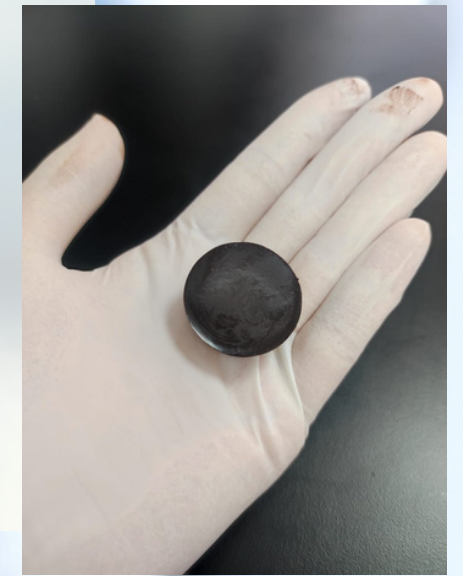




CHOCAPINE: A TREAT FOR BODY AND MIND

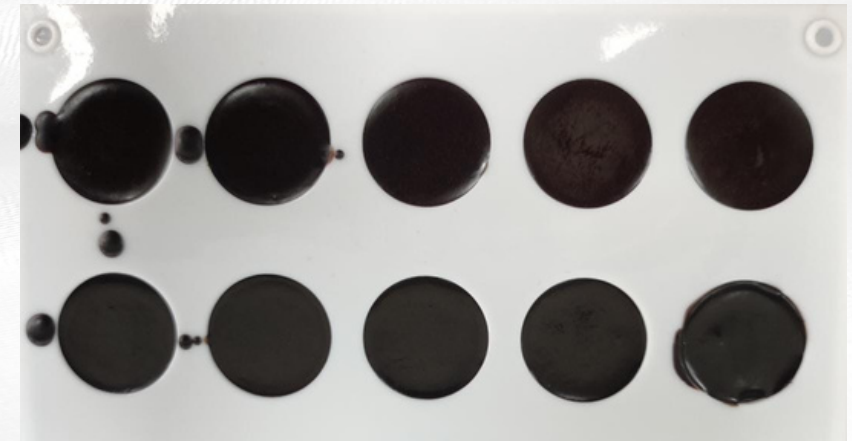


BACKGROUND

- Quetiapine fumarate is a drug used to treat schizophrenia, a psychotic disorder.
- It is very challenging to ensure that schizophrenia patients comply to their medications due to signs and symptoms such as hallucinations, delusions, disorganized thinking and others.
- Schizophrenia patients require lifelong treatment, even when the symptoms have subsided.
- Chocolate based drug delivery system is a newly emerging drug delivery method in the pharmaceutical industry.
- Medicated chocolate containing quetiapine fumarate which have elegant in appearance and provides pleasant taste could be a new method to deliver drugs to patients since chocolate would be more easily acceptable by patients.

MATERIALS

- Cocoa powder, cocoa butter substitute and soy lecithin are used in the preparation of chocolate base.
- Quetiapine fumarate is used as the active pharmaceutical ingredient (API).
- Artificial sweeteners are used as flavoring agent to mask the unpleasant taste of quetiapine fumarate.



METHODOLOGY

- The chocolate base was prepared by melting cocoa butter substitute at 50°C and then cocoa powder and soy lecithin were added.
- Quetiapine fumarate in required amount was added to the mixture above and casted into the silicone mould.
- The mixture was left at room temperature to be solidified.
- The solidified medicated chocolate containing quetiapine fumarate was then wrapped using aluminium foil and stored in a suitable container.

CHARACTERISTICS

The chocolate showed acceptable results for several evaluation tests:

- Weight of 4.611 g
- Diameter of 25.327 mm
- Height of 12.856 mm
- Hardness of 10.985 kg
- Friability of 0.026%
- Disintegration time of 6.34 - 9.21 minutes
- Melting point of 34°C - 36 °C

UNIQUENESS & ADVANTAGES

- Have smooth, shiny and attractive appearance, provides pleasant taste
- More easily acceptable by psychotic patients
- A fun way in taking medicine and improve patient's compliance
- Integrated food technology in pharmaceutical industry in manufacturing drugs
- Huge market since the trends of medicated chocolate is increasing
- Easy to manufacture, do not involve use of organic solvent, biodegradable

CONCLUSION

- Chocolate based drug delivery system is a new drug delivery method in which drug is incorporated into the chocolate and is released from the chocolate when placed in the mouth.
- The method to prepare medicated chocolate is easy and convenient.
- Medicated chocolate can improve the non-compliance issue among schizophrenia patients since it has an elegant appearance and provides pleasant taste.

List of Researchers

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