

# **Application of 2D Barcode on Pharmaceutical Product Labels in Indonesia to Improve Drug Control**

Ivan Riandi M. Hutabarat (023201905007)

## **Abstract**

*The increase in reports of counterfeit cases in Indonesia makes BPOM as the national food and drug regulatory association must create a surveillance system. 2D Barcode has ability to encode different types of information. Previously, barcodes are widely recognized by end customers as scanning at the point of sale during product purchase. 2D barcode scanning technology uses patterns, shapes and points to encrypt information both horizontally and vertically. 2D barcodes can encrypt more characters in the same space as 1D barcodes. 2D barcodes can have 2,000 or more characters. So that it can store information on the date of production, the name of the manufacturer, the marketing authorization number, or other information that is needed by the community when choosing and using the product. The government has issued regulations regarding the implementation of 2D barcodes in drug and food control through the Regulation of POM No. 33 of 2018. Through this regulation how are the implications of the application of 2D barcodes to fake drug cases in Indonesia.*

**Keywords:** anti-counterfeit, 2D Barcode, QR-Barcode, BPOM

## **Reference:**

- M. Moisoiu, A. Negrău, R. Győrödi, C. Győrödi, and G. Pecherle. (2014, Jun). QR Code Scanning app for Mobile Devices. *International Journal of Computer Science and Mobile Computing (IJCSMC)*, 3(6), 334-340.
- R. Rotunn, V. Cesarotti, A. Bellman, V. Introna, and M. Benedetti. (2014). Impact of Track and Trace Integration on Pharmaceutical Production Systems. *International Journal of Engineering Business Management*, 6, 25.
- V. Mavroeidis and M. Nicho. (2017). Quick Response Code Secure: A Cryptographically Secure Anti-Phishing Tool for QR Code Attacks. *7th International Conference on Mathematical Methods, Models and Architectures for Computer Networks Security (MMM-ACNS 2017)* (pp. 313-324). Warsaw, Poland: <https://www.researchgate.net/publication/318924255> .
- Várallyai, L. (2012). From barcode to QR code applications. *Journal of Agricultural Informatics*, 3(2), 9-17.