

Assay-Normalised Dosing Capsules

Medical cannabis flower: dose accuracy, patient experience and clinical governance

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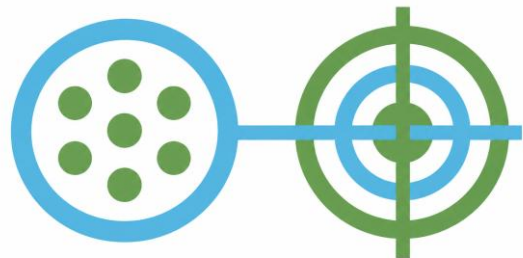


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1. Executive Summary

A prescription for loose medical cannabis flower can leave a clinically important part of dose preparation to the patient. A target of 40 mg THC from flower labelled 20% THC nominally requires 0.200 g of flower. In a domestic setting, however, a scale displaying two decimal places (0.01 g) is not thereby proven accurate to ± 0.01 g: display resolution, calibration, repeatability, linearity, draughts, vibration, tare technique and surface stability all contribute to uncertainty. This white paper adopts ± 0.02 g as a pragmatic working assumption for patient self-weighing; it is not asserted as a specification for every domestic scale.¹

With the working $\pm 10\%$ relative potency tolerance used in this analysis, flower labelled 20% THC may represent 18–22% THC. Combining that potency range with a patient-prepared mass of 0.200 g ± 0.020 g gives an illustrative 32.4–48.4 mg THC range around a nominal 40 mg target: approximately -19% to $+21\%$. This is before any grinding or transfer loss, moisture change, chamber-fill variability or vaporisation variability is considered.

An assay-normalised dosing capsule changes the control point. The released batch assay is used to calculate the batch-specific flower mass required to represent the prescribed cannabinoid target, and that mass is then reproduced under controlled manufacturing conditions. If a batch assays at 25.5% THC, a 40 mg target requires 156.9 mg flower. If a lower-potency batch assays at 14.55% THC, the same 40 mg target requires 274.9 mg — approximately 275 mg. A controlled $\pm 5\%$ fill contribution around either calculated target corresponds to approximately 38–42 mg THC represented in the flower.

The principal proposition is therefore not simply pre-portioning. It is assay-normalised, countable dosing: the active-ingredient target remains constant while the batch-specific flower mass changes. For patients this reduces self-dispensing, preparation burden, mess, waste and stigma. For clinicians it creates a more reproducible input for titration, monitoring, controlled-drug reconciliation and discussion in mg of active ingredient.

¹NIST, 'Weighing and Scales FAQs' (resolution/verification scale division) and NISTIR 6919, Recommended Guide for Determining and Reporting Uncertainties for Balances and Scales.

2. Why Loose-Flower Dosing Is Uncertain

2.1 Label claim is not the same as released batch assay

A percentage printed on a pack is a nominal product strength. Where the product specification permits $\pm 10\%$ relative potency around a 20% label claim, the actual material may assay between 18% and 22% THC. A clinician targeting 40 mg THC from the label claim would calculate 200 mg flower, but that same 200 mg represents 36–44 mg THC across the potency range. The released assay removes much of this ambiguity because it is a measured batch result rather than a nominal label value.

The broader cannabis market also demonstrates why very high label claims should not be treated as a reliable dosing input without analytical confirmation. Independent testing of commercial flower has documented substantial label inflation; one 2023 study found observed THC potency averaged 23.1% below the lowest reported label values and 35.6% below the highest. Claims in the 34–35% range are therefore sufficiently exceptional that they warrant particular analytical scrutiny rather than being accepted uncritically as a dose-calculation basis.²

2.2 Domestic weighing: readability is not accuracy

A target mass of 0.200 g is challenging for consumer weighing equipment. A scale that displays to 0.01 g has only twenty displayed increments between zero and the target mass; one 0.01 g increment is already 5% of the target. More importantly, metrology guidance distinguishes display resolution from accuracy. Calibration uncertainty, repeatability, linearity, off-centre loading, vibration, drafts and drift all matter. Domestic scales are also unlikely to be subject to documented, traceable and regular calibration in the way a controlled manufacturing balance would be.³

For this white paper, ± 0.02 g is used as a realistic working assumption for patient self-weighing. At a 0.200 g target that is $\pm 10\%$ mass variation before potency uncertainty is added. It is deliberately a modest assumption: poor siting, infrequent calibration, low batteries, residue on the pan, incorrect taring or simply stopping when the display looks 'close enough' can all worsen performance.

2.3 Many patients do not weigh each administration

Glass Pharms® experience is that many patients — and likely most in routine use — do not weigh every administration. Instead, they commonly fill the available chamber or void in the chosen vaporiser by eye. Chamber-fill by volume is not dose control by mass: particle size, grind consistency, packing density and moisture all change how much flower occupies the same space.⁴

Where patients do weigh, the flower may be weighed directly into a reusable dosing capsule or into an intermediate weighing vessel before transfer. Direct filling places greater reliance on accurate tare and stable handling of a very small receptacle; use of an intermediate vessel adds another transfer step where particulate can adhere, spill or remain behind.

2.4 Grinding and transfer create measurable loss

Grinding, weighing and transfer do not conserve mass perfectly in domestic practice. Trichome-rich particles can remain in a grinder, adhere to a vessel or tool, spill during

²Schwabe AL, Johnson V, Harrelson J, McGlaughlin ME. 'Uncomfortably high: Testing reveals inflated THC potency on retail Cannabis labels.' PLOS ONE 18(4), 2023, e0282396.

³NIST, 'Weighing and Scales FAQs' (resolution/verification scale division) and NISTIR 6919, Recommended Guide for Determining and Reporting Uncertainties for Balances and Scales.

⁴Glass Pharms patient-use observations and clinic feedback, 2026 (unpublished internal observations).

transfer, or be left behind on the work surface. Glass Pharms' internal preparation studies have measured losses of up to 7% when medical cannabis flower is prepared with domestic equipment. A nominal 40 mg THC input would become 37.2 mg if 7% of the prepared flower were lost before loading, even if potency and weighing had otherwise been perfect.⁵

2.5 Patients may alter the hydration state after dispensing

Patients sometimes add two-way humidity-control products such as Boveda packs to prescribed flower. Boveda markets 58% and 62% RH products specifically for cannabis storage. This can change the mass of water in the flower after the released assay was established. The exact change is product- and equilibrium-dependent, but the direction of the dosing effect is straightforward: adding water increases total flower mass without adding THC, reducing THC concentration on an as-is mass basis.⁶

As an illustration, flower at 10% moisture contains 90 parts dry matter per 100 parts total mass. If the same dry matter is re-equilibrated to 12% moisture, total mass becomes $90 \div 0.88 = 102.27$ parts. With cannabinoid mass unchanged, as-is potency falls by about 2.22% relative. A nominal 40 mg dose calculated from the pre-hydration concentration would therefore represent only about 39.1 mg after that hydration change if the patient continued to weigh the same total mass. This example is illustrative; water activity and moisture content are related but are not interchangeable measures.

2.6 Potency and mass errors compound

The principal upstream uncertainties multiply rather than add independently. Table 1 uses the working 20% $\pm 10\%$ potency range and the ± 0.02 g domestic weighing assumption to show the effect on a 40 mg target. It does not include the additional 7% preparation loss, hydration change, chamber-fill-by-eye behaviour or downstream vaporisation variability, so it should not be treated as a worst-case model.

Table 1. Illustrative upstream variability around a 40 mg THC target when dosing loose flower from a 20% label claim using ± 0.02 g patient weighing accuracy.

Scenario	Flower mass	THC potency	THC represented	Deviation from 40 mg
Nominal label calculation	200 mg	20.0%	40.0 mg	0%
Potency low; mass exact	200 mg	18.0%	36.0 mg	-10.0%
Potency high; mass exact	200 mg	22.0%	44.0 mg	+10.0%
Potency low + weighing low	180 mg	18.0%	32.4 mg	-19.0%
Potency high + weighing high	220 mg	22.0%	48.4 mg	+21.0%

⁵Glass Pharms internal domestic preparation-loss study, 2026 (unpublished); losses of up to 7% observed in the tested domestic preparation workflow.

⁶Boveda, cannabis humidity-control guidance: 58% and 62% RH products; see 'Which Boveda RH Level Is Right for Your Flower'.

3. Assay-Normalised Dosing Capsules

3.1 Principle: target active ingredient ÷ actual released assay

The assay-normalised approach starts with the clinician's intended cannabinoid content and works backwards from the actual released batch assay. The manufacturing calculation is:

$$\text{Target flower mass (mg)} = \text{target THC dose (mg)} \div \text{assayed THC fraction}$$

The fill mass therefore changes from batch to batch while the intended THC content remains centred on the same target. This is the key difference from loose-flower self-dispensing: potency variation is measured and used to correct the mass before the patient receives the dose.

3.2 Worked examples using a 40 mg THC target

If a batch nominally labelled 25% releases at an actual assay of 25.5% THC, the calculated flower mass is $40 \div 0.255 = 156.9$ mg. If a lower-potency batch releases at 14.55% THC, the same 40 mg target requires $40 \div 0.1455 = 274.9$ mg, operationally approximately 275 mg. At exactly 275 mg and 14.55% THC, the represented THC content is 40.01 mg.

Table 2. Batch-specific flower masses required to represent the same 40 mg THC target when the actual released assay changes.

Actual released assay	Calculation	Target flower mass	THC target
25.5% THC	$40 \div 0.255$	156.9 mg	40 mg
14.55% THC	$40 \div 0.1455$	274.9 mg (≈ 275 mg)	40 mg

3.3 Effect of a controlled $\pm 5\%$ fill process

Using the 14.55% batch example, a 274.9 mg target filled within $\pm 5\%$ produces a fill-weight contribution corresponding to approximately 38–42 mg THC. The same proportional relationship applies to the 25.5% batch because the target mass has already been assay-normalised.

Table 3. Effect of $\pm 5\%$ fill control on the 14.55% assay example targeting 40 mg THC per dosing capsule.

Fill condition	Flower mass	Calculation	THC represented
-5% fill limit	261.2 mg	$261.2 \times 14.55\%$	38.0 mg
Nominal target	274.9 mg	$274.9 \times 14.55\%$	40.0 mg
+5% fill limit	288.7 mg	$288.7 \times 14.55\%$	42.0 mg

3.4 The $\pm 5\%$ claim is a fill-control contribution, not total systemic dose accuracy

A $\pm 5\%$ fill specification should not be described as $\pm 5\%$ systemic THC exposure. Finished-dose confidence also depends on assay uncertainty, sampling representativeness, within-batch homogeneity, stability and moisture state. After the dosing capsule is loaded into a vaporiser, extraction efficiency, temperature, inhalation pattern and bioavailability remain downstream variables. The advantage is narrower and more defensible: two major upstream variables — unknown actual potency and patient-prepared mass — are substantially controlled before administration.

4. Patient Perspective

4.1 Accuracy without domestic self-dispensing

The patient no longer has to translate a percentage strength into grams, judge a 0.14–0.18 g quantity, rely on a domestic scale, remember to calibrate or verify it, tare correctly, or decide whether a fluctuating reading is acceptable. Nor do they have to rely on chamber volume as a surrogate for mass. A dosing capsule prepared from the released batch assay arrives as a defined dose ready for administration.

4.2 Convenience and accessibility

Loose flower preparation can require a grinder, scales, a weighing vessel or reusable dosing capsule, a suitable stable surface and a transfer tool. A prefilled dosing capsule requires no additional preparation equipment beyond the compatible vaporiser: the patient removes the dosing capsule from its blister and inserts it into the vaporiser. This is faster and simpler when symptoms, reduced dexterity, tremor, poor vision, fatigue or cognitive load make fine manipulation difficult.

4.3 Discretion, dignity and stigma

Cannabis continues to carry negative social associations even when it is lawfully prescribed for medical purposes. In a UK survey of 450 patients receiving cannabis-based medicinal products, only 32.9% believed society in general was very or somewhat approving of their prescription. Visible grinding, weighing and handling of flower can therefore create an avoidable social burden. A blistered dosing capsule is smaller, quicker to handle, releases less odour during preparation and looks less like recreational cannabis use.⁷

4.4 Less mess, less waste and easier device cleaning

Loose flower produces crumbs and trichome-rich particulate during grinding and transfer. Glass Pharms has measured preparation losses of up to 7% using domestic equipment. If loose flower is loaded directly into a vaporiser filling chamber, the device also accumulates plant residue quickly and requires more frequent and difficult cleaning. Using a dosing capsule contains much of that material within the dosing capsule itself; after dispensing there is no patient grinding or transfer loss because the patient simply removes the dosing capsule from the blister and loads it into the compatible vaporiser.^{8,9}

4.5 Countable doses and clearer adherence

A prescription expressed as a number of 40 mg THC dosing capsules is easy to understand and reconcile. The patient can report how many dosing capsules were used and how many remain, rather than estimating consumption from the changing mass of a bulk flower pack. This supports more meaningful discussions about adherence, benefit, adverse effects and dose escalation.

⁷Erridge S et al. 'Perceived Stigma of Patients Undergoing Treatment with Cannabis-Based Medicinal Products.' Cannabis and Cannabinoid Research, 2022; PubMed PMID 35742748.

⁸VAPORMED current product/certification documentation for MIGHTY+ MEDIC and VOLCANO MEDIC 2; STORZ & BICKEL support states MIGHTY+ MEDIC supports dosing capsules, and VAPORMED documentation supports dosing-capsule use with VOLCANO MEDIC 2 via its adapter.

⁹Glass Pharms internal domestic preparation-loss study, 2026 (unpublished); losses of up to 7% observed in the tested domestic preparation workflow.

5. Clinician and Regulatory Perspective

5.1 Prescribing in active-ingredient terms

The ACMD specifically recommended that cannabis-derived medicinal products should state CBD and THC content in mg per unit dose or volume in a manner that informs clinical decision-making; the Government accepted that recommendation. Assay-normalised dosing capsules operationalise that principle for flower: the clinician can think in a 40 mg THC target while manufacturing adjusts the flower mass to the released assay.¹⁰

5.2 Schedule 2 controlled-drug prescription discipline

Unlicensed cannabis-based products for medicinal use in humans are Schedule 2 controlled drugs. Schedule 2, 3 and 4 controlled-drug prescriptions are valid for 28 days from the appropriate date. Separately, the Department of Health and Social Care strongly recommends that Schedule 2, 3 and 4 prescriptions normally do not exceed 30 days' treatment, although a longer period can be justified. Regulation 15 of the Misuse of Drugs Regulations 2001 also requires controlled-drug prescriptions to specify the dose and, where applicable, form and strength, and the total quantity or number of dosage units in words and figures.^{11,12,13}

A countable dosing capsule does not change the law, but it makes the administered unit explicit. A direction such as 'one 40 mg THC dosing capsule' is easier to reconcile with quantity supplied and quantity remaining than a repeated instruction to self-measure a small mass from a bulk pack.

5.3 Unlicensed medicines place direct professional responsibility on the prescriber

The GMC requires a doctor proposing or prescribing an unlicensed medicine to be satisfied that there is sufficient evidence or experience to demonstrate safety and efficacy, to take responsibility for prescribing and overseeing the patient's care and follow-up, and to make clear records. It is therefore more precise to describe unlicensed prescribing as carrying direct personal professional responsibility for the prescribing decision, rather than implying that the unlicensed status transfers responsibility elsewhere in the supply chain. Reducing avoidable dose-preparation variability supports — but does not replace — those duties.¹⁴

5.4 Route-of-administration control: smoking is prohibited

The Misuse of Drugs Regulations 2001, as amended in 2018, expressly prohibit self-administration of a cannabis-based product for medicinal use in humans by smoking, other than for research purposes. Loose flower is physically easy to remove from its pack and smoke, including by mixing it with tobacco. A sealed, device-specific dosing capsule makes that eventuality materially less convenient and less likely by moving the supplied medicine towards a prepared vaporisation format. It does not make misuse impossible, and it should not be described as a tamper-proof legal control.¹⁵

¹⁰Home Office / DHSC response to ACMD advice on cannabis-based products for medicinal use, Recommendation 5 (accepted): CBD and THC content should be stated in mg per unit dose or volume.

¹¹Misuse of Drugs Regulations 2001, regulation 15 (Schedule 2/3 controlled-drug prescription particulars, including dose, form/strength where appropriate, and total quantity/number of dosage units in words and figures).

¹²NHS Business Services Authority / DHSC controlled-drug prescribing guidance: strong recommendation that Schedule 2, 3 and 4 controlled-drug prescriptions normally do not exceed 30 days' treatment.

¹³NHS Business Services Authority: prescriptions for Schedule 2, 3 and 4 controlled drugs are valid for 28 days from the appropriate date.

¹⁴GMC, 'Prescribing unlicensed medicines', paras 102–108; para 105 requires the prescriber to take responsibility for prescribing, monitoring and follow-up.

¹⁵Misuse of Drugs Regulations 2001 as amended by SI 2018/1055, regulation 16A(3): self-administration of a cannabis-based product for medicinal use by smoking is prohibited other than for research purposes.

5.5 GMP and pharmaceutical dose-control principles

MHRA guidance describes GMP as the minimum standard for medicines manufacturing and requires medicinal products to be consistently produced, controlled to appropriate quality standards and compliant with their product specification. Separately, harmonised pharmacopoeial practice recognises uniformity of dosage units as a core control concept for single-dose preparations. A batch-specific assay calculation followed by a calibrated, controlled fill process is therefore much closer to conventional pharmaceutical dose control than asking the patient to reproduce a sub-gram mass at home.^{16,17}

5.6 Medical-device administration

UK CBPM legislation does not itself state that dry flower must be administered through a Class IIa vaporiser. The stronger governance position is nevertheless to use a medical device that is certified for its intended administration purpose rather than relying on a consumer vaporiser. MHRA guidance recognises Class IIa as a medium-risk medical-device class, while GMC prescribing guidance cautions clinicians to use medical devices for their intended purposes.¹⁸

For dry-herb cannabis vaporisation, VAPORMED currently lists the MIGHTY+ MEDIC and VOLCANO MEDIC 2 as its two current medical vaporisers and publishes current EU MDR certification documentation for both. A 2026 market review found no other dry-herb vaporiser manufacturer with equivalent publicly verifiable medical-device certification. The Storz & Bickel® dosing capsule system is specifically supported for these medical devices — directly in the MIGHTY+ MEDIC and, using the dosing-capsule adapter, in the VOLCANO MEDIC 2. On the evidence reviewed, these Class IIa systems provide the most defensible intended-use pathway for a dosing-capsule-based medical cannabis administration system.¹⁹

5.7 More interpretable titration and pharmacovigilance

Titration attempts to relate dose to effect and adverse effects. If both potency and patient-prepared mass vary materially, a clinician cannot easily determine whether a change in response reflects pharmacology or preparation noise. Assay-normalised, countable dosing capsules do not remove inhalation and pharmacokinetic variability, but they provide a better-controlled upstream dose for clinical review, adverse-event interpretation and longitudinal treatment data.

¹⁶European Medicines Agency, ICH Q4B Annex 6, Uniformity of Dosage Units General Chapter; harmonised pharmacopoeial control of dosage-unit uniformity.

¹⁷MHRA, 'Medicines: good manufacturing practice and good distribution practice': GMP is the minimum standard for medicines manufacture; products must be consistently produced and controlled to appropriate quality standards.

¹⁸MHRA, 'Borderline products: classifying medical devices and risk' (Class IIa = medium/lower-medium risk general medical device); GMC prescribing guidance advises care not to use medical devices outside their intended purpose.

¹⁹VAPORMED current product/certification documentation for MIGHTY+ MEDIC and VOLCANO MEDIC 2; STORZ & BICKEL support states MIGHTY+ MEDIC supports dosing capsules, and VAPORMED documentation supports dosing-capsule use with VOLCANO MEDIC 2 via its adapter.

6. Side-by-Side Comparison

Table 4 compares the two pathways on a like-for-like upstream basis. The $\pm 5\%$ figure for the dosing capsule is the controlled fill contribution around an assay-normalised target; it is not a claim of $\pm 5\%$ systemic bioavailability. The $\pm 20\%+$ loose-flower figure reflects only the worked potency-plus-weighing model and can widen further where the dose is not weighed, where material is lost during preparation, or where hydration is changed.

Table 4. Loose-flower self-dispensing versus an assay-normalised prefilled dosing capsule for a 40 mg THC target.

Dimension	Loose flower self-dispensing	Assay-normalised prefilled dosing capsule
Dose basis	Nominal label strength $\times$ patient-prepared mass	Actual released assay $\times$ batch-specific controlled fill target
Illustrative upstream accuracy around 40 mg	Approximately 32.4–48.4 mg in the worked model: -19% to $+21\%$ (about $\pm 20\%+$)	Approximately 38–42 mg from a $\pm 5\%$ fill contribution after assay normalisation
Potency input	Label claim; very high claims can be affected by assay/lab variability	Released batch assay used directly in calculation
Patient weighing	Consumer scale or no weighing at all; 0.01 g display does not establish accuracy	None
Calibration	No documented routine calibration expected in domestic use	Calibrated manufacturing equipment within a controlled quality system
Fill process	Patient judges, adds/removes fragments and may fill by chamber volume	Controlled fill process under defined manufacturing conditions / GMP quality system
Grinding / transfer loss	Glass Pharms domestic studies: up to 7% loss	0% patient preparation/transfer loss after dispensing; dosing capsule is removed from blister and inserted into device
Moisture after dispensing	Patient may add humidity-control device and alter mass/potency relationship	Sealed blister constrains post-fill handling and hydration change
Additional equipment	Typically grinder, scales, weighing vessel or reusable dosing capsule, transfer tool and stable surface	No preparation equipment beyond compatible vaporiser and the supplied dosing capsule
Convenience	Multi-step preparation before every administration	Blister $\rightarrow$ dosing capsule $\rightarrow$ vaporiser
Discretion / stigma	Visible flower, grinder and scales; more odour during preparation	Less visible handling, lower preparation odour and a medicine-like unit

Dimension	Loose flower self-dispensing	Assay-normalised prefilled dosing capsule
Smoking / tobacco misuse opportunity	Loose flower is readily repurposed for smoking or mixing with tobacco	Prepared device-specific format materially reduces the opportunity, though does not eliminate misuse
Dose counting	Estimated from bulk quantity remaining	Simply count how many 40 mg THC dosing capsules were used and remain
Device cleanliness	Direct loose-flower loading rapidly soils filling chamber and requires cleaning	Dosing capsule contains flower and reduces direct chamber contamination

7. Five Strongest Benefits

Five Strongest Benefits

The five principal benefits of assay-normalised prefilled dosing capsules, considered jointly from patient and clinician perspectives.

1



Improved dose accuracy

Prepared from the actual released batch assay to represent the prescribed 40 mg THC target.

2



No patient weighing or calibration

Removes grinding, weighing, tare and scale-calibration burden in the home.

3



Less mess and waste

Blister-to-vaporiser workflow reduces loose crumbs, transfer loss and device contamination.

4



Clearer convenience and communication

A defined 40 mg THC dosing capsule is easier to explain and use than a fraction of a gram.

5



Supports adherence and accountability

Patients can count how many dosing capsules were used and remain.

8. Considerations and Limitations

- A $\pm 5\%$ fill-weight tolerance is not automatically a $\pm 5\%$ finished-unit THC-content specification. Finished-unit confidence also depends on assay uncertainty, sampling, homogeneity, stability and moisture state.
- The released assay must be representative of the material actually used to manufacture the dosing capsules; otherwise assay-normalisation creates false precision.
- Glass Pharms tightly controls the moisture state of its flower, targeting water activity (a_w) of approximately 0.60 within defined tight tolerances. Published medical-cannabis literature commonly treats $a_w \leq 0.65$ as an important microbial-stability threshold. This upstream control reduces moisture variability before filling, while the sealed blister helps limit post-fill change.²⁰
- Water activity and moisture content are related but distinct. A patient who rehydrates loose flower after dispensing can alter the mass-to-cannabinoid relationship even if the absolute cannabinoid content has not changed.
- The 7% preparation-loss observation is an upper value from Glass Pharms internal domestic-equipment studies and should not be presented as the loss experienced by every patient.²¹
- Very high THC label claims should be confirmed analytically rather than used as an unquestioned dosing input. Label-inflation evidence from other regulated cannabis markets demonstrates why the released assay is the stronger basis for dose calculation.²²
- A nominal 40 mg THC content in the flower is not 40 mg systemically delivered. Vaporiser extraction, temperature, inhalation behaviour and bioavailability remain downstream sources of variability.
- The working $\pm 10\%$ potency range, ± 0.02 g domestic weighing assumption and $\pm 5\%$ fill tolerance are used to illustrate the dose-control argument. Any supplied product claim must be supported by the applicable specification, validation and analytical control strategy.

²⁰Uziel A et al. 'Solid-State Microwave Drying for Medical Cannabis Inflorescences.' Cannabis and Cannabinoid Research, 2024; published literature notes medical cannabis should generally be dried to water activity ≤ 0.65 .

²¹Glass Pharms internal domestic preparation-loss study, 2026 (unpublished); losses of up to 7% observed in the tested domestic preparation workflow.

²²Schwabe AL, Johnson V, Harrelson J, McGlaughlin ME. 'Uncomfortably high: Testing reveals inflated THC potency on retail Cannabis labels.' PLOS ONE 18(4), 2023, e0282396.

9. Conclusion

Loose-flower prescribing can give the appearance of quantitative precision while leaving several material variables unresolved at the point of administration. A 40 mg THC instruction derived from 20% flower requires 0.200 g material. With a realistic ± 0.02 g domestic weighing assumption and a $\pm 10\%$ potency range, the illustrative dose already spans 32.4–48.4 mg before preparation losses, hydration changes, chamber-fill behaviour or vapourisation are considered. Many patients do not weigh at all, making the actual flower mass even less defined.

Assay-normalised dosing capsules move those variables upstream into a controlled manufacturing process. The actual released assay determines the batch-specific mass; calibrated filling reproduces that target; the finished dose is countable; and the patient can move directly from blister to an intended-use medical vaporiser without grinding, scales or transfer. The result is not perfectly invariant systemic exposure, but it is a substantially better controlled medicinal input.

For clinicians, this better aligns flower prescribing with the established pharmaceutical principles of active-ingredient expression, dosage-unit control, GMP manufacturing, controlled-drug reconciliation and explicit route of administration. For patients, it offers a simpler, more discreet and less wasteful treatment experience. The defensible claim is therefore not merely convenience: assay-normalised dosing capsules convert a patient-prepared quantity of loose flower into a batch-assayed, manufactured and countable dose designed around a defined mg THC target.

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