntary in nature. For the marginal consumer that is aware, a certified management system might serve as a selling point and thus, each company based on its target audience and margin of profit may decide on its own whether to obtain license or not. The decision to provide completely voluntary registration schemes or to head towards privatization is hugely dependent on significant factors such as removal of red-tapism in the administration and harsher laws and crackdown on violators/offenders who prevent fair competition. While demands for privatization are made, expert advices of consumer org heads and retired and present BIS officials can't be rejected. They believe that markets in a country like India, where law and order implementation is not strict, are highly unorganized. Further, they fear that a check free market might lead to a chaos and can cause massive accident and injuries to consumers and endanger the health and safety of buyers who are less educated and less informed. Their argument sounds valid. Thus, proposals for a compromise between the two positions may sound plausible where a gradual shift to a freer and relaxed safety-check and licensing system may be pursued while efforts to increase information flow and severe crackdown on culprits is simultaneously carried out. In the next section,

<sup>20</sup> "Quality Helmets," accessed July 26, 2012, [http://articles.timesofindia.indiatimes.com/2012-04-05/india/31293730\\_1\\_quality-helmets-helmet-manufacturers-m-c-misra](http://articles.timesofindia.indiatimes.com/2012-04-05/india/31293730_1_quality-helmets-helmet-manufacturers-m-c-misra)

steps taken by the government to bring reform and various proposals floated by industries and academicians have been discussed.

## SELF DECLARATION OF CONFORMITY AND REGISTRATION PROCEDURE

It must be pointed out that a proposal for amendment in the original Act had been introduced at various levels since 2009. The Bureau of Indian Standards (Amendment) Bill which aims to bring about reforms in this regard has also been cleared by the Union Cabinet in early 2012 and is currently tabled in the parliament. The Bill, “introduced by Minister of State for Consumer Affairs K V Thomas, The amendment seeks to introduce registration of relevant standards as an alternative mechanism to the compulsory certification regime to facilitate growth of sunrise sectors like IT and biotechnology and protect consumers from spurious and substandard imports. It also empowers the BIS to grant, renew, suspend or cancel registration to maintain standards.”<sup>21</sup> Various industries have often demanded permission to declare an article as “conforming to the relevant Indian Standard”. But the existing provisions of the Act require the company to get a licence from BIS which resulted in undesired heavy regulatory touch. This demand compelled prescription through rules, a scheme for conformity assessment, wherein the manufacturer of an article may be permitted for self-declaration of conformity to Indian Standards on articles manufactured by them. The proposed scheme consists of two<sup>22</sup> parts:

- 1) **Compulsory Registration Scheme:** The Government will make it compulsory for certain products (on its discretion based on various parameters) to obtain this and will prescribe it accordingly in the rules.
- 2) **Voluntary Registration Scheme:** This will be similar to the compulsory scheme but is based solely on the manufacturer’s discretion. The aim of this is to incentivize those under the voluntary licensing scheme currently. Also, manufacturers who are in a sector not yet covered by voluntary licensing may come to this scheme.

Since the Bill is still not an Act and the reforms introduced have yet not been implemented, there are no concrete details available regarding the nuances of its execution. Even the BIS officers seemed speculative and divisive on the final shape of the Bill. On one hand, it seeks to provide freedom from the licence-raj system but at the same time, it comes with a diktat that the Government may choose certain products to be under the compulsory registration scheme in the name of protecting public interest. Now, this is a far cry from the desired scheme that would incentivize the producers to register purely due to consumer demand and interest. But it seems that the incentive has been reduced only to remove the licensing system while there will be an increase of regulation by the government over many products in the market that were previously not under mandatory certification. So, on one hand, the reforms are welcome as registrations and self-conformity are always a convenient form that serves the interest of both producers and consumers while on the other, this increase in the regulatory ambit of the government is a deterrent. It is also not clear whether the BIS will act as a third party guarantor in this case as well or if the safety liability will be purely on the manufacturer who declares self-conformity.

<sup>21</sup> “Bill in Lok Sabha to expand ambit of hallmarking of products,” accessed July 26, 2012, [http://articles.economictimes.indiatimes.com/2012-05-03/news/31559115\\_1\\_products-like-gold-jewellery-prevention-of-deceptive-practice-registration-of-relevant-standards](http://articles.economictimes.indiatimes.com/2012-05-03/news/31559115_1_products-like-gold-jewellery-prevention-of-deceptive-practice-registration-of-relevant-standards)

<sup>22</sup> Refer to Section IV A of the new Rules, accessed June 18, 2012, <http://www.bis.org.in/bs/bisrules.htm>

In the latter case, the laws will then have to be strengthened at par with similarly applicable international laws which account for high penalty in case there is proof of violation of the law by the manufacturer.

## GOLD HALLMARKING

Gold Hallmarking is one area where there has been a huge focus by the government to bring about sweeping reforms. In a country like India which is the largest in gold consumption in the world, it was very necessary to rapidly eliminate malpractices. Though not completely successful, but due to the huge emphasis put by the government, this campaign can be termed a relative success (especially in comparison to other products under mandatory certification like helmet, water etc.). There have been mass awareness campaigns promoting hallmarking of gold jewellery, a lot of jewelers have been persuaded actively to subscribe to this and the consumers have responded well by expressing concern about every piece of jewelry they buy. As mentioned earlier, many new hallmarking and assaying centres have come up and the number of gold licenses in the country over the last decade has increased manifold. The Government has also regularly made grants to the BIS from its 5 year plans to promote Gold Hallmarking. Riding on the relative success, the Government has moved on to bringing Gold under the ambit of mandatory certification regime in the Bureau of Indian Standards (Amendment) Bill, 2012 approved by the Union cabinet and is currently tabled in the parliament. Though soon to be awarded a mandatory status, it is far from being implemented effectively all over the country in the near future.

A lot of infrastructure and huge regulation opposing resistance will have to be placed to ensure this. Even though the incidents of malpractice in the trade have significantly reduced, it still has to be ascertained if the credit has to be given to regulatory touches or to the combination of a good awareness campaign followed by intelligent consumer demand and encouragement provided to the jewelers by giving increasing accessibility to infrastructure. Many feel that the latter is the major factor that has brought this change. In surveys conducted by us, we found that 72% of the urban consumer today is aware and insists on buying hallmarked jewellery only. In the rural population, 46% were found to be insistent on procuring hallmarked jewellery only. An average license costs around Rs20000/- per year and per unit price of hallmarking is on an average Rs17 per piece (Rs100 for a set of 6 pieces or less). This cost, the jewellers say cause a negligible increase in the cost of jewellery when viewed in the complete scheme of things, and is an affordable price to pay for in return for the assurance that's provided. The jewelers though do not rule out malpractices still rampant in at least 30-40% of the market where both consumers and jewelers enter into personal agreements to buy unbilled jewellery that is not hallmarked. An interesting case pointed out by them was that even unlicensed jewelers prefer getting their jewellery hallmarked in order to fulfill the demands of the increasingly aware public. But what is feared is that this heavy regulation proposed by the government to make this sector mandatory may backfire since it may give encouragement to forced black marketing. This black market may then spread even more than the existing share as well if this powerful lobby starts to use illegal and covert ways of evading the clutches of the government. Instead, the government could have continued with its existing successful campaigns and effective persuasion policy. People privy to this industry and its legal aspect say that certain legal obstructions had ensured that this step is not taken for the past few years.

## LEGAL VALIDITY

“Section 14 of the BIS Act provides the Consumer Affairs Ministry the power to make those industrial products and processes for compulsory hallmarking that are listed under the Industries Development and Regulation Act (IDRA), 1951.”<sup>23</sup> It was not possible earlier for the Central Government to make gold hallmarking mandatory since it did not fall under the IDRA list of items. Goldsmiths, who process gold into jewellery, are also not on that list. The Cabinet thus sought the Law Ministry’s advice and cleared the Bill after considering their views which suggested delinking the Act from the provisions of the Industries Development and Regulation Act (IDRA), 1951.

## BIS LABORATORY SERVICES

The Product certification scheme launched in 1956<sup>24</sup> required reliable testing of products for evaluating their conformity to Indian Standards and regular surveillance. Services of various independent laboratories were initially availed. With rapid expansion of the certification scheme, the BIS decided to establish its own laboratories to cater to the requirements.

Under the Certification Marks Scheme, In-house testing of samples began in 1963<sup>25</sup> at the BIS Headquarters in New Delhi. As expansion continued, it was decided to establish laboratories at The 4 regional offices to ensure availability of testing facilities close to the BIS licensees. Central and State Governments provided significant financial assistance in this task. The laboratory at the Headquarters was shifted to its present premises near Delhi at Sahibabad (U.P.). These 5 labs were equipped with adequate test facilities under central assistance and became fully operational in 1982<sup>26</sup>.

Currently, BIS Laboratories do not have test facilities for about 300 products listed under the Certification Marks Scheme. BIS labs provide facilities mainly in electrical, mechanical and chemical areas. BIS currently has a chain of 8 laboratories all over India and the distribution of workload of in-house testing is explained in the appendix<sup>27</sup>.

### Calibration Facilities

Testing of products involves various measuring instruments and equipment. Hence, calibration of this equipment is carried out periodically as part of the Lab Quality System. The Central Lab is capable of providing in-house calibration facilities for certain instruments which helps in rapidly verifying test results by calibration whenever required.

### Training of Manpower

Training is provided in testing techniques to the testing persons of BIS licensees, its own testing personnel, applicants and to foreign nationals under International Training Programmes. The Induction Training Programme covers both theoretical and practical aspects of testing activities and a regular exposure is provided. Senior management level consultations are periodically held with other reputed labs. The BIS Central Lab provides training to various college students in May/June every year as a part of its social responsibility.

<sup>23</sup> “Cabinet okays BIS (Amendment) Bill,” accessed July 26, 2012, <http://www.thehindubusinessline.com/industry-and-economy/economy/article1561653.ece?css=print>

<sup>24</sup> “BIS Laboratory Services,” accessed July 26, 2012, <http://www.bis.org.in/lab/labs.pdf>

<sup>25</sup> Ibid.

<sup>26</sup> Ibid.

<sup>27</sup> Refer to Appendix- Figure 1, Table 1

BIS laboratories organize and participate in proficiency test programmes regularly to ensure precision of test methods. Inter-laboratory as well as intra-laboratory test comparisons are also undertaken. Such tests are in sync with various international norms.

At present five BIS labs are accredited from National Accreditation Board for Testing and Calibration Laboratories (NABL) details of which can be obtained from [www.nabl-india.org](http://www.nabl-india.org).

### BIS Lab Recognition Scheme

BIS takes assistance from recognized external laboratories (nearly 129<sup>28</sup>) due to excessive work load or inadequate facilities for certification purpose.

BIS laboratory recognition scheme is in sync with IS/ISO/IEC 17025:2005<sup>29</sup>. The Labs are assessed for their competence in the required areas and surveillance audits are organized maintain suitability.

BIS has allocated finances from its own funds for future programmes aimed at modernization of the laboratories.

For the list of external laboratories (grouped in 3 categories) that are accredited by BIS for standardization purposes, visit:

[http://www.bis.org.in/lab/NewLab\\_list1.pdf](http://www.bis.org.in/lab/NewLab_list1.pdf)

[http://www.bis.org.in/lab/NewLab\\_list2.pdf](http://www.bis.org.in/lab/NewLab_list2.pdf)

[http://www.bis.org.in/lab/lab\\_list3.pdf](http://www.bis.org.in/lab/lab_list3.pdf)

## HOUSE OF CARDS

This section has been named so since the mechanism that BIS follows in reality is a house of cards which seems beautiful and strong from outside but in reality, it is delicate enough that one simple strike is enough to collapse the house exposing its weaknesses. This is precisely the case with the National Standards Body. As explained earlier in the paper, that the fundamentals of the BIS are very strong and the performance on paper is very impressive. But a small, alert conversation with officials, consumers, manufacturers and consumer organizations is enough to expose the weakness and ineffective reality. This section is precisely aimed at doing that.

### Shortage of Staff

The BIS is facing an acute shortage of staff in various departments due to Central Government policy of minimal recruitment<sup>30</sup> and to cover up for it, a number of services have been outsourced. Outsourcing of

<sup>28</sup> "BIS Laboratory Services," accessed July 26, 2012, <http://www.bis.org.in/lab/labs.pdf>

<sup>29</sup> Ibid.



activities to private operators as a policy is in itself a welcome step. But the results shown so far have not been very effective which raises questions on the procedure of outsourcing being followed. Also, in this strict policy paralysis where fresh recruitments are rare, a number of departments like the Publication Department are in a sorry state of affairs. The publication team behind the monthly magazine Standards India consists of only 4 active persons<sup>31</sup> who are also involved in other activities. The annual subscription of the BIS magazine has been declining over the years and the national figure is currently just over 400! Clearly, this is an area that needs immediate reform.

### Ineffective Outsourcing

Also, the basic functions of BIS defined in the Act<sup>32</sup> such as inspection, enforcement activities (intelligence) and laboratory testing have been outsourced. In terms of the healthcare industry, it is almost akin to the All India Institute of Medical Sciences (AIIMS), the top hospital in the country, outsourcing surgical operations! If statutory functions of the organization defined in the BIS Act are being outsourced, it clearly points to a need of immediate reform- either in the recruitment policy being followed or treading a path to complete privatization of standardization procedures.

### Weak Judicial Process

“The judicial process and law for punishing the offenders is also not something to cheer about. While cases on average take as long as 3-5 years to complete, there is no noticeable case where harsh punishment such as imprisonment has been awarded to the offender. Financial penalties imposed are limited by an upper cap of merely Rs 50000/- (which is often reduced to Rs 10,000-20,000 on humanitarian grounds). This is even less than the travelling expense of the BIS official borne by the BIS!”<sup>33</sup> While the offenders are hardly affected and continue to violate the law, this whole procedure, instead, becomes a painful ride for the BIS officer who has to travel to various parts of the country during hearing of cases at places he was posted at the time of filing the case. Such cases should be handled solely by the Legal Department and not the officer in-charge.

The laws do not fix a single institution responsible for prosecution and often, cases fall under various institutions and in this confusion, the consumer is the final loser. A person selling packaged water without an ISI mark (which is mandatory since 2003) is not to be prosecuted by the BIS, but by the concerned Quality control order issuing ministry/department. While, a case where that packaged water is sold under an ISI mark but the seller does not hold a license to do so, the Quality control order issuing authority does not have the power to prosecute as it is under the purview of the BIS. The 83 items under the mandatory list are under 51 different departments who have issued the various Quality control orders. It is thus, obvious that the BIS cannot possibly carry out effective and frequent communication with 51 different departments for various items and this becomes the reason for inaction. Hence, a single prosecuting body, which seems to be the BIS, should be given complete prosecution powers to act on every item no matter which the notified ministry under the Quality Control Order is.

<sup>30</sup> As told by Director, Publication Department, BIS in June, 2012. It is told that the Central Government has dictated in its policy to minimize recruitment and as a result, many activities are outsourced to external agencies.

<sup>31</sup> As told by an official in Publication Department, BIS in June, 2012

<sup>32</sup> The Act refers to Bureau of Indian Standards Act, 1986 and can be found at <http://www.bis.org.in/bs/bisact.htm>

<sup>33</sup> As told by a senior official involved in policy making for BIS

“There are cases where manufacturers are able to pursue their self-interests by forming a nexus. There are clear examples where the laws are weak to protect the manufacturer in cases of accidents. While switches are under mandatory list, 5 pin sockets that are adjoining on the same switch board have been exempted. Electric appliances are not made to undergo abnormal conditions test and in case of an injury, due to voltage fluctuation or excessive heating, the manufacturer is not held liable. In case of a LPG cylinder, while valves and the cylinder itself is under mandatory list, the gas pipe is exempted and often becomes the cause of cylinders bursting. In such cases, the consumer is held responsible for negligence.”<sup>34</sup> Hence, the basic purpose/intent of the BIS for enforcing the mandatory law is not served. Another cause of concern is that there is no outcome analysis done on the results/consequences of the policies implemented by the BIS. The case of water being packaged and sold without an ISI mark is a common sight. Consider the growing industry where 20l water jars are provided to urban homes these days. Most of them do not carry ISI marks while it is necessary under the mandatory list of 83 items to do so. Bulbs of power below 100 W continue to be produced in small units often setup in domestic settings even though it is not legal to do so without obtaining a licence. “Helmets, which are under the mandatory list, have often found to be below par according to standards enforced with reference to Crushing Strength. It is even alleged that the BIS laboratories, till late, did not have adequate facilities to completely test helmets as per standards enforced. But in spite of this, licenses have still been issued in some cases and they continue to be sold under the ISI mark.”<sup>35</sup> Insiders including Technical Heads at Consumer Organizations and retired BIS officials well versed with the trade claim that a healthy share of the helmet market is occupied by manufacturers who misuse the ISI mark and sell these helmets cheaply by evading the cost of license and using sub-standard material of low crushing strength. In such a case, Helmets often become a false sense of security. Helmets often of similar shape are found in the market at surprisingly varying prices where the difference is upto Rs. 200-300 on a single piece of visibly the same design and other physical features. This is often due to the licensing cost evaded by the manufacturer and by use of poor quality material. In all this process, the loser is the general consumer who not only due to the fear of traffic laws and penalty, ensures he wears a helmet and travels with a false sense of security trusting the ISI mark or on the assumption that the authorities have implemented the Quality Control Order strictly. If all this was not enough to burden the consumer, a shocking case that dates December 2011 had been reported in the Mumbai Mirror. Following orders from Commissioner of Police Arup Patnaik, the traffic department has started fining bikers under section 129 of the Motor Vehicle Act for wearing helmets that don’t meet safety standards. Within a span of three days, they had fined 643 bikers a hefty penalty of Rs 200/- each while offenders in their defence pleaded that they knew of the rule that made wearing helmets while riding two wheelers compulsory, but they were not aware that the helmets needed to be ISI approved. Until the consumer is well informed by means of mass campaigns, it is nearly impossible for him to be updated with new legislations. The offenders could have been let off with a warning citing it as a first time offence. To support the consumers’ claim, we surveyed 50 people each in three different locations:

Did you know that it is mandatory to wear only ISI marked helmets?

<sup>34</sup> As told by retired BIS official Shri S C Gupta

<sup>35</sup> Ibid.

Sector-31 market and adjoining localities in Gurgaon:

14 people answered YES.

36 people answered NO.

Lal Tanki Market in Model Town, Panipat, Haryana:

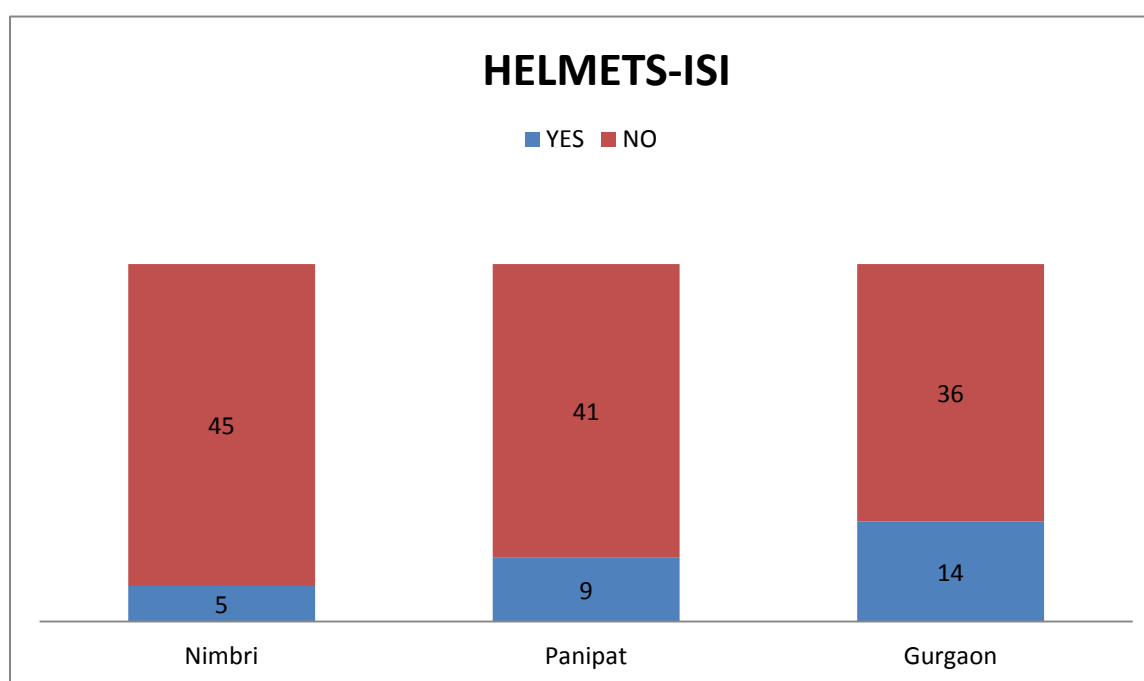
9 people answered YES.

41 people answered NO.

Nimbri Chowk, Village Nimbri, Sanoli Road, Haryana

5 people answered YES.

45 people answered NO.



It is equally necessary to point out that all the 150 respondents surveyed were in possession of a two-wheeler and knew that it is compulsory to wear helmets while driving. The above survey clearly pointed out the failure of authorities to provide information to the masses with equal zeal and full details. Instead of going after manufacturers and retailers who had supplied these helmets in the market, they decided to punish the consumer which is akin to shooting the messenger!

#### Lack of Autonomy

The autonomy of BIS is also under a severe question. In spite of regular demands by officials and recognition by the JPC itself, the top administrative posts continue to be occupied by IAS lobby without a

technical knowhow of the standardization procedure<sup>36</sup>. The President and Vice-President of BIS are the Honorable Union Minister and Minister of State from the Ministry of Food, PDS and Consumer Affairs while the Director General is also an appointee of the Central Government. This lack of autonomy is often blamed for discouraging morale of employees and taking inconvenient decisions due to lack of technical knowhow. Hence the autonomy is only visible on paper.

As on July 26, 2012<sup>37</sup>, the President of the Bureau is Prof K V Thomas, the Minister of State (I/C) for Consumer Affairs, Food and Public Distribution, the office of Vice President is vacant and the Director General is Shri Sharad Gupta.

- For more details of the composition of Bureau, visit <http://www.bis.org.in/org/ombureau.htm>
- For a list of the principal officers (Advisory and Executive Committee) of the Bureau, visit <http://www.bis.org.in/org/bureau.htm>.
- The Organizational chart of the BIS is available at <http://www.bis.org.in/org/ORG%20CHART.pdf>.
- The executive committee composition can be found at <http://www.bis.org.in/org/compEC.htm#>

The committees of BIS mentioned below have a similar structure and is available at <http://www.bis.org.in/org/compAC.htm>

- **Standards Advisory Committee**
- **Laboratory Advisory Committee**
- **Planning and Development Advisory Committee**
- **Consumer Policy Advisory Committee**
- **Financial Committee**
- **Certification Advisory Committee**

### SCAMS

“In this era of scams, the BIS has not been far behind. There have been allegations of a CD ROM scam where a current license/tender awarded to a company for sale of standards was abruptly cancelled without ensuring an alternative system is put in place. The daily revenue was approximately Rs 65,000/- from the royalty/commission received by sale of standards that came to a halt and no effective alternative could be brought in for the next 2 years till when the initial tender was awarded. The claimed loss to the exchequer runs into crores of rupees.”<sup>38</sup> Currently, the BIS has shifted to online sale of standards.

### Rajiv Gandhi National Quality Award

In surveys conducted by us, not even 10 % of the people were aware of the Rajiv Gandhi National Quality Award or even the mandatory FPO mark. In such a scenario, there seems to be no incentive for a company to apply for this award whose judging procedure also involves expenses to be borne by the applicant company. When the very consumer that needs to be attracted is unaware of this award, there

<sup>36</sup> As told by retired BIS official Shri S C Gupta

<sup>37</sup> “Principal Officers of Bureau,” accessed July 26, 2012, <http://www.bis.org.in/org/bureau.htm>

<sup>38</sup> Shri SC Gupta posted “Scams of BIS,” accessed June 18, 2012, <http://scg-24yrs.blogspot.in/2011/08/scams-of-bis.html>

is no justifiable reason for a firm to go an extra mile to ensure that safety and standards are in check. There is no evidence to show that a particular brand has benefitted in terms of revenue and sales after winning this award. In case of FPO, it is mandatory and hence, every company dealing in fruit processed products has to obtain a licence.

### Consumer Protection

In a recent annual report, the BIS claimed that only 21 complaints were registered and 16 of them were redressed. This is a confusing statistic since it could mean two things- either that the BIS is very effective in its method that only 21 cases of unsatisfactory service took place or it could mean that the consumer is due to some reason unable to register his/her complaints. In the latter case, the reasons could be many including resistance in registering complaints or the consumer unable to identify the responsible institution due to the complex laws that divide the onus amongst 51 ministries and the BIS.

## ROLE OF NON-GOVERNMENTAL ORGANIZATIONS

Consumer organizations are NGOs, registered either as Charitable Trusts or under the Societies Registration Act or the Companies Act, dealing with consumer problems. There are more than 800 such organizations in India.

NGOs undertake several activities as part of the consumer movement such as creating awareness about consumer rights amongst the general public through workshops and training programmes. They also provide legal aid by assisting in seeking legal remedy and undertake advocacy of consumers' point of view in protection councils and in various boards. They also make recommendations to government authorities for consideration in policy making in the interest of consumers and use Public Interest Litigation (PIL) to enforce consumer rights in several cases. They perform comparative testing of consumer products and publish periodicals and journals to disseminate important information among readers. These periodicals conform to an ethic code which does not allow them to accept advertisements from business firms.

The role of consumer organizations such as CERC, Consumer VOICE and CSE is an important area of study. While the research carried out by them is of good standard and holds much relevance to the demand of the consumer, their outreach in the public has been very low. There is almost no awareness about them in the common market. While all of them have raised important issues at regular intervals, the response from the authorities has been mixed. In case of packaged drinking water and soft drink pesticide issue raised by CSE, while some concrete steps were taken initially but the end result has not been effective. Organizations like CERC and VOICE that are recognized by the BIS and referred while updating standards and are a part of most of the committees, must also then take up responsibility for the stagnation shown in the updating of standards in recent years. Laws have been unable to catch up with the IT Industry that is making significant developments at a very rapid rate. At large, these organizations seemed like the current media industry. When it came to carrying out research and raising issues that would turn a few eyeballs, they were excellent. But it was when it came to getting hold of big firms who flout norms, they seemed either helpless or in a state of mysterious silence. At this point, I would want you to remember the "pesticide content in soft drinks" issue raised by the CSE in 2003 and 2006 that got the big wigs of the industry gasping for breath. But with time, the drama suddenly died out of media glare and the public conscience. In a survey conducted by us, nearly 80% of the people still

remember that such an issue had come up while 90% of them embarrassingly admit that they continued to drink soft drinks after a short halt without receiving any credible information that allayed their doubts. In a conversation with a CSE employee, I found that the issue had reached a dead end sort of situation. While certain norms have been put in place to ensure that the quality of water used in the soft drinks is regulated, but the BIS still does not have adequate facilities to be able to set parameters for complete standardization of soft drinks. It may be a little relief to the general consumer that India does have one of the stringent laws in the world with respect to soft drinks (most other countries do not have any laws in place). But it is also a cause of worry that the soft drink companies did manage to relax the strict recommendations of the CSE on allowable levels of pesticides(in ppp) by almost 10 times. It is also a cause of concern that the national standards body has failed to inform or guide the public effectively about such a highly consumed product even after so many years of high concern expressed by activists. In the mean-time, CSE as an organization has moved on to cover some very important issues related to environment and other food products and is also a regular representative at various government committees. There is no doubt that CSE is currently one of the most active organization in India and the research carried out them on hugely diverse issues are of great interest to the general consumer. They are perhaps the only well-known organization in India and their fame is well-deserved. Their publications are highly recommended for interested readers and they also organize seminars for spreading awareness and hold workshops in consumer interest. The reader may visit their website <http://cseindia.org/> for further details on their activities. An interesting section on Food Safety and toxins (<http://cseindia.org/taxonomy/term/30/menu>) includes reports on pesticide regulations, pesticides in bottled water, pesticides in cold drinks, a detailed report on pesticide regulations, pesticide residues in blood, Endosulfan, Bhopal tragedy: a toxic legacy, toxic toys, Lead in Paints, Antibiotic in honey, Trans fat in oils, energy drinks, Junk Food and FSSAI. All these are issues that have rocked the country at various points in time but no follow up or clear guidance to the public was ever provided.

Consumer VOICE is another leading consumer organization set up in 1991. As mentioned earlier, while the Comparative Testing carried out by them and their findings are of great interest to the consumer, it is sad that even after 2 decades they do not enjoy any form of mass public outreach. In such a scenario, the organization is left struggling for grant/aid by the government to carry out activities since the revenue earned from the publications sold to the public is negligible. This is in high contrast to some of their German counterparts which are so popular amongst the general public that in a survey carried out, 96% of the German public recognized the organization. Even non-paid services like videos on Youtube that are uploaded in the interest of the consumer do not have more than 200 views on average. Such a poor public outreach is surely a cause of concern. Unlike CSE, they do not even have a well-established team with less than 50 people working that too on a purely contractual basis. They have to depend on external labs to carry out testing activities for their research and hence, they depend on the government to approve their projects and provide grants on the basis that it is in the interest of the consumer. Consumer VOICE is recognized by the Government of India and is a regular representative of the consumer at various BIS committees and brings many important suggestions to the table. They are even responsible for setting up the National Consumer Helpline (1800-11-4000). They are often involved in organizing workshops, seminars and activities like *nukkad naataks* to spread awareness. Their monthly periodical, though of a very low circulation, is a highly recommended one mainly due to the interesting research findings that are published. It is sold at a very affordable price of Rs 500 for a subscription of 1 year. Their website ([www.consumer-voice.org](http://www.consumer-voice.org)) also provides free trials and old editions as samples. Their blogs and videos are also very informative and are regularly updated with new advancements in the industry with respect to new standards and important consumer court judgments. They also advise us in a "BEST BUY" section about various branded products of a particular category in the market and

ask the consumer to make an informed choice on the basis of that. Their recommendations are trustworthy since they follow an ethics code that does not allow them to receive funds for carrying advertisements as that would be a clear case of conflict of interests. In fact, their officials claim that they do not receive much coverage in the media solely because a company that might be exposed in their findings could be a big sponsor for the media channel. The only difficulty thus lies in ensuring that a successful business model is put in place for them so that they can reach out to the public and also speak out loudly against the BIS in cases of gross mismanagement which is not possible now due to their financial dependence on the Ministry. Consumer VOICE sends to all the companies a copy of their report findings and it is interesting how some of their findings have done wonders for businesses of some firms. For example- V-John was a less known firm in the market of shaving creams but after a research carried out by VOICE that listed it as the best shaving cream according to their evaluation, the firm did get a huge push in the market. Similar is the case of ALL OUT that carried out advertisements in the Hindustan Times boasting about them being listed as the best in their category in a research carried out by VOICE.

To give an idea to the reader of the various products that these organizations test and their relevance in our daily lives, a list of the products tested by Consumer VOICE has been listed in the appendix<sup>39</sup>.

Since it might be a very extensive procedure to discuss in detail research carried out by these firms, some of the results of research carried out by CERC have been shared in the appendix<sup>40</sup>. It also includes details of the follow-up procedure a consumer organization follows after conducting a research and how an effective change in the Indian Standards is brought about on the recommendations given by the consumer organization. It is important to mention that CERC is based in Ahmedabad and works in close association with the Gujarat government and brings out issues in regional languages as well. It is also the nodal agency responsible for running the Gujarat State consumer helpline. It often sits in various committees appointed by the BIS as a consumer organization representing the rights of the general consumer.

## Jurisdiction of Consumer Courts

### Consumer Protection Act, 1986

The judicial system set up under this Act consists of consumer courts at the district, state and national level known as District Forum, State Consumer Disputes Redressal Commission (State commission) and National Consumer Disputes Redressal Commission (National Commission). Any consumer or association of consumers can file a complaint, free of charge, at any of the three levels depending on the value of the goods and compensation claimed.

The district forum deals with all complaints where the value of the goods and the compensation claimed is below Rs 20 lakhs. The state commissions deal with appeals the against orders of the district forum and directly deals with cases from Rs 20 lakh to Rs 1 Crore. The National commission takes up all claims and grievances exceeding the value of Rs. 1 crore and deals with appeals against orders passed by state commissions. An aggrieved party can even approach the Supreme Court against the orders of the National Commission.

### Consumer grievances Redressal

<sup>39</sup> Refer to Appendix- Table 2.

<sup>40</sup> Refer to Appendix

The complaint may be filed before the District Forum where the cause of action has arisen or at the residential district of the opposite party, or the State Commission of the state/union territory or before the National Commission in New Delhi.

The complaint may be filed by the complainant or his/her authorized agent in person, or it may be sent by post. Usually, five copies<sup>41</sup> of the complaint are required along with the following information.

- i) Name address of the complainant;
- ii) Name and address of the opposite party;
- iii) Facts related to the complaint- time and place;
- iv) Documents (like cash, receipt, etc.) in support of the allegations.
- v) The nature of relief sought.

The complaint should be signed by the complainant or his/her authorized agent. It has to be addressed to the president of the forum approached. A complaint can be filed within a period of two years from the incident and in cases of further delay, it may be excused by the concerned Forum/Commission but the reason must be on record. Complaints are expected to be decided within 3 months. For complaints which require laboratory analysis, this period is extended to five months.

Depending on the nature of complaint and relief sought by the consumer and facts of the case, the forum may order removal of defect in goods/deficiency in services or replacement of the goods/restoration of the service or refund of the price paid for goods or excess charge paid for service and/or compensation.

## SPREADING AWARENESS

In surveys<sup>42</sup> conducted by me, it was found that there were mixed levels of awareness amongst the general public about standardization procedures. The level of awareness amongst people were found to increase sharply when it came to matters such as Gold, electric switches or Cement. But consumers in daily markets seemed largely unaware. Hence, an attempt to find the major source of public information was made for that was the point where the solution to this information asymmetry lied. It is clear that most of the people gain awareness through mass awareness campaigns carried out by the government using diverse methods/platforms of publicity. In a discussion with a senior official of the public relations department at BIS, I got access to some data about expenditures done on publicity, awareness campaigns and organization of nukkad naataks by the government.

“The total budget for expenditure of the current year was approximately Rs. 10, 00, 00,000. On search for further details, it was found that this budget was divided amongst platforms such as print media, electronic mediums, cinema halls, metro, railway stations, bus shelters, back panels on buses and on nukkad naataks or similar workshops on consumer awareness. Most of the advertisements emphasized on publicity of two things- BIS hallmark and ISI mark. In 2011-12, a total of Rs. 64 lakh was spent on publicizing BIS hallmarks in newspapers while nearly Rs 55 lakhs was spent on promoting ISI mark through print media. A total of Rs. 3.3 crore was spent on booking of TV spots for publicity of ISI mark where approximately 48 channels were booked for a span of 10 days. Approximately Rs 5 crore were spent on developing ads for 2 new TV spots. A total of Rs 88 lakhs was spent on booking publicity spots

<sup>41</sup> “Consumer Protection”, accessed July 26, 2012, <http://www.nios.ac.in/Secbuscour/27.pdf>

<sup>42</sup> Refer to “The Survey” section of this paper.



of 20 sec each on All India Radio. Nearly 40 commercial broadcasters and 22 FM channels were approached for the same. A total of Rs. 10 lakhs was spent on booking 30 minute spots in the railway enquiry telephone line for 2 months. Approximately RS 40, 00,000 were spent on publicity efforts in the Delhi Metro. A budget of Rs 25 lakhs was allocated towards the Rajiv Gandhi National Quality Award. A total of Rs. 16 lakhs was allocated equally amongst the 4 regional offices to carry out activities such as nukkad naataks. Approximately Rs 1,40, 00,000 were spent on publicity through electronic display boards, bus shelters, railway hoardings and back panels of buses. While ads were dubbed in regional languages too, Rs 10 lakhs each were spent for publicizing via cinema halls and railway enquiry no. 139.”<sup>43</sup>

While a separate government agency is responsible for assisting in the distribution and execution of this process of advertisements, there was no clear detail available on what basis are various newspapers selected to carry advertisements. What was even more surprising is the arbitrary manner in which different amount was allocated to various mediums of publicity and to specific firms within those categories. In the absence of any outcome analysis ever done on the success levels of these methods of publicity, there seems to be no accountability. While there is no doubt of the fact that some of these campaigns have been successful but the big question is whether any effort was made to identify the popular methods and the level of success they achieved relative to the expenditure. To expose the ground reality with reference to awareness amongst the general public, a lot of consumer surveys were conducted and have been shared in the “The Survey” section of this paper.

## THE SURVEY

During the course of the paper, a lot of references have been made to various surveys conducted by me in urban and rural areas to support my argument. These surveys were conducted with an unbiased view. Apart from valuable inputs from retired/present BIS officials and other stakeholders well versed with this industry, my observations are solely based on the survey’s findings.

The surveys were conducted only with people outside various shops, in common markets and outside food joints since I intended to reach out directly to those who buy the products for themselves and their families.

In a survey conducted with 50 people each in Sector-31 market Gurgaon, Lal Tanki Market in Model Town, Panipat, Haryana and Nimbri Chowk, Village Nimbri, Sanoli Road, Haryana:

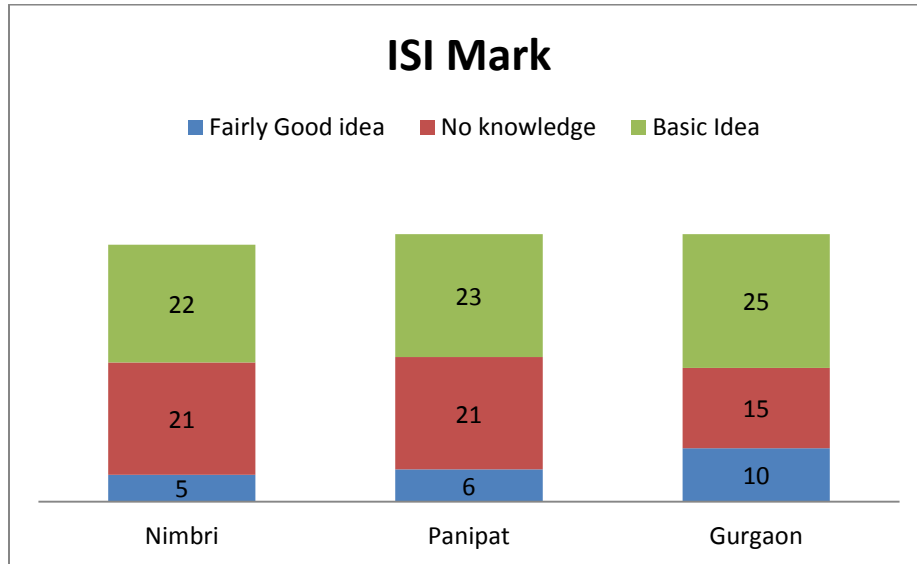
Do you know what does the ‘ISI’ mark indicates?

The responses have been grouped into three categories:

- a) Have a fairly good idea.
- b) Do not know anything at all.
- c) Vague Idea- Something Related to product quality.

---

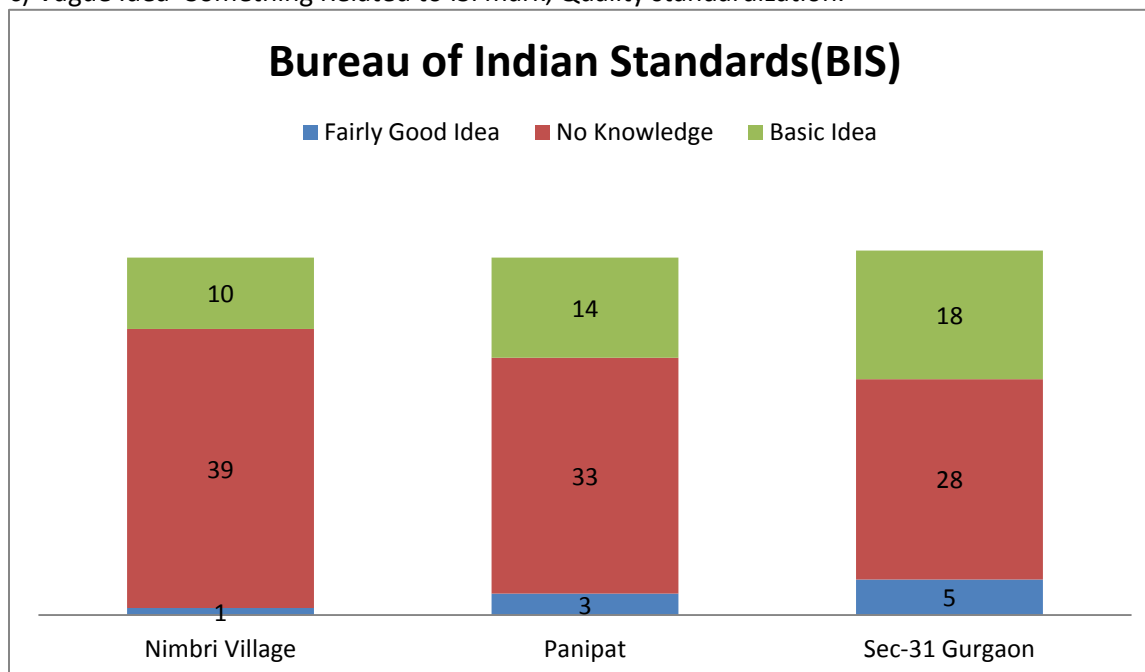
<sup>43</sup> The figures used have been rounded-off.



Do you know what 'Bureau of Indian Standards(BIS)' does?

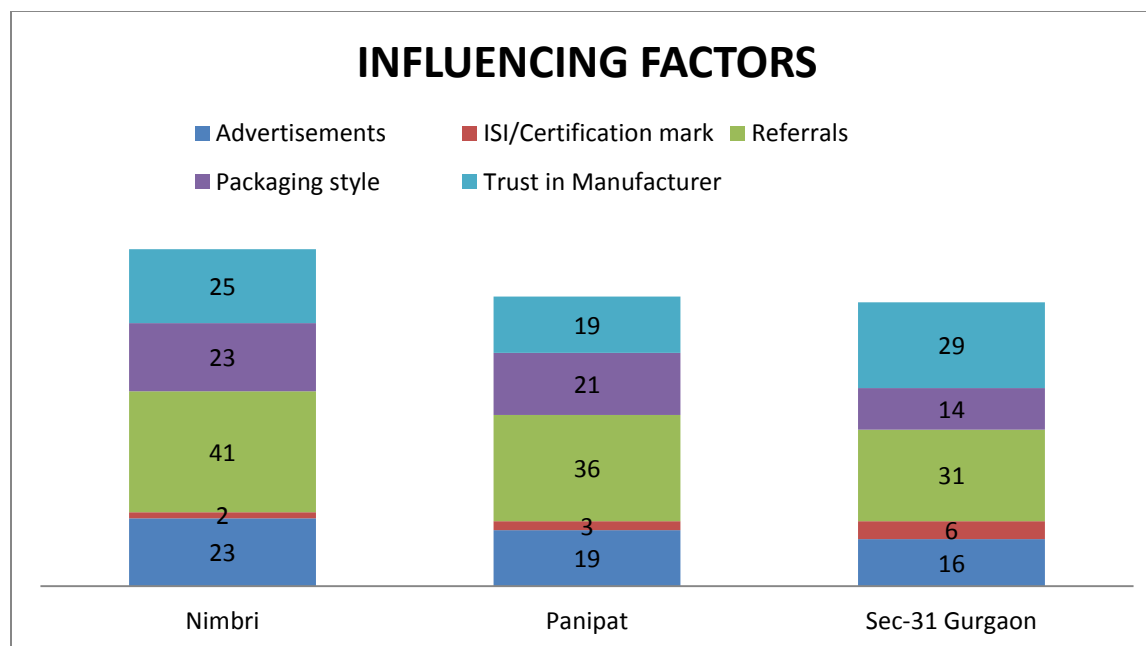
The responses have been grouped into three categories:

- a) Have a fairly good idea.
- b) Do not know anything at all.
- c) Vague Idea- Something Related to ISI mark, Quality standardization.



Which of the following factors form the basis of your trust when you buy a new product<sup>44</sup>?

- The brand on basis of advertisements
- The Certification mark on the product- ISI, Agmark, FPO etc
- Referrals/Reviews from acquaintances
- Packaging style
- Your trust on other products from the same manufacturer



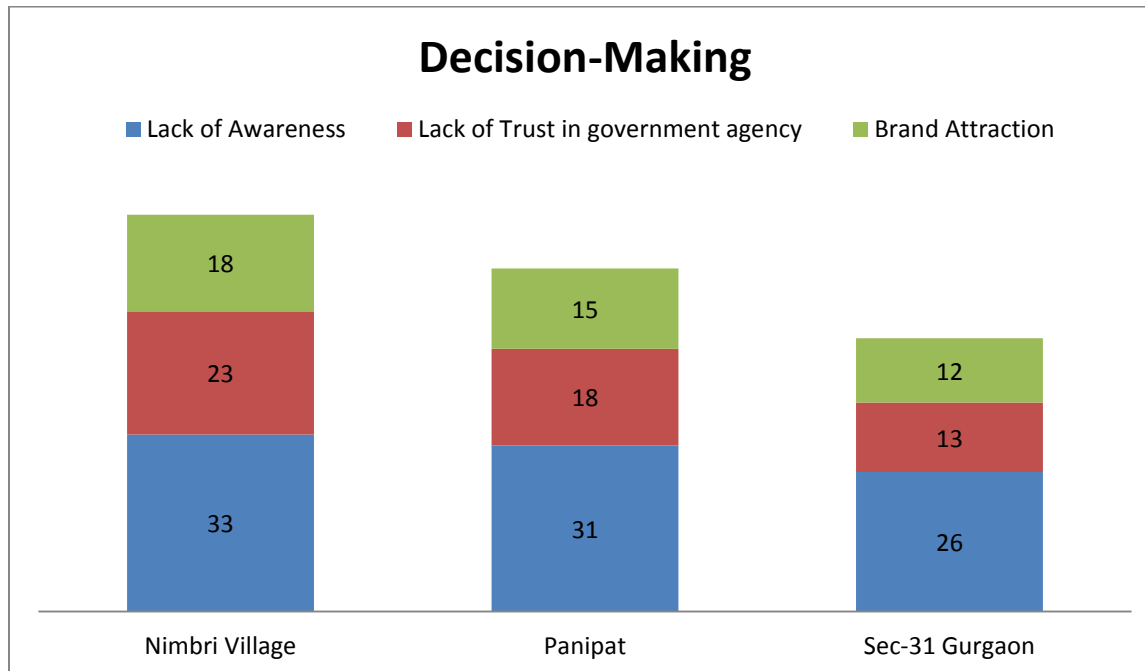
The above survey conducted in a major city Gurgaon, a relative small city Panipat and a village in Haryana over a group of 150 people in total that consisted men, women and children equal in proportion and belonged to diverse educational backgrounds and financial income makes us draw the following inferences from their responses. People across these barriers of sex, age, gender, educational background, social background and financial income tend to believe more in the Brand Value (Packaging and Advertisement), Referral from acquaintances, Quality of a product and trust in the manufacturer more than the Standardization mark issued by the government.

In a subsequent attempt to precisely find out the reason for this, the following question was put up:

What are the major reasons for not checking the Certification/Standardization mark?

- Lack of Detailed Awareness about Certification Marks
- Lack of trust in the certifying government agency and hence, the mark as a sufficient indicator of quality.
- More Attraction towards Branding(Packaging and Advertisements)

<sup>44</sup> The consumers were asked to assuming a Daily use Product worth Rs 200-1000. Multiple options could be chosen for this answer

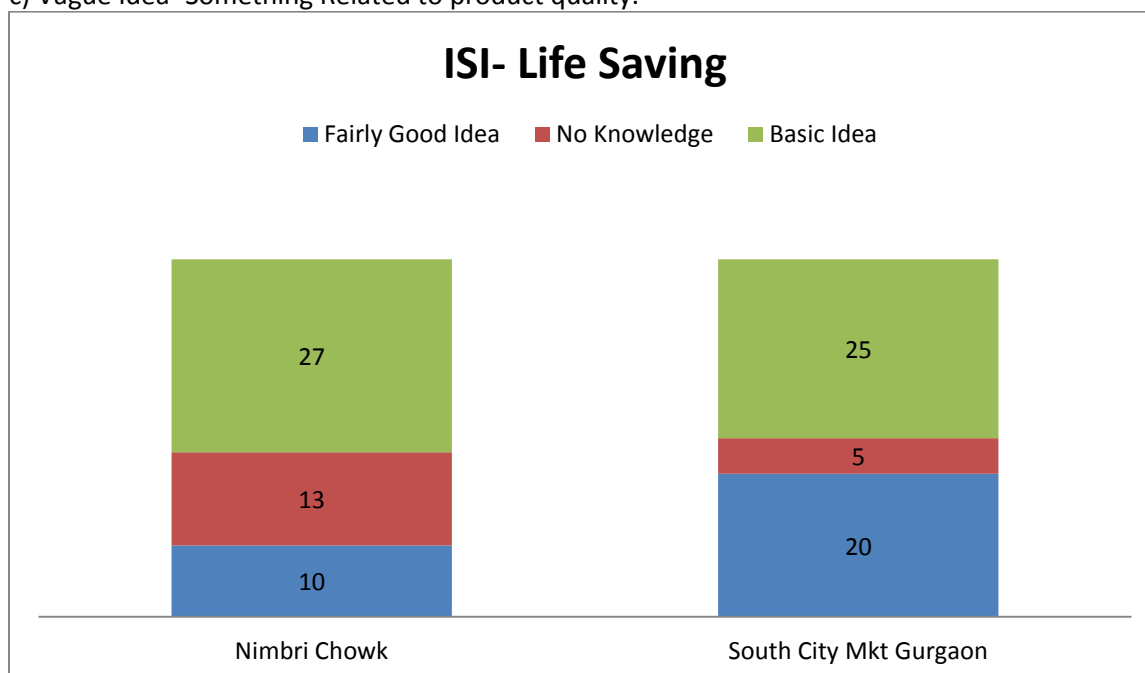


In a survey conducted outside electrical switches retail shops and cement dealer shops with 50 people each in South City Main market and Village Nimbri, we asked:

Do you know what does the 'ISI' mark indicates?

The responses have been grouped into three categories:

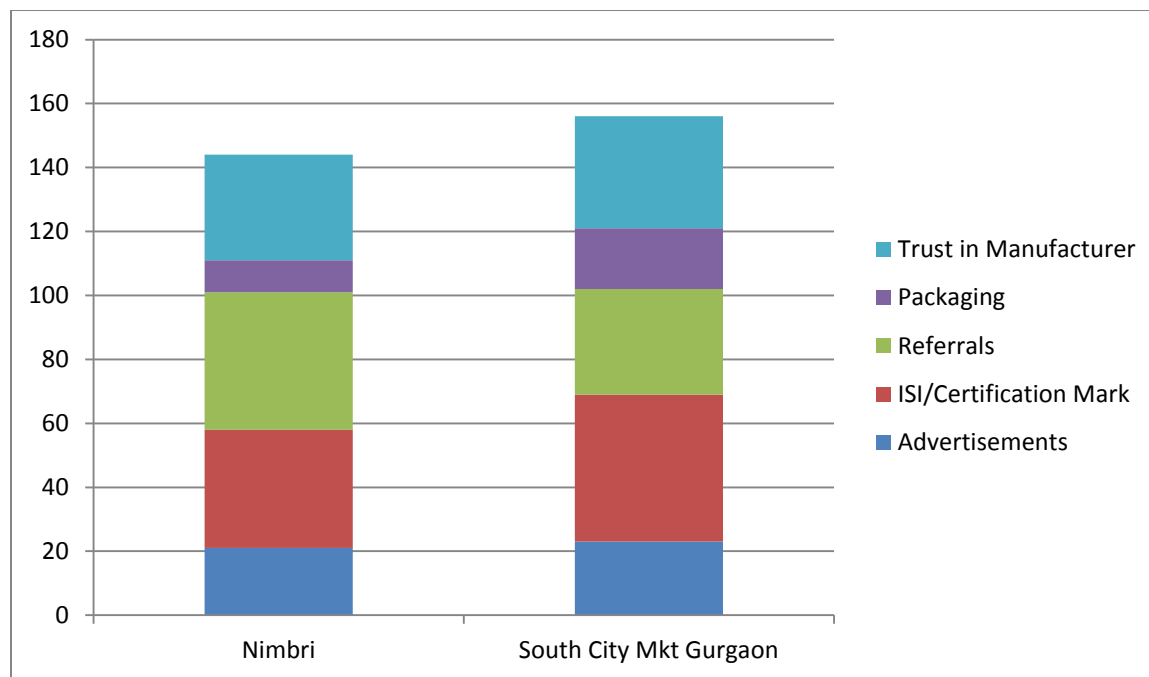
- Have a fairly good idea.
- Do not know anything at all.
- Vague Idea- Something Related to product quality.



In a survey conducted outside electrical switches retail shops and cement dealer shops with 50 people each in South City Main market and Village Nimbri, we asked:

Which of the following factors form the basis of your trust when you buy a new product?

- a) The brand on basis of advertisements
- b) The Certification mark on the product- ISI(in case of cement and switches)
- c) Referrals/Reviews from acquaintances
- d) Packaging style
- e) Your trust on other products from the same manufacturer

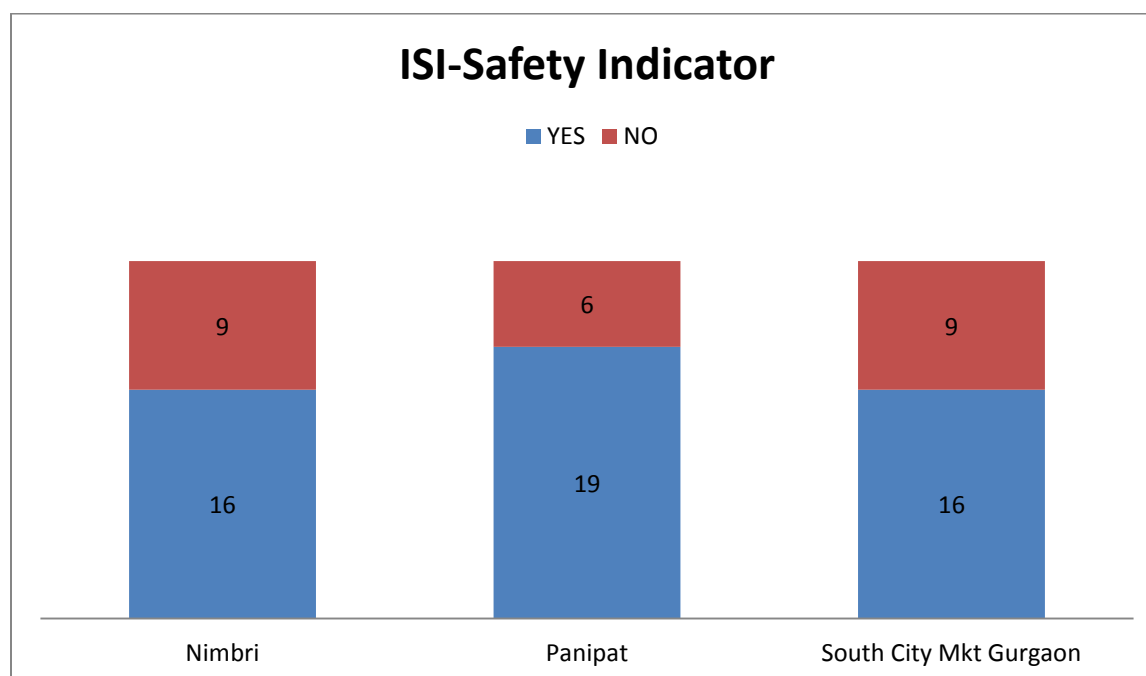


As mentioned earlier in the paper, the average consumer outside shops that sell products that can be potentially life threatening is well aware of the safety precautions and standards in place and makes his choice accordingly. This is in sharp contrast to consumers in daily product markets where the regard for these measures and general awareness levels are very low. This supports our argument that a general consumer is intelligent enough to take care and adequate precautions to ensure his/her safety especially when there is a visible/potential life threat associated.

In a survey conducted with 25 people who responded positively when asked if they knew what an ISI mark is, in three different locations, we asked:

Do you think that ISI marked products are safe to consume?

- a) YES
- b) NO



It may be heartening for the authorities that people believe in the credibility of ISI mark as an indicator of safety though not as a sufficient indicator of good quality (see other survey results), it also points out that the misuse of ISI mark by non-authorized manufacturers is a grave offence and must be met with harsh punishment which is not sufficient by current laws. It also increases the huge level of responsibility the enforcing authorities carry on their shoulders as approximately 75% of the population believes in the safety of the product by merely noticing the ISI logo on the product. Illegal arrangements between suppliers operating in tandem with enforcement authorities are potentially creating an illusion of safety for a responsible, aware consumer which is more serious than not issuing a mark on the product at all.

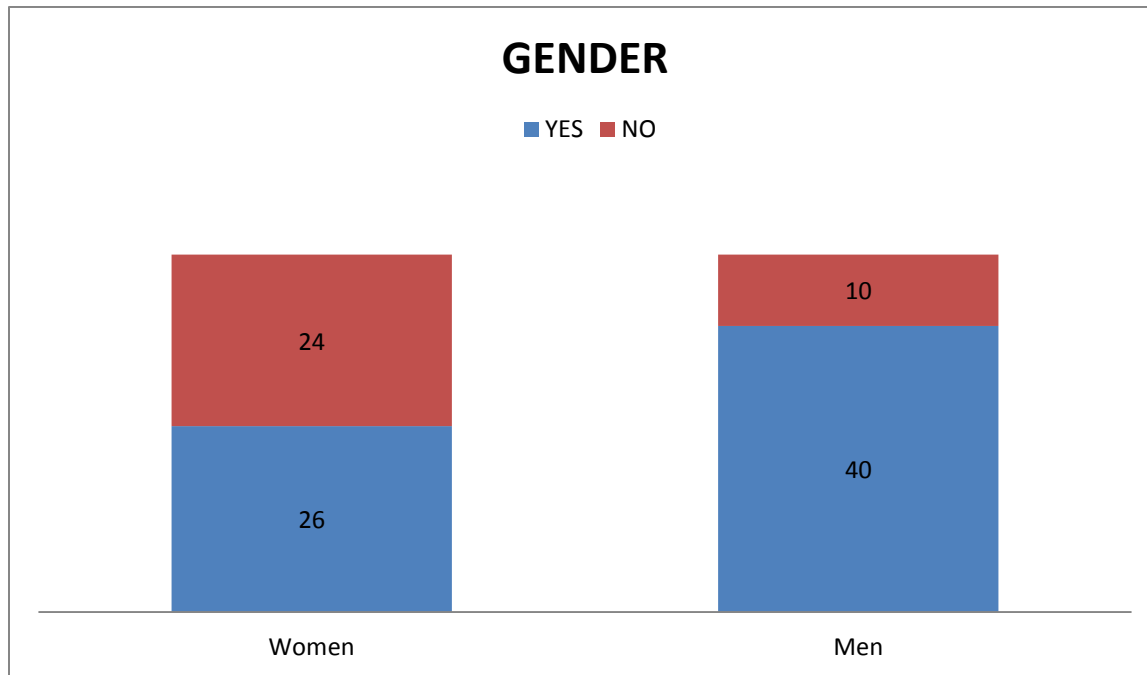
We decided to find out if factors such as sex, age, location, educational background or financial income of a person were an indicator to his awareness level about certification/standardization process in India. In a survey conducted with 150 people over three different locations, we asked:

Do you know what does the 'ISI' mark indicates?

Responses were collected from Sector-31 market and adjoining localities in Gurgaon, Lal Tanki Market in Model Town, Panipat, Haryana and Nimbri Chowk, Village Nimbri, Sanoli Road, Haryana.

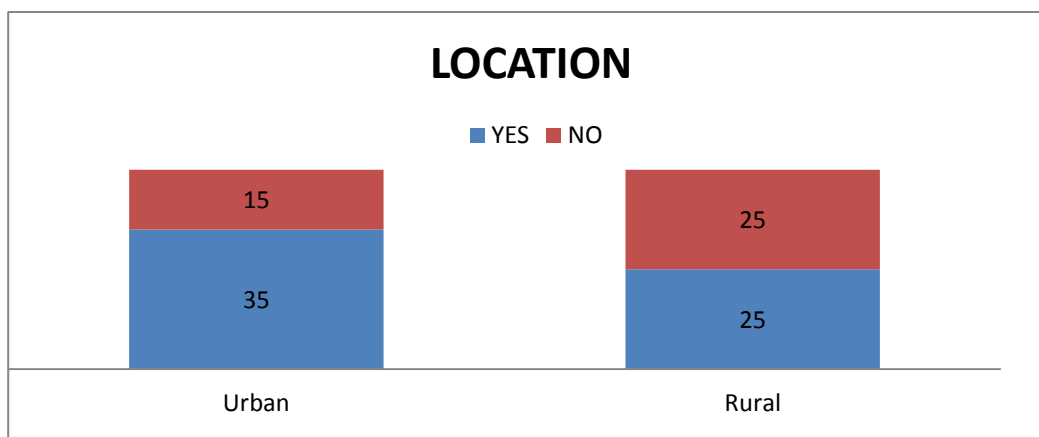
On the basis of GENDER-  
 50 women and 50 men (above 12 years of age):  
 26 women answered YES.  
 24 women answered NO.

40 men answered YES.  
 10 men answered NO.



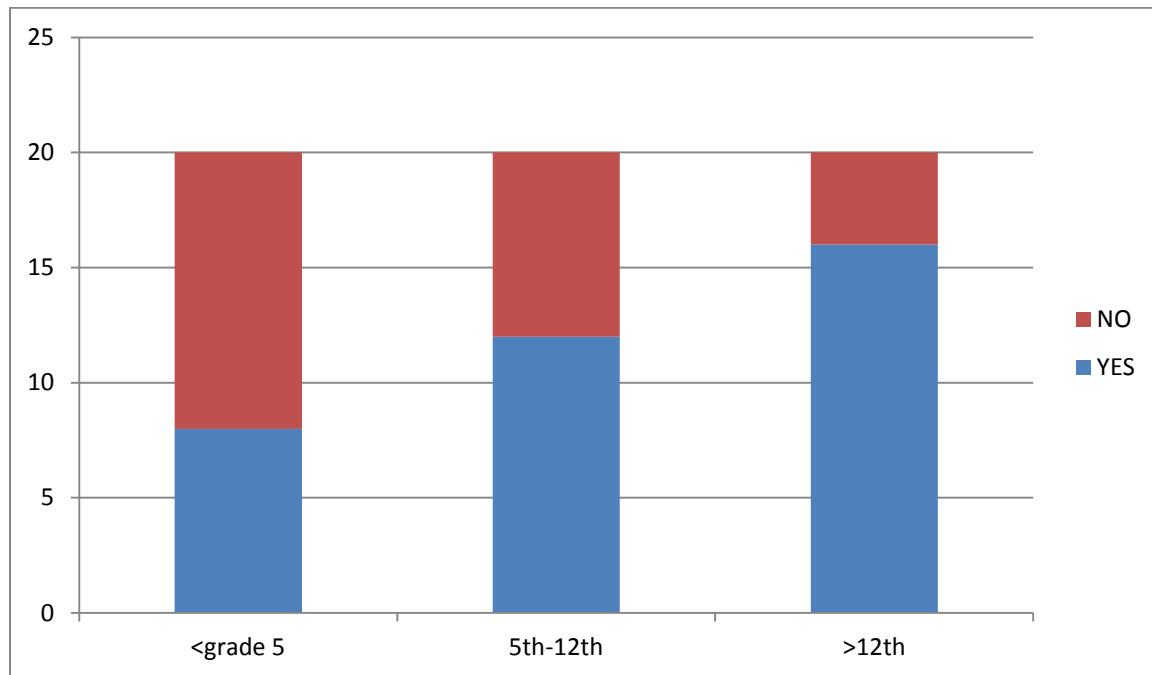
In case of women, an interesting find was the huge contrast in the awareness level in Urban and Rural Areas. While awareness amongst women in Urban areas was as high as 80% and it was found to be as low as 20% in rural areas.

On the basis of Location- 50 people each in Urban and Rural



On the basis of Educational Background

20 people each in 3 groups- <5th pass, 5-12th pass, >12th pass

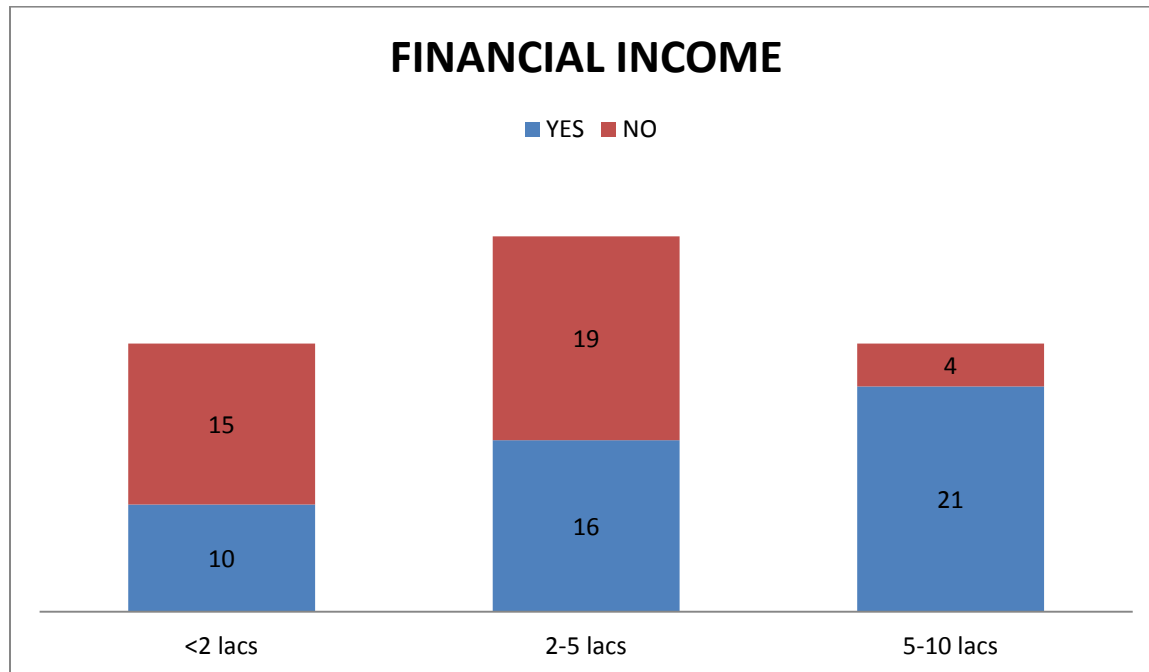




On the basis of financial background

(Family income in case of non-working person)

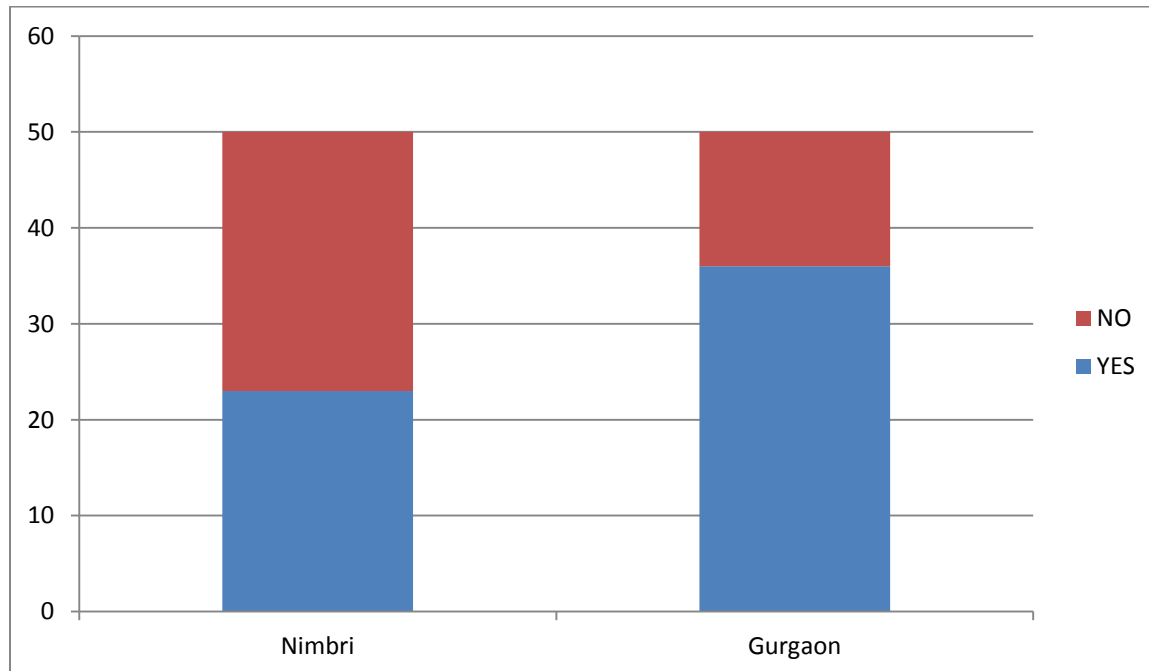
25 people each in slab < 2 lakhs per annum, 2-5 lakhs per annum, 5-10 lakhs per annum, >10 lakhs per annum



In a consumer survey carried out in Nimbri Village and Sector-31 Gurgaon, a total of 50 people were asked;

Do you insist on buying 'BIS jewellery hallmark' jewellery only?

- a) YES
- b) NO



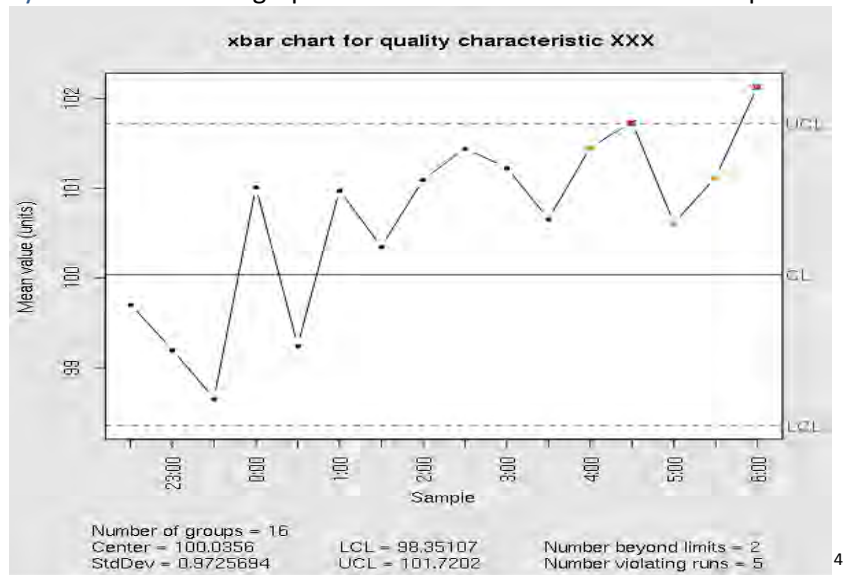
## APPENDIX

**Footnote 11:** The two methods of quality control include Inspection and Statistical Quality Control. Inspection further has three important aspects that include:

- **Process inspection:** Designed to check raw material and machines leading to economical use of time and material preventing process bottlenecks.
- **Product Inspection:** Ensures defect free product pertaining to established standards.
- **Inspection Analysis:** - Identification of critical points in the process on the basis of inspection results.

**Statistical Quality control (SQC):** A sample of items to be controlled is selected and statistically checked to ensure the maintenance of parity with the established standards of quality. It works on the principle of manufacturing products in the right manner rather than discovering and rejecting the wrong ones later. Control charts and Acceptance sampling are used for this purpose.

(i) **Quality Control Charts:** A graph on which the characteristics of samples are plotted.



45

LCL- Lower Quality Control  
UCL- Upper Quality Control

(ii) **Acceptance Sampling:** A full lot of products is rejected if the sample that is collected and checked consists of defective items in a quantity more than the predetermined limit percentage called the Acceptable Quality Level (AQL) otherwise the whole lot is accepted. This might be a risk (known as producer's risk) for an unsatisfactory lot might also get accepted. Hence Lot tolerance percentage defective (LTPD) is determined to minimize this risk. LTPD refers to the highest level of defects beyond which a lot will not be accepted for sale.

**Footnote 12:** The other certification marks issued by the government agencies are:

**FPO mark-** Mandatory for all processed fruit products. It certifies hygienic 'food-safe' manufacturing conditions. It is in effect since 1955 and has been made mandatory since 2006.

**Agmark-** Certifies all agricultural products. It has an advisory status and is in effect since 1986.

**The Non Polluting Vehicle mark-** It is mandatory for motor vehicles and certifies conformity to the Bharat Stage emission standards.

**The India Organic certification-** It certifies that the organic food product conforms to the specifications of *National Standards for Organic Products*. It has an advisory status and is in effect since 1991.

**Ecomark-** In effect from 2002, it has a voluntary and promotional status and is issued by BIS as an eco-label for various products.

<sup>45</sup> [http://en.wikipedia.org/wiki/File:Xbar\\_chart\\_for\\_a\\_paired\\_xbar\\_and\\_R\\_chart.svg](http://en.wikipedia.org/wiki/File:Xbar_chart_for_a_paired_xbar_and_R_chart.svg), (accessed July 26, 2012)

There are certain other mandatory labels required by the law in India.

**The Vegetarian mark** indicated by green dot symbol and the **Non-vegetarian mark** indicated by the brown dot symbol to be printed on food products are mandatory under law.

**Toxicity label**- It has a mandatory status and indicates the level of toxicity of the pesticide in four levels.

There are other non-statutory certification schemes that bear no legal status in the nation but are promoted by the Government of India:

**Silk Mark**- Managed by the 'Silk Mark Organization of India', it certifies that a piece of textile is pure silk.

The *Department of Ayush* issues the **Ayush Mark** for herbal products.

**The Darjeeling tea certification mark** acts as a geographical indication mark for tea produced in Darjeeling.

**ISO Certification marks** issued by private agencies in India confirm that a particular service/system is in accordance to standards prescribed by the **International Organization for Standards (ISO)**.

**Footnote 17**- The various activities of the BIS are:

### Standards formulation

Under Standards formulation, it is engaged in formulation of Indian Standards for 14 sectors namely Chemicals, Food and Agriculture, Civil, Electrical, Electronics & Telecommunications and Information Technology, Mechanical Engineering, Management & Systems, Metallurgical Engineering, Petroleum, Coal & related Products, Medical and Hospital Planning, Textile, Transport engineering and Production and General Engineering, Water Resources under Division Councils which have 308 Sectional Committees working under them. As on 31 March 2008, 18424 Standards formulated by BIS, are in force. These cover important segments of economy, which help the industry in upgrading the quality of their goods and services. BIS formulates need-based Indian Standards in line with the national priorities as a time-bound programme.

### Product Certification Scheme

BIS Product Certification Scheme is basically voluntary in nature. However, keeping in view the health and safety of the consumer, it has been made mandatory for 68 items by the Government through various statutory measures such as Prevention of Food Adulteration Act, Coal Mines Regulations and Indian Gas Cylinders Rules besides BIS Act. Some of the items brought under mandatory certification on consideration of health and safety are milk powder, packaged drinking water, LPG cylinders, oil pressure stoves, clinical thermometers etc. As on 31 March 2008, 20025 certification marks licences are in operation under the Scheme, covering about 1000 different items ranging from food products to electronics. For an IS-Wise list of licences, visit

<http://nicdc.nic.in/CMMS/InternetRep/InternetRelatedRep.aspx>.

All foreign manufacturers of products who intend to export to India are required to obtain a BIS product certification licence. Towards this, BIS launched its Product Certification Scheme for overseas manufacturers in the year 1999. Under the provisions of this scheme, foreign manufacturers can seek certification from BIS for marking their product(s) with BIS Standard Mark. Under this scheme, about 101 licences of foreign manufacturers in about 15 countries are in operation as on 31 March 2008. Under the scheme for Indian importers, Certification Marks Licence can be granted to Indian importers for the product imported into the country and are not covered under Regulatory Requirements. Indian importers can apply for BIS licence on such products and they are treated as Indian manufacturers. Three licences are in operation under this scheme. BIS also runs other certification schemes like IECEE-CB, IECQ and IECs Schemes of IBC under different provisions. India is a certifying member of the IEC System of Quality Assessment of Electronic Components (IECQ) and IEC System for Conformity Testing to Standards for Safety of Electrical Equipment (IECEE). Further, BIS has taken new initiatives like simplification of procedure for grant of licence, basically to reduce the procedural time which has yielded some encouraging results. The product certification scheme has been analyzed and discussed in detail later in this paper.”<sup>46</sup>

This scheme has been further discussed in detail in the section, “Product Certification Scheme” of this paper.

### Laboratories

BIS has set up 8 laboratories that have established testing facilities for chemical, food, electrical and mechanical products. They provide support to product certification operations including testing of nearly 25000<sup>47</sup> samples in these labs annually. When it is not economically viable to develop test facilities or the equipment is out of order or there is overloading of samples, the services of NABL accredited external laboratories (116<sup>48</sup>) are availed. BIS aims to modernize all its testing labs to increase its in-house capacity of sample testing and reduce the time taken for this procedure.

The Laboratory services, being a basic function of the BIS as described in the Act, have been discussed in detail in a separate section- “BIS Laboratory services”.

### Hallmarking

Hallmarking of Gold was introduced as a voluntary scheme in April 2000. It aims to certify the purity of gold in the interest of the consumers. As on March 2008, over 91<sup>49</sup> hallmarking and assaying centres have been recognized, 5403<sup>50</sup> gold jewellers have been granted licence and 381<sup>51</sup> lakh jewellery articles have been hallmarked. The list of licenced jewellers and accredited hallmarking centres can be found

---

<sup>46</sup> “Bureau of Indian Standards,” accessed July 26, 2012  
[http://india.gov.in/sectors/consumer\\_affairs/index.php?id=13](http://india.gov.in/sectors/consumer_affairs/index.php?id=13))

<sup>47</sup> Ibid.

<sup>48</sup> Ibid.

<sup>49</sup> Ibid.

<sup>50</sup> Ibid.

<sup>51</sup> Ibid.

on the BIS website. Hallmarking of Silver was also introduced in October 2005 and over 405<sup>52</sup> licenses have been granted.

### Management Systems Certificate

Other important systems certification schemes for 23<sup>53</sup> major economic activities are run under Quality Management System Certification Scheme (QMSCS) launched in September 1991 and is accredited by Raad voor Accreditatie (RvA) of Netherlands. Over 1161<sup>54</sup> licences have been granted as on March 2008.

Hazard Analysis and Critical Control Point Certification (HACCP) Integrated Scheme, Environmental Management Systems Certification Scheme (EMSCS), Occupational Health & Safety Management System (OH & SMS) Certification Scheme are some other schemes already in operation. To ensure minimum service delivery standards in government influenced sectors, BIS has launched a new scheme under Public Service Delivery Management systems (IS 15700-2005<sup>55</sup>).

### Enforcement activity

The BIS carries out enforcement raids frequently and prosecutes those who misuse the ISI mark. External agencies are also hired for providing intelligence information. Over 125<sup>56</sup> search and seizures operations were carried out in 2007-08.

### International Activities

The then ISI and now BIS is a member of international organizations such as ISO and International Electrotechnical Commission (IEC) since its very inception. BIS holds Participating Membership (P) status in 259<sup>57</sup> ISO and 62<sup>58</sup> IEC Technical committees and is Observer Member (O) on 308<sup>59</sup> ISO and 84<sup>60</sup> IEC Technical committees of IEC. It also engages in several policy-making committees of these bodies. BIS holds secretariat of important ISO/IEC Committees which are in India's trade interest. It engages in the development of International Standards with a view to protect the interests of Indian trade & industry. It is also involved in various Regional and Bilateral Cooperation Programmes concerning standardization, accreditation & conformity assessment and has signed 16<sup>61</sup> MoU/MRA with several institutions including ISO and American National Standards Institute (ANS).

---

<sup>52</sup> Ibid.

<sup>53</sup> Ibid.

<sup>54</sup> Ibid.

<sup>55</sup> Ibid.

<sup>56</sup> "Bureau of Indian Standards," accessed July 26, 2012

[http://india.gov.in/sectors/consumer\\_affairs/index.php?id=13](http://india.gov.in/sectors/consumer_affairs/index.php?id=13))

<sup>57</sup> Ibid.

<sup>58</sup> Ibid.

<sup>59</sup> Ibid.

<sup>60</sup> Ibid.

<sup>61</sup> Ibid.

### Consumer protection

BIS has a separate department for providing consumer protection and deals with public grievances. It is associated with Central Consumer Protection Council and consumer organizations and coordinates with the concerned Ministry as well. The Consumer Policy Advisory Committee provides guidance on activities undertaken by the BIS. It also gives advice on policy matters relating to making standardization and certification activities user-friendly and efficient discharge of the functions. Complaints are handled by a well-defined procedure. Online complaints can also be made and are monitored regularly.

Since all standards are voluntary in nature, promotion of Indian Standards is necessary to implement the standards for achieving the desired gains. This promotion of standards pertains to diverse interests including ordinary consumers to educational institutions.

Since 1997, BIS has an established single window Information & SSI Facilitation Cell with the aim of providing total customer satisfaction. Many consumers and professionals visit this cell for collecting information and assistance.

### Rajiv Gandhi National Quality Award

Inspired from awards such as Malcolm Baldrige National Quality Award (USA) and European Quality Award conferred by various counterparts, the BIS instituted the Rajiv Gandhi National Quality Award to encourage manufacturers and service providers to strive for achieving excellence. It is based on various parameters including Leadership, Policies objectives and Strategies; Customer Focus; Resources, Processes; Employees' Satisfaction; Human Resources Management; Business Results and Impact on Environment and Society.

### National Institute of Training for Standardization (NITS)

BIS has established the National Institute of Training for Standardization (NITS) in 1995 and started operations from the new campus at NOIDA in 2005. It provides training to technical and management personnel from industry, government bodies, consumer organizations, PSU's and BIS itself. It conducts training on Quality Management Systems, Environment Management Systems, Occupational Health and Safety Management Systems, Food Safety Management Systems, Hazard Analysis and Critical Control Points (HACCP) and Laboratory Management Systems in accordance with the concerned IS standards. Since 1968, it annually conducts International Training Programmes in Standardization and Quality Systems and on Management systems for several developing countries located in Asia, Africa, Europe and Latin America.

### Library

The BIS Technical Library, the largest library of standards in South Asia spanning over a floor area of 1000<sup>62</sup> square meters, is the national centre for information on standards and associated matters set up to meet the needs of industry, researchers, government and consumers. The collection consists over “6

<sup>62</sup> “Bureau of Indian Standards,” accessed July 26, 2012  
[http://india.gov.in/sectors/consumer\\_affairs/index.php?id=13](http://india.gov.in/sectors/consumer_affairs/index.php?id=13)

lakh standards and 50,000 technical books”<sup>63</sup>. There are four Libraries at the regional offices in Mumbai, Kolkata, Chandigarh and Chennai.

BIS has established manual and computerized sale points to provide standards in hard copy and electronic forms like CD ROM and online purchase for the convenience of customers.

BIS has its own website [www.bis.org.in](http://www.bis.org.in) that provides information about its activities to the Indian industry as well as consumers.

### Finance & Account

The BIS has been self-sufficient in the management of its finances over the last decade due to major revenue sources such as Product Certification, Sale of Standards, Hallmarking, Management System Certification and training activities at NITS.

### Footnote 18-

### PRODUCT CERTIFICATION SCHEME

The specific procedure for operating a licence can be found under Scheme of Testing and Inspection at (<http://www.bis.org.in/cert/prosti.htm>). A very high degree of confidentiality and integrity must be maintained among personnel involved in this task. The ' Certification Advisory Committee', composed of persons from varied sectors like manufacturers, consumers, industry experts, reviews the performance of the scheme and gives advice on policy issues. The Additional Director General (Marks) is responsible for ensuring that the scheme operates in accordance with the specified rules.

### CERTIFICATION SYSTEM

The product certification scheme is voluntary in nature and is based on ISO Guide 28<sup>64</sup>, which prescribes rules for third party certification method of determining conformity with product standards via testing of samples, both from market and factory, and assessment of the quality management system followed by surveillance. Majority of the operational elements of the BIS product certification scheme are in sync with ISO Guide 65.

### TYPES OF LICENSING

Though, the scheme is voluntary in nature, the Government of India, on considerations of public health and safety, security, infrastructure requirements and mass consumption has enforced mandatory certification on certain products through Quality Control Orders under various acts at regular intervals. The enforcement of compulsory certification is carried out by the ministry notified in the Order. For the list of items currently under mandatory certification with details of the respective Quality Control Orders, please visit

<sup>63</sup> Ibid.

<sup>64</sup> “Product Certification Scheme,” accessed July 26, 2012, <http://www.bis.org.in/cert/procert.htm>



<http://www.bis.org.in/cert/man.pdf>

Under discrete engagements with statutory agencies, certain products have been listed under special certification schemes of lot/batch inspection. A majority of Gas cylinders, regulators and valves are certified through such schemes. Deep well hand-pumps for rural areas are also certified under a lot inspection scheme as they are a critical potable water supply source.

For all other products, the manufacturer is permitted to self-certify the products after ascertaining its conformity to the Standard licensed for.(important citation).

Overseas applicants and Indian Importers are permitted to use ISI mark under separate schemes. For details, please see *BIS Foreign Manufacturers Scheme* at <http://www.bis.org.in/cert/fms.htm> and *Indian Importers Scheme* at <http://www.bis.org.in/cert/ici.htm>.

## OPERATIONAL AREAS

The BIS Product Certification Scheme is unbiased and open to manufacturers in all countries. While a licence can be granted for any Indian Standard specifying product characteristics, which is amenable to certification, the broad areas of technologies now under certification are mentioned in the appendix.

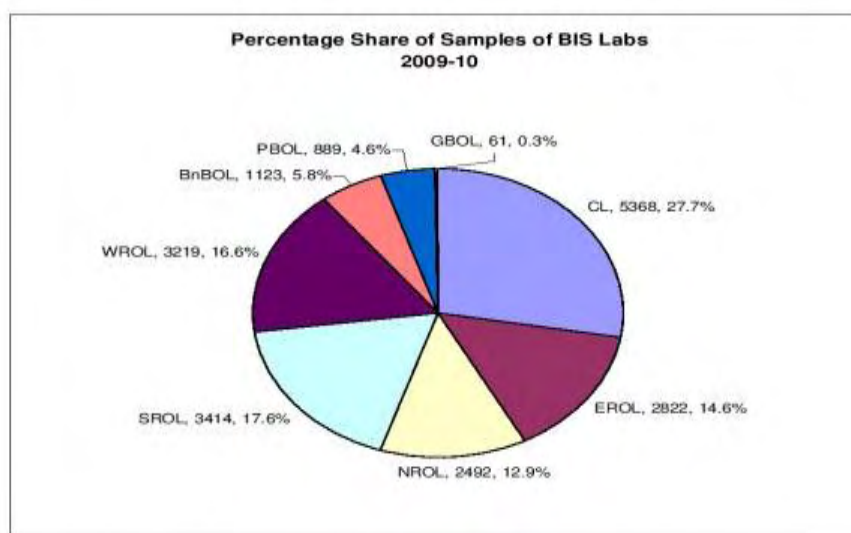
- Textiles
- Chemicals and Pesticides
- Rubber and Plastic products
- Cement and concrete products
- Building materials
- Pumping, irrigation, drainage and sewage equipment
- Pipes and fittings for water supply
- Basic metals and fabricated metal products
- Machinery and equipment
- Electrical, electronics and optical equipment
- Automotive components
- Agriculture, food and tobaccos
- Black tea and beverages
- Packaged drinking water and Natural mineral water
- Leather products
- Wood products
- Paper and pulp products
- Testing instruments”<sup>65</sup>

<sup>65</sup> “Product Certification Scheme,” accessed July 26, 2012, <http://www.bis.org.in/cert/procert.htm>

**Footnote 27:**

<sup>66</sup> *Figure: Distribution of in-house testing workload*

Percentage share of testing by individual labs for the year 2009-10 is as below:



CL: Central Laboratory, Sahibabad, UP  
 EROL: Eastern regional Laboratory, Kolkatta  
 NROL: Northern Regional Laboratory, Mohali  
 SROL: Southern Regional Laboratory, Chennai  
 WROL: Western Regional Laboratory, Mumbai  
 BnBOL: Bangaluru Branch Laboratory  
 PBOL: Patna Branch Laboratory  
 GBOL: Guwahati Branch Office Laboratory.

2

<sup>67</sup> *Table 1: Major Facilities available at various Laboratories*

<sup>66</sup> <http://www.bis.org.in/lab/labs.pdf> (accessed July 26, 2012)

<sup>67</sup> <http://www.bis.org.in/lab/labs.pdf> (accessed July 26, 2012)

Major facilities available in Bureau's other labs are :

TESTING FACILITIES	NROL	EROL	WROL	SROL	ENBOL	PBOL	GBOL
<b>ELECTRICAL LAB</b>							
i) Domestic Electrical Appliances	*			*			
ii) Cables & Conductors	*	*	+	*	*		
iii) Wiring accessories & switchgear			*				
iv) Electrical motors and fans	*						
v) GLS lamps					*		
<b>MECHANICAL LAB</b>							
i) Physical testing and measurements	*	*	+	*	*	*	*
ii) Gas cylinders, valves & regulators	*		+	*	*		
iii) Gas & oil burning appliances	*		+	*	*		
iv) Builder's hardware	*	*	+	*	*		*
v) Sanitary wares			*				
vi) Metallic Pipes & Fittings	*	*	+	*		*	
vii) Non-metallic Pipes & Fittings		*	+	*			
viii) Water supply fittings & water meters	*						
ix) Timber & timber products	*	*			*		
x) Drum & Tin Containers		*	+	*	*		
xi) Fire fighting equipment			+	*			
xii) Plant protection equipment (sprayers)	*		+	*			
xiii) Pumps	*						
xiv) Hand pumps		+	+	*	*	*	
xv) Steel & Steel products	*	*	+	*	*	*	*
xvi) Cement & concrete	*	*	+	*	*	*	
xvii) Medical instruments and accessories			+	*			
xviii) Leather and rubber products	*	*	+	*	*		
xix) Irrigation Equipments			+		*		
xx) Jute & Textile products		*					
xxi) Solar Devices	*				*		
xxii) Pressure cookers & utensils	*	*	+	*	*		
xxiii) Diesel Engines						*	
<b>CHEMICAL LAB</b>							
i) Agricultural, food & dairy products	*	*	+	*	*	*	
ii) Microbiology lab	*		+	*	*		
iii) Stationary & packaging materials		*	+	*	*		
v) Jute & Textile products		*	+	*	*		
vi) Pesticides formulations		*	+	*	*	*	
vii) Miscellaneous organic/inorganic	*	*	+	*	*	*	

TESTING FACILITIES	NROL	EROL	WROL	SROL	BNBOL	PBOL	GBOL
chemicals		*		*		*	
viii) Petroleum products		*		*		*	
ix) Packaged drinking water & Packaged natural mineral water			*	*	*		
x) Soap, Detergent and toiletries	*	*		*	*		
xi) Food colours and dyes		*	*	*	*		
xii) Ferrous & non ferrous Metals & Alloy	*	*	*	*	*		
xiii) Cement	*	*	*	*	*	*	
xiv) Animal feed	*			*	*		

Footnote 39- Table 2: List of Products tested by VOICE

S.no.	Products	No. of Brands	Month/Year of Publication
1	Sunscreens (ICRT-Test)	20	Apr-2011
2	Digital Cameras (ICRT-Test)	6	Mar-2011
3	All-in-one Printers (ICRT-Test)	5	Feb-2011
4	Frying pans	9	Jan-2011
5	Moong Dal	8	Dec-2010
6	Canned Rasgullas	8	Nov-2010
7	Pesticides in vegetables (35 fruits for 106 pesticides)	35	Nov-2010
8	Hand Blenders	9	Oct-2010
9	Pesticides in fruits (17 fruits for 106 pesticides)	17	Oct-2010
10	Anti-wrinkles creams (ICRT-Test)	20	Sep-2010
11	Paracetamol	13	Aug-2010
12	Wheat Flour	13	Jul-2010
13	Vacuum Cleaners (ICRT-Test)	16	Jun-2010
14	DVD Recorders(ICRT-Test)	13	May-2010
15	Domestic Airlines(Quality Assessment Report)	9	Apr-2010
16	Ice-creams	11	Mar-2010
17	Pressure Cookers	11	Feb-2010
18	Detergent Bars	11	Feb-2010
19	Fruit Drinks	11	Jan-2010
20	Hair shampoos	12	Dec-2009
21	Camcorders	14	Nov-2009
22	Hair dyes	17	Oct-2009
23	Shaving Creams	10	Sep-2009
24	Vanaspati	7	Jul-2009
25	CFLs	16	Jun-2009
26	Microwave Ovens	12	May-2009
27	Honey	11	Apr-2009

28	Desi Ghee	10	Mar-2009
30	LCD TVs	14	Feb-2009
29	Digital Cameras	16	Jan-2009
31	Hall Mark Gold (Current scenario)		Jan-2009
32	Refrigerators	8	Nov-2008
33	Steam Iron	10	Oct-2008
34	Inverters	9	Sep-2008
35	Washing Machines	12	Aug-2008
36	Potato Chips	10	Jul-2008
37	Candle Water Filters	3	Jun-2008
38	Fairness creams	10	May-2008
39	UV & RO Water Purifiers	9	Apr-2008
42	Water Purifiers	12	Apr-2008
43	Chocolates	13	Mar-2008
44	Mobile phones( ICRT Test)	11	Feb-2008
45	Digital cameras( ICRT Test)	9	Jan-2008
46	Tomato Ketchups	12	Dec-2007
47	Refined oils ( Sunflower & Groundnut oils)	13	Nov-2007
48	Mobile Phones( ICRT Test)	17	Oct-2007
49	Printers:	21	Sep-2007
50	Butter:	12	Aug-2007
51	Iodized Salt	13	Jul-2007
52	Digital Camcorders ( ICRT Test)	13	Jun-2007
53	Anti-Wrinkle Creams ( ICRT Test)	13	May-2007
54	LCD & Plasma TVs ( ICRT Test)	31	Apr-2007
55	Rechargeable Batteries( ICRT Test)	14	Mar-2007
56	Juicer-mixer grinders	11	Feb-2007
57	Pumpsets	14	Jan-2007
58	Health Drinks	10	Dec-2006
59	Jams- Mixed Fruits	12	Nov-2006
60	Lipsticks	14	Oct-2006
61	Compact fluorescent Lamps	14	Oct-2006
62	Mosquito Repellents	14	Sep-2006
63	Disinfectant Fluids	10	Aug-2006
64	Soyabean Oils	13	Jul-2006
65	Potato Chips	9	Jul-2006
66	Chilli Powders	14	May-June 2006
67	Cements	12	May-June 2006
68	Ceiling Fans	12	March-April 2006
69	Clinical Thermometers	12	March-April 2006
70	TFL(Tabular Fluorescent Lamps)	10	Jan-Feb 2006
71	Ballasts	12	Jan-Feb 2006
72	MCBs	12	Jan-Feb 2006
73	Exhaust Fans	10	Nov- Dec 2005
74	Copier Paper	10	Sept-Oct 2005

75	Batteries	11	Sept-Oct 2005
76	Shaving Cream	10	July -Aug 2005
77	Haldi powder	10	May -June 2005
78	Scanners( ICRT Test)	12	March -April 2005
79	Digital Cameras( ICRT Test)	18	Jan-Feb 2005
80	Computer Printers( ICRT Test)	35	Nov-Dec 2004
81	Antiaging Cream( ICRT Test)	15	Sept-Oct 2004
82	Cooker Hood( ICRT Test)	36	July-Aug 2004
83	Mobile Phones( ICRT Test)	12	May-June 2004
84	Hair Dyes	12	March-April 2004
85	Laptop Computers ( ICRT Test)	15	Jan-Feb 2004
86	Compact Cameras( ICRT Test)	16	Nov-Dec 2003
87	Microwave Ovens( ICRT Test)	24	Sept-Oct 2003
88	Air Conditioners( ICRT Test)	13	July -Aug 2003
89	Colour Televisions	12	May-June 2003
90	Glucose Biscuits	13	March -April 2003
91	Toilet soaps	14	Jan- Feb 2003
92	Storage Type water heaters	10	Nov-Dec 2002
93	Refrigerators	8	Sept-Oct 2002
94	Toothpastes	14	July -Aug 2002
95	Ceiling Fans	10	May -June 2002
96	Packed Mustard Oil	14	March-April 2002
97	GSM Mobile Phone( ICRT Test)	29	Jan-Feb 2002
98	Scanner( ICRT Test)	17	Nov-Dec 2001
99	Laptops Computer( ICRT Test)	13	Sept -Oct 2001
100	Printer ( ICRT Test)	19	July -Aug 2001
101	Stereo-2-in One	8	May -June 2001
102	Household Synthetic Detergent Powder	14	March-april 2001
103	Domestic Water Filters & Purifier	13	Sept-Oct 2000
104	Solid State Inverter	10	Jan-Feb 2000
105	Bottled Mineral Water	12	March-april 1999
106	Alkaline Dry Cell	3	Jan -Feb 1999
107	Paracetamol Tablet	13	Nov-dec 1998
108	Iodised Salt	9	Sept-Oct 1998
109	Dry Cell Battery	10	Jul-Aug 1998
110	Electronic Fan Regulator	10	Nov-dec 1997
111	Automatic Voltage Stabilizer	15	Sept-Oct 1997
112	Out Door Antennae	3	1997
113	B & W TVs	17	1997
114	Colour TVs	13	1993

Table 2: List Of Tested Products<sup>68</sup>

<sup>68</sup> "List of Tested Products," accessed July 26, 2012, <http://www.consumer-voice.org/list-products.aspx>

**Footnote 40:****RESEARCH AND FOLLOW-UP PROCEDURE**

“Recently CERC tested hand blenders, exhaust fans, and organic tea.

**(1) HAND BLENDERS:**

CERC tested hand blenders in its independent in house laboratory. Presently hand blenders are neither covered under quality control order 2003 nor under the mandatory certification.

None of the brands tested were marked with ISI mark. It was found that 5 brands out of 14 did not comply with their requirements of BIS standard for safety. (Clause No. 25.0., supply connections & external flexible cables & cords) of IS 302-(2)-14-1994 & IS 302-(1)-2008<sup>69</sup>.

Presently no standards are available for checking performance evaluation of hand blenders. Hand blenders are not suitable for heavy grinding tasks as specified under the operational tests of IS. 4250-1980. Hence CERC has devised performance tests on blenders considering product usage pattern of consumers.

**FOLLOW-UP:**

To ensure the performance and safety of hand blenders CERC has requested the Ministry of Commerce & Industry, Department of Industrial Policy and Promotion, Government of India, to cover hand blenders under Quality Control Order'2003 and requested the Bureau of Indian Standards (BIS) to cover the marking of 'operating time' on the models and develop norms for performance evaluations of hand blenders.

**(2) EXHAUST FANS:**

Exhaust/fresh air fans are neither covered under quality control order nor under the mandatory certification. The key information required to purchase the exhaust fans is their air delivery. During testing of 13 models of exhaust fans of 300 mm (12 inch) size, it was found that manufacturers do not declare the air delivery m<sup>3</sup>/hr. on the exhaust fans. Only some of them provide this information in leaflet/manual supplied with fans.

BIS standards mention that air delivery should not be less than 10% of the values assigned to manufacturer. Also BIS standards does not cover popular sizes of exhaust fans (225, 230, 250 mm, etc.) and their air delivery requirements in IS 2312-1967.

**FOLLOW-UP:**

To ensure the quality, safety and performance of exhaust fans, CERC requested Bureau of Indian Standards (BIS) to cover the domestic exhaust fans of intermediate sizes (225, 230, 250 mm, etc.) under IS 2312-1967 and provide limits for air delivery and input power; the rated air delivery with unit and information on appropriate room size with unit under the marking clause; the marking clause under type test; the definition of air delivery under the scope of 'terminology' for exhaust fans; the requirement of instructions sheet to be supplied by the manufacturers. BIS should provide the limits for

<sup>69</sup> Shweta Mahajan, e-mail message to author, July 6,2012

service value, with unit, and the reference of speed for high and normal speed exhaust fans. CERC requested the Ministry of Commerce and Industry, Department of Industrial Policy and Promotion, to cover exhaust fans under Quality Control Order 2003.

### **(3) ORGANIC TEA**

12 brands of organic tea were tested, of which seven were procured from Germany and the rest purchased locally. There are no analytical standards for testing organic tea internationally. They were therefore, tested against the standards for conventional tea. There are no limits for the presence of pesticide residues such as lindane, aldrin, dieldrin, DDT AND endosulfan in the PFA or BIS as requirement for tea. Organic tea was not free from lead and copper. Both metals were present in samples tested, though within the specified limits.

#### **ROLE OF CERC:**

CERC requested Bureau of Indian Standards (BIS) to stipulate analytical standards and testing requirements for organic foods and hence for organic tea and make organic certification mandatory for organic tea and other organic food products. It also suggested a few more steps which include: The Food Safety and Standards Authority of India (FSSAI) should revise and bring down the maximum limits for metal contaminants in tea, especially for lead, and make the standards stricter. The FSSAI should relook into current levels of pesticide in tea. Apart from the seven enlisted pesticides, the FSSAI should specify the maximum residue limits (MRL) for various other pesticide residues in tea, example. DDT, Endosulfan and persistent organic pollutants (POPs) based on a countrywide survey. The BIS should monitor the quality of pesticide formulation used in tea plantations for the presence of chemical contaminants. For example, Dicofol formulation sometimes contained DDT as a by-product. The FSSAI should harmonize the PFA standards for tea with the BIS requirements, especially with reference to maximum limits for the presence of iron filings (a foreign matter) in tea. The Ministers of Agriculture and Environment should give subsidies for organic farming of tea and other crops. The Government should regulate the prices of organic products to make them affordable to consumers. For the ECOMARK certification criteria for packaging, the BIS should give detailed guidelines for the type and quality of material to be used by the manufacturers and review why manufacturers are not applying for the ECOMARK. More awareness should be created for the ECOMARK labeling scheme and tea manufacturers should be encouraged to adopt this scheme.

Suggestions sent by CERC for all the above three products are under consideration by BIS and are scheduled to be discussed in relevant technical committee meetings.

#### **IMPACT AND EFFECTIVE CHANGE**

Following are some of the examples of CERC's suggestions, which have been accepted by Bureau of Indian Standards<sup>70</sup>:

<sup>70</sup> Shweta Mahajan, e-mail message to author, July 6,2012



Table 3: Measuring CERC's Impact

Sr. No.	Products	CERC's comments / suggestion	Impact
1	Water IS:10500	New Standards for all packaged drinking water to be formulated, in harmony with the international ones	New Standards were formulated viz. Packaged Drinking water IS: 14543.  Packaged Natural Mineral Water IS: 13428.  BIS certification was made mandatory for all packaged drinking water.
2	Fried Potato Chips IS : 12575 1989 IS : 12574 1989 (INSIGHT Jan-Feb 2006)	The BIS should suggest limits for salt and sodium. Since excess sodium is harmful for health, it causes hypertension (high blood pressure) which triples the risk of heart disease & stroke.	The BIS has accepted it and has revised specification in Feb'09 for Fried Potato Chips IS: 12575:1989. It includes the maximum requirement of salt content as 1.0 percent by mass.
3	Soft Drinks IS: 2346	There should be maximum limit for Sugar content. Labeling the 'Best Before Date' list of ingredients, nutritive value & Caffeine content.	Labeling of date was made compulsory for all food products.
4	Food Products	Labels must mention the nutritional content.	Labeling of nutritional contents was made mandatory for all food products by Food Safety & Standards Authority of India (FSSAI).

Sr. No.	Products	CERC's comments / suggestion	Impact
5	Chili Powder IS:2445	Best Before date to be mentioned on the label.	In Case of all food products, BIS has specified – 'Best Before Date' & 'Date of Mfg' to be mentioned on the label.
6	Turmeric Powder IS : 2446	“ “	
7	Compact Fluorescent Lamps (CFLs)	The production and use of CFLs has increased manifold in India. They are cost effective and very popular among consumers.	BIS has published IS 15111 Part-1 & 2 covering all safety, performance and quality requirements. Also BIS covered CFLs under mandatory

		CERC suggested formulation of Indian Standards on CFLs.	certification.
8	Compact Fluorescent Lamps (CFLs)	CFLs contain mercury, a highly toxic chemical.  CERC suggested to include a 'warning for safe disposal' in marking requirements of BIS standards.	Amendment No. 3 to IS : 15111 (Part 1) 2002 has been published by BIS with above warning.
9	Room Heaters	To include rated air velocity / air volume and air temperature in marking requirements of BIS standards to help the consumers to select room heaters according to their need for maintaining the desired warmth.	Amendment No. 3 to IS: 4283-1981 has been published by BIS.
10	Tube lights	To include the rated life of tubelights in the marking requirements for standards to help the consumers to select the better product.	Amendment No. 6 to IS: 2418-Part 1-1979 has been published by BIS.
11	Food Mixers	Suggested proper colour coding for wiring especially for earthing wire for safety purpose.	BIS has covered the proper colour coding for earthing conductors in revised standard for safety of electrical appliances.

Sr. No.	Products	CERC's comments / suggestion	Impact
12	Digital Thermometer	Mercury in glass clinical thermometer should have approval from BIS for manufacturing / import of the product and after getting license they produce it. Hence clinical thermometer should be labeled with ISI mark.	This law came to force during April, 2005.

## REFERENCES

1. "JPC set up to probe 2G spectrum, telecom policy," accessed July 26, 2012, <http://www.sify.com/news/jpc-set-up-to-probe-2g-spectrum-telecom-policy-news-national-lyt4gghbfd.html>
2. "JPC set up to probe soft drinks row," accessed July 26, 2012, <http://www.expressindia.com/news/fullstory.php?newsid=24070>
3. List of items under mandatory ISI certification as dictated by Govt. of India - <http://www.bis.org.in/cert/man.pdf>
4. "Close shave for Karat as LPG cylinder bursts," accessed July 26, 2012, <http://www.thesundayindian.com/en/story/close-shave-for-karat-as-lpg-cylinder-bursts/254/34273/>

5. "Helmet minus ISI mark," accessed July 26, 2012, <http://www.mumbaimirror.com/article/2/2011120320111203021542565765706ec/Helmet-minus-ISI-mark-Be-prepared-to-pay-a-fine.html>
6. "Bureau of Indian Standards," accessed July 26, 2012, [http://en.wikipedia.org/wiki/Bureau\\_of\\_Indian\\_Standards](http://en.wikipedia.org/wiki/Bureau_of_Indian_Standards)
7. "Bureau of Indian Standards(BIS) Act," accessed July 26, 2012, <http://www.bis.org.in/bs/bisact.htm>
8. "Bureau of Indian Standards," accessed July 26, 2012 [http://india.gov.in/sectors/consumer\\_affairs/index.php?id=13](http://india.gov.in/sectors/consumer_affairs/index.php?id=13))
9. "Quality Helmets," accessed July 26, 2012, [http://articles.timesofindia.indiatimes.com/2012-04-05/india/31293730\\_1\\_quality-helmets-helmet-manufacturers-m-c-misra](http://articles.timesofindia.indiatimes.com/2012-04-05/india/31293730_1_quality-helmets-helmet-manufacturers-m-c-misra)
10. "Bill in Lok Sabha to expand ambit of hallmarking of products," accessed July 26, 2012, [http://articles.economictimes.indiatimes.com/2012-05-03/news/31559115\\_1\\_products-like-gold-jewellery-prevention-of-deceptive-practice-registration-of-relevant-standards](http://articles.economictimes.indiatimes.com/2012-05-03/news/31559115_1_products-like-gold-jewellery-prevention-of-deceptive-practice-registration-of-relevant-standards)
11. Refer to Section IV A of the new Rules, accessed June 18, 2012, <http://www.bis.org.in/bs/bisrules.htm>
12. "Cabinet okays BIS (Amendment) Bill," accessed July 26, 2012, <http://www.thehindubusinessline.com/industry-and-economy/economy/article1561653.ece?css=print>
13. "BIS Laboratory Services," accessed July 26, 2012, <http://www.bis.org.in/lab/labs.pdf>
14. The Act refers to Bureau of Indian Standards Act, 1986 and can be found at <http://www.bis.org.in/bs/bisact.htm>
15. "Principal Officers of Bureau," accessed July 26, 2012, <http://www.bis.org.in/org/bureau.htm>
16. Shri SC Gupta posted "Scams of BIS," accessed June 18, 2012, <http://scg-24yrs.blogspot.in/2011/08/scams-of-bis.html>)
17. "Consumer Protection", accessed July 26, 2012, <http://www.nios.ac.in/Secbuscour/27.pdf>
18. [http://en.wikipedia.org/wiki/File:Xbar\\_chart\\_for\\_a\\_paired\\_xbar\\_and\\_R\\_chart.svg](http://en.wikipedia.org/wiki/File:Xbar_chart_for_a_paired_xbar_and_R_chart.svg), (accessed July 26, 2012)
19. "Product Certification Scheme," accessed July 26, 2012, <http://www.bis.org.in/cert/procert.htm>
20. "List of Tested Products," accessed July 26, 2012, <http://www.consumer-voice.org/list-products.aspx>
21. <http://www.bis.org.in/cert/ici.htm>
22. <http://www.bis.org.in/cert/SimplifiedProcedure.htm>
23. [www.nabl-india.org](http://www.nabl-india.org)
24. [http://www.bis.org.in/lab/NewLab\\_list1.pdf](http://www.bis.org.in/lab/NewLab_list1.pdf)
25. [http://www.bis.org.in/lab/NewLab\\_list2.pdf](http://www.bis.org.in/lab/NewLab_list2.pdf)
26. [http://www.bis.org.in/lab/lab\\_list3.pdf](http://www.bis.org.in/lab/lab_list3.pdf)
27. <http://www.bis.org.in/org/ombureau.htm>
28. <http://www.bis.org.in/org/compEC.htm#>
29. <http://www.bis.org.in/org/ORG%20CHART.pdf>
30. <http://www.bis.org.in/org/compAC.htm>
31. <http://cseindia.org/>
32. <http://cseindia.org/taxonomy/term/30/menu>
33. [www.consumer-voice.org](http://www.consumer-voice.org)
34. <http://nicdc.nic.in/CMMS/InternetRep/InternetRelatedRep.aspx>.
35. [www.bis.org.in](http://www.bis.org.in)
36. <http://www.bis.org.in/cert/prosti.htm>
37. <http://www.bis.org.in/cert/fms.htm>
38. <http://www.bis.org.in/cert/ici.htm>