MCP SERVER | NO CODE | CLOUD HOSTED

Essential Oil Drop Calculator MCP for AI Agents

Accurate essential oil dilution calculation for aromatherapy and cosmetic formulation

The Essential Oil Drop Calculator gives you precise instructions for safe aromatherapy dilutions. It figures out exactly how many drops of essential oil to mix with your carrier oil volume to hit a target concentration, whether that's 1% or 2%. You can also check if an existing mixture is safe and determine the total capacity of any bottle.

A+ Quality Score 100/100

essential-oil | dilution | calculator | safety | aromatherapy

MAINTAINED BY VINKIUS CLOUD FOR AI AGENTS · JULY 2026
vinkius.com/mcp/essential-oil-drop-calculator

SCAN TO VIEW

The connectivity layer between AI and the world's software.

Vinkius sits between AI and every application. All communication passes through Vinkius Cloud via the Model Context Protocol (MCP) — with governance, observability, and security at every layer.

Your AI Connections Run Through Vinkius Cloud

The world's largest managed MCP catalog

Vinkius is the connectivity layer where AI connects to the software your business already runs. We handle the hosting, the security, the credentials, the uptime — you get agents that actually do things.

We operate the world's largest managed MCP catalog. Major SaaS platforms, CRMs, databases, and cloud providers — running, monitored, production-ready. This MCP server is hosted and maintained by the Vinkius Cloud for AI Agents.

> *The agent doesn't manage credentials, doesn't manage uptime, doesn't manage security. Vinkius does.*
>
> — Architecture principle

Four Pillars of the Vinkius Runtime

01 — Security by design

Credentials stay encrypted at rest via AES-256. The AI agent never touches raw keys — they're injected into a sandboxed V8 isolate at runtime. Actions are logged, and connections have an emergency kill switch.

02 — Built on MCP Fusion

This MCP server was built with **MCP Fusion**, the open-source framework (Apache 2.0) that powers the entire Vinkius catalog. Schema-as-firewall strips undeclared fields, compiled PII redaction runs at zero overhead, and cryptographic lockfiles produce git-diffable audit trails.

03 — Deterministic observability

Eight immutable metrics per endpoint: request volume, p95 latency, error rate, active connections, cost attribution. A live payload feed logs every tool call with mutation detection.

04 — Autonomous operations

Servers are deployed, monitored, and patched autonomously. New capabilities and security patches ship weekly. Zero-downtime deployments ensure continuous availability across all managed MCP servers.

AES-256	Ed25519	24h TTL	V8 Isolate
Encryption at rest	PKI vault signatures	Ephemeral session keys	Sandboxed execution

One Token. Instant Access.

Every MCP server on Vinkius is accessed through a **Connection Token**. Tokens are generated in the cloud dashboard and produce a unique MCP endpoint URL. Paste this URL into any MCP-compatible client — no SDK required.

A single token can serve **multiple AI clients simultaneously**, or you can issue separate tokens per client for granular access control. Each token tracks its own request count, last activity timestamp, and can be individually enabled or revoked.

MCP ENDPOINT

```
https://edge.vinkius.com/{token}/mcp
```

Claude · Cursor · VS Code · Windsurf · Grok · Gemini

Security Is the Architecture

Security in Vinkius is not a feature — it's the foundation of the runtime. The gateway enforces multiple independent protection layers between AI agents and third-party APIs.

01 — Ed25519 PKI Vault

Every workspace has an Ed25519 Master Key. Session keys are generated ephemerally (24h TTL) and signed by the Master Key. Credentials never leave the vault boundary.

02 — V8 Isolate Sandboxing

Tool code runs inside isolated-vm V8 isolates with 64 MB memory caps and per-request timeouts. No filesystem access, no network access except through the SSRF-guarded fetch bridge.

03 — SSRF Guard

All outbound HTTP requests are DNS-resolved and validated before execution. Private IP ranges (10.x, 172.16-31.x, 192.168.x, AWS metadata 169.254.x) are blocked at the network layer.

04 — DLP & PII Redaction

A ResponseGuard pipeline intercepts every tool response. Configurable redaction patterns strip sensitive fields (emails, SSNs, card numbers) before data reaches the AI agent.

05 — Cryptographic Audit Trail

Every request is signed into a SHA-256 hash chain with Ed25519 signatures. Events form a tamper-proof, SIEM-exportable forensic record.

06 — Honeytoken Trap System

Phantom credentials are injected into isolated environments. If a honeytoken is used outside Vinkius infrastructure, the server is quarantined instantly.

Emergency Kill Switch

EU AI Act Art. 14(1) Compliant

The kill switch is an **emergency halt** mechanism — not a simple toggle. When triggered, it executes three actions atomically:

01 — Server deactivated

The MCP server is immediately taken offline across the entire cluster.

02 — All tokens revoked

Every connection token is invalidated. Total lockout — reconnection blocked until new tokens are issued.

03 — WebSocket connections killed

Active connections terminated via Redis pubsub broadcast. Propagates to every runtime node in the cluster.

Full Visibility. Zero Guesswork.

The Vinkius cloud dashboard includes a full MCP Governance suite — real-time analytics and security controls for production AI operations.

Control Plane

KPI dashboard with request volume, latency, success rate, token consumption, and AI-generated operational briefings.

Agent Activity

Which AI clients are connecting, how often, and what they're doing — real-time session tracking.

FinOps

Cost tracking per tool, payload compression savings, budget optimization signals, and consumption trends.

Tool Health

Slowest and most error-prone tools, with actionable root-cause insights and performance baselines.

Firewall & DLP

PII redaction activity, sensitive data protection counters, and security event timeline.

Incident Log

Error trends, failure rates, status-code breakdowns, and forensic audit trail access.

> Get started at **cloud.vinkius.com** — connect your AI agent in under 60 seconds.

Essential Oil Drop Calculator MCP

3 tools available
Cloud-hosted on Vinkius

Aromatherapy requires precision. Guessing dilutions isn't safe, so this MCP calculates exactly how many drops you need to mix essential oils into carrier oil for specific concentrations. It takes your desired dilution percentage and the volume of your carrier oil and gives a precise drop count. You can use it to verify existing blends or figure out the total drop capacity of an empty bottle. The whole process ensures consistent, safe results every time, removing guesswork from your practice. If you're building out a suite of utilities for your creative work, connecting this MCP through Vinkius lets your AI agent access essential chemistry calculations alongside other services you use daily.

Core Capabilities

01 — Determine required drops

Calculates the exact number of essential oil drops needed to reach a specific dilution percentage in a given volume of carrier oil.

02 — Assess blend safety

Checks an existing mixture of essential oil and carrier oil to confirm if the resulting concentration is at a safe, usable level.

03 — Find bottle capacity

Retrieves the maximum total drop count for any specified volume of carrier oil.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/essential-oil-drop-calculator** — connect your AI agent in three steps.

01 Give your AI client the carrier oil's volume (in ml) and the target dilution percentage. The agent runs the calculation to determine the required drops.

02 Alternatively, if you have a mixed blend, input the current oils and volumes. The system checks that data against established safety guidelines.

03 Finally, if you just need to know how many total drops fit in a bottle, input the volume, and the tool tells you the full capacity.

The bottom line is, it turns guesswork into guaranteed precision for safe aromatherapy blends.

Built For

This MCP is essential for professional aromatherapists, cosmetic formulators, and herbal product developers. If your practice relies on precise ratios and safety is non-negotiable, you need this tool to stop mixing by feel.

Aromatherapist

Uses it daily to ensure every blend they create—from roll-ons to inhalants—achieves the correct dilution percentage for safe client application.

Cosmetic Formulator

Calculates the precise drop count needed when scaling a recipe from test batches into full commercial product volumes, maintaining strict safety standards.

Herbalist/Holistic Practitioner

Verifies existing client blends or mixtures before use to confirm they haven't accidentally exceeded safe dilution levels.

What Changes When You Connect

01 Stop guessing on ratios. Use the `calculate_drops_needed` function to determine the exact drop count needed, guaranteeing your blend hits the target concentration (e.g., 2%).

02 You gain safety assurance immediately. Run a check using `check_dilution_safety` to confirm if any current mixture is safe for use before applying it.

03 Eliminate inventory confusion. By running `get_drop_capacity_info`, you instantly know the total number of drops available in any bottle size, improving stock management.

04 Maintain client trust and professional standards. Every product made with this MCP has verifiable, accurate dilution data attached to it.

05 Speed up your workflow. Instead of flipping through chemistry charts or doing manual math, your agent runs complex calculations instantly.

Real-World Applications

Aromatherapy client blend creation

A client needs a roll-on for headache relief using 10ml of jojoba oil. Your agent asks the MCP to calculate drops, and it returns the exact number needed for a 2% dilution, ensuring maximum efficacy without risk.

Checking accidental over-dilution

A practitioner mixes oils in haste—say, they put 6 drops into 8ml of carrier oil. The agent uses the safety check function and immediately flags that the blend is dangerously strong, requiring immediate dilution.

Calculating batch yield

You need to know how many total aromatherapy blends fit into a bulk supply of 250ml of fractionated coconut oil. The agent uses the capacity info tool and gets an accurate drop count, allowing you to order precisely what you need.

Patterns to Avoid

Using basic percentage math

✗ AVOID

Manually trying to estimate drops by dividing percentages into total milliliters. This method ignores the unique variable of essential oil density and is highly inaccurate.

✓ INSTEAD

Always run these calculations through the specialized functions. Use `calculate_drops_needed` for ratios, or `get_drop_capacity_info` for bottle limits. Never guess.

Ignoring existing blend safety

✗ AVOID

Creating a new product and mixing it with an older mixture without checking the final concentration. This can lead to dangerous over-dilution or under-dilution.

✓ INSTEAD

Before combining any oils, use `check_dilution_safety`. It gives you instant feedback on whether the combination is safe for skin application.

Treating capacity as fixed

✗ AVOID

Assuming a 50ml bottle can hold 'about' 1000 drops. This ignores variations in oil viscosity and density.

✓ INSTEAD

Always use `get_drop_capacity_info` to get the precise, calculated drop count for that specific volume of carrier oil.

The Right Fit

Use this MCP if your practice demands measurable accuracy when mixing oils. If you need to know the exact drops required for a target percentage (like 1% or 2%), use `calculate_drops_needed`. Use it to verify safety using `check_dilution_safety` anytime you mix two unknown components. Don't use this if you are just listing ingredients; you need volumes and percentages. If your goal is simply inventory tracking, the capacity tool helps. However, don't rely on this for complex chemical reactions or temperature-sensitive processing—this MCP only handles dilution ratios.

Essential Oil Drop Calculator: Solving Dilution Safety in Aromatherapy

Right now, creating a product is messy. You measure carrier oil into one beaker, then try to eyeball the drops of essential oils based on what you think 'safe' looks like. This involves cross-referencing charts for density, calculating percentages by hand, and hoping your memory of dilution ratios holds up through a busy day.

With this MCP, the process is simple. You tell your agent the volume and the desired concentration, and it returns the exact drop count you need. It takes all that manual math out of the equation, giving you one definitive answer for safe formulation.

Essential Oil Drop Calculator: Streamlining Bottle Capacity Checks

Keeping track of inventory is a headache. You have jars of oils and need to know total usable drops, but you don't want to measure everything manually or rely on rough estimates.

The MCP solves this by providing reliable capacity data. Input the volume, and it tells you exactly how many drops that carrier oil holds. It makes inventory management simple and precise.

Essential Oil Drop Calculator: 3 Tools for Accurate Dilution Calculations

These functions allow you to calculate required drops, check existing mixture safety, and determine the total drop capacity of carrier oil containers.

#	TOOL	DESCRIPTION
01	`calculate_drops_needed`	Calculates the precise number of essential oil drops required for a specific target concentration in your carrier oil volume.
02	`check_dilution_safety`	Evaluates if a mixture of essential oils and carrier oil is within generally accepted safe dilution levels.
03	`get_drop_capacity_info`	Returns the total number of drops that fit into any specified volume of carrier oil, helping track inventory capacity.

See It in Action

Real prompts you can use once this MCP is connected to your AI agent through Vinkius Cloud.

U I need a roll-on for muscle pain using 10ml of fractionated coconut oil at 2%. How many drops?

Dilution Calculation Results

- **Carrier Oil Volume:** 10 ml
- **Target Concentration:** 2%
- **Essential Oil Drops Needed:** 2 drops

Note: This calculation assumes standard density and is for informational purposes only.

U My current mixture has 4 drops in 15ml of sweet almond oil. Is this safe?

Safety Check Report

PARAMETER	VALUE
Calculated Dilution:	1.6%
Safety Category:	Mild (Recommended)
Usage Guidance:	Suitable for general topical application on adults.

U How many total drops are in a jumbo bottle of jojoba oil that holds 200ml?

Capacity Information

A carrier oil volume of **200 ml** can contain exactly **4,000 drops**.

You have ample supply for up to 20 batches at a 1% dilution.

Frequently Asked Questions

01 **How do I use the Essential Oil Drop Calculator when I don't know my target percentage?**

You can calculate drops based on a known concentration or by providing the desired ratio. The tool helps you figure out what dilution level is appropriate for your intended use, ensuring safety first.

02 **Can this MCP help me check if my existing essential oil mixture is safe?**

Yes, it evaluates current blends using the `check_dilution_safety` function. It tells you immediately if the ratio falls into a Safe, Moderate, or Strong category, helping prevent skin irritation.

03 **What kind of oils can I use with the Essential Oil Drop Calculator?**

It works with any standard carrier oil volume (like jojoba or coconut oil). You just need to provide the accurate milliliter measurement and the desired dilution percentage for the calculation.

04 **Does the Essential Oil Drop Calculator tell me how many drops fit in a large container?**

It does. By providing the total volume of your carrier oil, it calculates the maximum drop capacity, which is great for inventory planning and ordering supplies.

05 **Is this better than using online charts for dilution ratios?**

Yes. This MCP provides a dedicated calculation engine that works directly within your AI workflow. It's faster, more accurate, and integrates seamlessly with other tools you use in aromatherapy.

Go Live in 60 Seconds

Get your connection token from **cloud.vinkius.com**, then paste the endpoint URL into any MCP-compatible client.

YOUR MCP ENDPOINT

```
https://edge.vinkius.com/[TOKEN]/mcp
```

CLIENT	WHERE TO CONFIGURE
Claude AI	Profile → Customize → Connectors → "+" → Add custom connector → Paste endpoint
Cursor	Settings → Features → MCP Servers → "+ Add New MCP Server" → Type: SSE → Paste endpoint
VS Code	Ctrl/Cmd+Shift+P → "MCP: Add Server" → add `"essential-oil-drop-calculator": { "url": "…" }`
Windsurf	MCP Settings → `mcp_settings.json` → Add endpoint URL
ChatGPT	Settings → Tools & plugins → Add MCP server → Paste endpoint
Gemini	Extensions → Add MCP Server → Paste endpoint URL

ASK AN AI ABOUT THIS

Let your preferred AI explain this MCP server

- Ask ChatGPT
- Ask Claude
- Ask Perplexity
- Ask Gemini
- Ask Grok

READY TO CONNECT

Essential Oil Drop Calculator is live on Vinkius Cloud.

Get your connection token, paste it into your AI agent, and start building. No SDK. No deployment. Just results.

Start at cloud.vinkius.com →

INDEPENDENT PLATFORM DISCLAIMER

Vinkius is an independent platform and is not affiliated with, endorsed by, sponsored by, verified by, or otherwise authorized by Essential Oil Drop Calculator. All third-party trademarks, logos, and brand names are the property of their respective owners. Their use in this document is strictly for informational purposes to identify service compatibility and interoperability.

DOCUMENT INFORMATION

Generated	July 2026
MCP Server	Essential Oil Drop Calculator MCP
Server ID	`019f26f0-52d8-70cb-b333-fdb58445742f`
Platform	Vinkius Cloud for AI Agents
Endpoint	`https://edge.vinkius.com/{token}/mcp`

LICENSE & USAGE

This document is generated automatically by the Vinkius PDF Engine. Content reflects the MCP server configuration at the time of generation and may change as updates are deployed. For the most current information, visit vinkius.com/mcp/essential-oil-drop-calculator.