Indian Compostable Polymers Association (ICPA)

India generates around 15,000 tons plastic waste every day and it is important to protect the environment through spot detection of FAKE PLASTIC bags claiming to be Bio compostable. ICPA is in discussion with other manufacturers for implementation of customized solutions benefitting the consumers and authorities in coming days, informed company spokes person.

ICPA has embarked upon a on spot detection of Bio Compostable Bags. The solution duly supported by Indian Compostable Polymer association (ICPA) members is a new method of detection of fake and duplicate bags claiming to be Bio Compostable.

ICPA in association with M/s. Ibhaan Digital Edge Advance Solutions Pvt Ltd., a Bangalore based company has implemented a authentication system, the encrypted QR codes that can be read by custom mobile apps, which enables stake holder's viz. Manufacturers, Authorities and consumer in detecting originality of their compostable bags.

Enabling CPCB and all related Government Nodal agencies

- Facilitates transparency within Government Revenue Departments

- Conclusive evidence for Pollution Control Board and curtail Conterfeit Biodegradable Bags

- Provides information about Quality, Standard, date and place of manufacture of the Compostable Bags

- Protection against Hazardous Products that harm the Environment

QR Code

QR Code or Quick Response Code is a two-dimensional barcode that can be read by modern smart phones and special QR Code scanner devices .A QR code consists of black squares arranged in a square grid on a white background. There are several variants of QR codes depending on their symbol size, layout, encoding and structure. QR Codes can be used to encode various types of data like – simple text, URLs, phone numbers, SMS, geolocation, email address etc.The four standard modes of data for creating QR code is numeric, alphanumeric, byte / binary and Kanji. There are extensions to these standard types available, using which custom data also can be coded. There are 2 types of QR codes

Static QR Codes are QR Codes that can't be changed once they are created. These codes contain fixed information which doesn't gather any tracking metrics.

Dynamic QR Codes have the possibility to be edited after completion. Both the type of QR Code and the content are editable as many times as needed. They use a short URL to send users to the landing page of your desire as well as monitor statistics for information such as the number of scans, location and operating system used.

Advantages of Dynamic QR code over Static QR Codes

SI NO	Static QR Code	Dynamic QR Code
1	The Code cannot be altered	Each code can be altered and dynamic
2	Does not allow you to Track	Track locations of Scans, Time, Mobile Device
3	Limited to Personal use and does not ideal for Business	Good for Authentication and also can be used as a marketing tool

Icpa Authentication Solution

This Evaluation addressed the requirement of coding on Laminates.

Product Type – Biodegradable Laminates

Application – Vertical Form Fill Sealing

Integration requirement – Interface Software for Random number QR code

The Encrypted Dynamic QR Code is custom designed to ICPA members with an in–built infallible mechanism with multi–level security validation

When applied to any Compostable bag, the Secure Authentication Process Validates and authenticates various critical information, essential to detect Fakes, Look Alike and Counterfeit bags.

Data Generation Process:

1. Initially we should know company and machine id for code generation.

2. According to machine id and counts we can generate code.

3. In java code we initialize company_id,machine_id and counts.

4. Manufacture date is based on data of code generation.

5. Packet id is generated automatically till the end count.

6. Details of the bag is generated and stored in one file this file is used as input file for encryption.

7. The input file is encrypted using secrete key and stored in another file.

8. Encrypted file is upload in the drive and from there upload to repository of machine.

9. From Repository to connect to printer and that printer will print the QR code on the biodegradable bags.

10. By using ICPA app we can scan a QR code and that will decrypt the code
    and gives the bag details.

Thanks