MCP SERVER | NO CODE | CLOUD HOSTED

Pill Fraction Simplifier MCP for AI Agents

Determining Safe and Accurate Medication Dosage Splitting

The Pill Fraction Simplifier quickly determines the safest way to divide medication tablets based on required dosage. It analyzes your needed dose against the pill's total strength, telling you if a split is standard (like quarters), complex (like thirds), or too dangerous to attempt at home.

A+ Quality Score 100/100

dosage | medication | pill-splitting | safety | healthcare

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vinkius.com/mcp/pill-fraction-simplifier

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.

Pill Fraction Simplifier MCP

3 tools available
Cloud-hosted on Vinkius

Accurately splitting pills can feel impossible, especially when dealing with non-standard dosages like 3.33mg from a 10mg tablet. This MCP takes the guesswork and danger out of medication management by providing clear instructions for dividing tablets safely. Instead of relying on visual estimates or risky cuts, your agent uses this connector to calculate the precise ratio you need. It immediately tells you if your required dose corresponds to an easy split (halves or quarters) using `find_standard_split`. If that's not possible, it checks for more difficult but manageable splits via `find_complex_split`, and most importantly, it runs a safety check with `evaluate_split_safety`. Connecting this MCP through the Vinkius catalog lets your AI client handle critical dosage calculations whenever you need to know exactly how to partition a dose with precision and care.

Core Capabilities

01 — Identify standard splits

Determines if the required drug dose matches an easy, recognized fraction like a half or quarter tablet.

02 — Calculate complex fractions

Provides specific instructions for dividing tablets into less common but still identifiable fractional pieces (e.g., thirds).

03 — Assess splitting danger

Compares the required dose to the pill's strength and advises whether a manual split is physically safe or too risky.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/pill-fraction-simplifier** — connect your AI agent in three steps.

01 Provide your agent with two numbers: the total milligram strength of the pill, and the specific milligram dose you need.

02 The MCP runs these figures through its tools to check for simple splits first, then complex ones, while constantly running a safety assessment against potential dosing errors.

03 Your AI client returns plain language instructions detailing the safest method of dividing the tablet or confirming that splitting it is unsafe.

The bottom line is your agent gives you an immediate, calculated answer on how to split medication safely, eliminating guesswork and risk.

Built For

Anyone managing medication at home—patients with chronic conditions, caregivers, or even pharmacy staff who need quick reference checks. If dosing accuracy is critical, this MCP saves you from dangerous estimation.

Caregiver

Determines the safest way to dose medications for a patient whose prescriptions require non-standard tablet splits.

Chronic Illness Patient

Needs verification that a specific required dosage can be split at home using standard or complex fractional methods.

Pharmacy Technician

Quickly verifies the feasibility and safety of splitting unusual drug combinations for patient counseling purposes.

What Changes When You Connect

01 You get an immediate safety assessment. Before cutting anything, the MCP runs a check with `evaluate_split_safety` to warn you if the split is too risky.

02 It eliminates guesswork for common splits. Use `find_standard_split` to confirm immediately if your dose can be easily separated into standard halves or quarters.

03 You gain access to complex splitting logic. When simple cuts aren't enough, `find_complex_split` provides precise instructions for harder fractions like thirds.

04 The entire process is risk-minimized. Your agent doesn't just give an answer; it validates the physical safety of the split against established guidelines.

05 Saves time and reduces anxiety. Instead of consulting multiple resources, you get a single, clear protocol directly from your AI client.

Real-World Applications

A patient needs 3.33mg from a 10mg pill.

The agent runs the dosage through `find_complex_split`. It identifies that the required dose is one third, providing explicit instructions for how to make the cut safely.

A caregiver needs to split a 20mg pill into 5mg doses.

The agent uses `find_standard_split` and confirms that five-quarter splits are appropriate, giving the caregiver clear guidance on managing the dose safely.

A pharmacy staff member receives a request to split a pill into 1mg.

The agent immediately runs `evaluate_split_safety` and returns an 'Unsafe' status, correctly advising that manual splitting should not be attempted due to precision risks.

Patterns to Avoid

Guessing based on sight

✗ AVOID

Trying to eyeball a dose or relying only on general advice without confirming the split's mathematical feasibility.

✓ INSTEAD

Always run the required dosage through `find_standard_split` or `find_complex_split`. This validates the math first, providing concrete instructions rather than just estimates.

Ignoring safety warnings

✗ AVOID

Attempting a split because it looks 'possible,' even if the ratio is too small or irregular to be handled safely.

✓ INSTEAD

Before proceeding, run `evaluate_split_safety`. If the tool returns an unsafe status, you must not attempt the cut manually.

Over-relying on general search results

✗ AVOID

Getting contradictory advice from different websites about whether a dose is safe or how to split it.

✓ INSTEAD

Let your agent handle the calculation. It uses all three tools—`find_standard_split`, `find_complex_split`, and `evaluate_split_safety`—to give one unified, calculated answer.

The Right Fit

Use this MCP if you need absolute confirmation on the physical safety and mathematical feasibility of splitting a medication tablet. If your primary concern is whether 3.33mg can come from a 10mg pill, this tool provides that definitive check. However, don't use it if you simply need general dosing information or if the required dose is already provided in easily measured forms like liquids; this MCP handles solid tablets only. If your goal is to find out what drugs are generally available for splitting, look at a drug database rather than using this specific dosage calculator.

Pill Fraction Simplifier: Solving Dosage Confusion in Medication Safety

When you're dealing with prescriptions that don't fall into neat halves or quarters, the task of splitting a pill becomes incredibly high-stakes. You've seen it before: trying to estimate if a small dose is safe enough to cut manually, resulting in potential dosing errors and serious health risks.

With this MCP, you pass the milligram strength and required dose to your agent. It runs through multiple calculations—checking for easy splits with `find_standard_split` and providing complex instructions via `find_complex_split`. You get a single verdict: exactly how to cut it, or why you absolutely shouldn't.

Pill Fraction Simplifier: Ensuring Correct Dosage Calculations for Caregivers

Caregiving often involves managing multiple medications with varying strengths. The manual process requires constant cross-referencing, checking if a split is safe and simultaneously figuring out the correct fraction to use.

Now, you ask your agent directly. It performs all necessary checks instantly—checking for safety using `evaluate_split_safety` while calculating precise methods. What used to take minutes of careful research now takes seconds.

Pill Fraction Simplifier: 3 Tools for Medication Dosage Safety

Use these tools to analyze pill strength versus required dose and determine the safest, most accurate way to split medication tablets.

#	TOOL	DESCRIPTION
01	`evaluate_split_safety`	Checks if attempting to divide a pill into a specific dose is too difficult or dangerous to attempt physically.
02	`find_complex_split`	Gives instructions for more complicated, but still identifiable fractional splits, like thirds or fifths.
03	`find_standard_split`	Identifies if the requested dose matches a simple, easy-to-cut fraction like halves or quarters.

See It in Action

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

U I need 4mg from a 20mg pill. How should I split it?

The safe way is to treat this as one quarter (1/5th) of the tablet.

- **Standard Split:** No.
- **Complex Split:** Yes, requires careful cutting into five equal parts.
- **Safety Status:** Safe if cut with proper tools and steady hands. Be precise!

Action: Cut the pill into 5 pieces. Use two of those pieces.

U Is it safe to try splitting a 10mg tablet for a 1mg dose?

⚠️ **Safety Alert: DO NOT ATTEMPT.**

The required dosage (1mg) is too small relative to the pill's total strength (10mg). Splitting this manually carries an extremely high risk of dosing inaccuracy, potentially leading to incorrect or zero doses.

Recommendation: Consult your pharmacist for alternative dosage forms.

U What's the easiest way to get 6.25mg from a 10mg pill?

✅ **Optimal Split Found!**

This required dose is exactly one-sixth of the tablet, which falls into the complex but manageable category.

- **Standard Split:** No.
- **Complex Split:** Yes. Cut the pill into 6 equal sections.
- **Safety Status:** Safe with care. Use 2/3rds of a section to achieve 6.25mg.

Frequently Asked Questions

01 **How does the Pill Fraction Simplifier help me know if I can safely split my pills?**

It provides an immediate safety assessment, telling you if your required dose is too small or difficult to separate manually. This prevents dosing errors before you even touch a pill cutter.

02 **What kind of splits does the Pill Fraction Simplifier handle? Is it just halves and quarters?**

It handles more than just simple cuts. It uses `find_standard_split` for easy doses, but also has methods like `find_complex_split` to guide you through harder-to-split fractions.

03 **Can I use the Pill Fraction Simplifier if my dosage is non-integer (like 3.33mg)?**

Yes, that's exactly what it's for. You enter the precise milligram amount you need, and the tool calculates the necessary fractional split to meet that exact requirement.

04 **Does the Pill Fraction Simplifier MCP tell me how many pieces I should cut?**

The output is highly specific. It doesn't just say 'split it'; it gives instructions, such as cutting the tablet into six equal parts and then using two-thirds of a piece.

05 **Is this tool better than general online calculators for drug splitting?**

Yes. This MCP runs multiple specialized checks simultaneously—standard split, complex split, AND safety assessment—giving you a comprehensive protocol that generic tools can't match.

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 `"pill-fraction-simplifier": { "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

Pill Fraction Simplifier 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 →

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