

## Comparative Evaluation of Metformin Hydrochloride Brands Available in Sri Lanka

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Metformin, being noteworthy, is used in the management of Type 2 Diabetes. It is available in different brands in Sri Lanka. Several studies have shown that different brands of the drug varied qualities, which could impact the treatment efficacy. This study was conducted to analyse the quantity of different brands of metformin hydrochloride tablets available in the Jaffna municipal area, Sri Lanka. It was a laboratory-based exploratory study conducted in State Pharmaceutical Manufacturing Corporation, Sri Lanka. Based on most available brands at pharmacies in the Jaffna Municipal area, fifteen brands of conventional metformin tablets were selected for this study. They were coded as M<sub>1</sub>, M<sub>2</sub>, M<sub>3</sub>,... M<sub>15</sub>. The uniformity of weight, hardness, friability, disintegration, uniformity of content, and dissolution tests were performed in accordance with the British Pharmacopoeia (BP). Two out of fifteen brands were locally manufactured, and the remaining were imported. All brands were conformed to BP specifications in uniformity of weight. The hardness test showed optimum withstanding strength in all brands. All brands excluding M<sub>1</sub> (108.95%), M<sub>6</sub> (111.58%), M<sub>7</sub> (94.27%) and M<sub>11</sub> (93.91%) were comprised of values falling under monograph specifications (95% -105%) for uniformity of content. Twelve brands satisfied Pharmacopoeia requirements in the friability test, while two brands, M<sub>7</sub> (40.45 min) and M<sub>10</sub> (34.5 minutes), failed in the disintegration test. The dissolution of one brand showed the least drug release (61.40%), and the remaining passed the dissolution test. In conclusion, of all the metformin hydrochloride brands, nine brands passed all the official tests according to BP specifications.

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