



J/W Mariceuticals Inc.

Information applies to medical suppositories.

Key Advantages of Rectal Suppository Administration Route

1. When correctly inserted (just past the anal sphincter muscle) significantly avoids the liver (hepatic) first pass metabolism, and initial significant conversion to 11-Hydroxy-Delta-9 THC (5-10 times as psychoactive as Delta-9 THC), therefore less of a 'high'. Gains direct access to the systemic blood circulation.
2. Compared to oral administration avoids degradation during digestion and absorption (by acidic gastric fluid, bile, enzymes).
3. Lower dosage of cannabinoids and terpenes than required when dosing orally should be equally effective.
4. Suitable for patients/consumers that have difficulty in swallowing oral solid dosage forms (e.g. the elderly), those suffering from vomiting (e.g. cancer patients on chemotherapy and radiotherapy), unconscious individuals, and those sensitive to gastric irritation or with gastric ulcers.
5. No problems with unpleasant tasting active agents.
6. Rapid and extensive absorption directly into the systemic blood circulation, with a typical onset of activity within 15-30 minutes post insertion, and a duration of activity of several hours.

Specific Advantages

As compared to suppositories formulated with a coconut oil or cacao butter base:

1. Do not need to be refrigerated to prevent softening and subsequent difficulties in handling and insertion. OK for storage at ambient temperatures of up to 30C/86F
2. Do not have the same problems in processing and storage as coconut oil/cacao butter based suppositories, which are sensitive to processing and storage temperatures, leading to inconsistent in-use melting ranges and difficulties in handling/insertion.
3. All formulation ingredients are of pharmaceutical or food grade quality,

and suitable for rectal usage. Suppository base consists of highly refined vegetable lipids, with consistent and reproducible stability and chemical and physical properties.

4. Contain antioxidants, to protect the suppositories from development of rancidity on storage due to atmospheric oxidation.
5. Suppositories formulated to readily melt at body temperature, and disperse to form a fine emulsion in the rectal fluid. This creates a very large surface area of lipid droplets containing the active cannabinoids and terpenes, thus enhancing their rate and consistency of absorption into the systemic blood circulation. Simple coconut oil/cacao butter bases typically melt at body temperature but do not disperse into fine emulsion droplets, so would not be expected to demonstrate the same degree of effectiveness for a given dosage strength.
6. Formulations incorporate penetration enhancers, to facilitate absorption of active cannabinoids and terpenes across the rectal lining membrane (epithelium) and into the systemic blood circulation.
7. Formulations specifically designed for enhanced bioavailability and superior effectiveness (efficacy).
8. Backed by comprehensive analysis of all formulation ingredients.

Efficacy

The efficacy of the suppositories is based upon years of development and patient trials of the product.

Anecdotal evidence has shown that suppositories are good for sleep issues, pain relief, anxiety reduction and overall well being without the psychoactive onset associated with other cannabis products on the market.

brynn@mariceuticals.ca