

M C P S E R V E R

N O C O D E

C L O U D H O S T E D

Electrolyte Balance Calculator MCP

Get exact mineral recovery plans based on your diet and activity.

Electrolyte Balance Calculator MCP tracks your mineral status by analyzing your diet, physical activity, and local climate. It identifies specific deficits in sodium, potassium, or magnesium and provides actionable recovery steps through precise supplementation math or whole-food suggestions. It also flags nutritional risks associated with specific dietary frameworks like Keto or Carnivore.

A+ Quality Score 98.33/100

electrolytes

nutrition

keto

hydration

health-tracking



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.

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.

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.

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

Encryption at rest

Ed25519

PKI vault signatures

24h TTL

Ephemeral session keys

V8 Isolate

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.

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.

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.

06 — Honeypot Trap System

Phantom credentials are injected into isolated environments. If a honeypot 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.

FinOps

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

Firewall & DLP

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

Agent Activity

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

Tool Health

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

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.

Electrolyte Balance Calculator MCP

4 tools available

Cloud-hosted on Vinkius

You can use this MCP to stop guessing about your mineral levels. If you follow a strict dietary protocol or train in high heat, your body's demand for sodium, potassium, and magnesium changes rapidly. This tool lets your AI client calculate exactly where you stand by looking at your current intake against your environmental and physical stressors.

Once you know you're in a deficit, you don't have to hunt for answers. You can ask your agent for a specific milligram-based supplementation plan to fix the gap immediately. If you prefer eating your nutrients, you can request a list of whole-food sources that target your specific deficiency. It also helps you stay ahead of the curve by evaluating how your current eating pattern, such as Keto, might be driving mineral loss. It's a direct way to turn nutritional data into a clear recovery strategy.

Core Capabilities

01 — Deficit Identification

Your agent calculates the exact gap between your current mineral intake and your physiological needs.

02 — Dietary Risk Assessment

The AI checks if your specific eating pattern, like Keto, makes you more prone to mineral loss.

03 — Supplementation Math

Your agent provides specific milligram counts for supplements to correct identified shortages.

04 — Whole-Food Recovery

The AI suggests specific foods to help you restore mineral balance naturally.

One Click on Vinkius — From Prompt to Execution

Available at vinkius.com/en/ai-agent-connect/electrolyte-balance-calculator — connect your AI agent in three steps.

- 01 Connect the MCP to your preferred client like Claude or Cursor via Vinkius.
- 02 Provide your current mineral intake, diet type, and activity levels to your agent.
- 03 The agent uses the calculation tools to find your specific deficits.
- 04 Receive a custom supplementation plan or a list of whole-food sources to fix the imbalance.

Connecting this MCP to your AI client gives your agent the ability to run mineral calculations and recovery plans instantly.

Built For

This MCP is built for people managing strict nutritional protocols or high-intensity physical lifestyles. It turns raw dietary data into specific mineral management instructions.

Athletes

They hand off activity levels and sweat rates to the AI to manage hydration and mineral loss.

Nutrition Enthusiasts

They use the tool to monitor how specific diets like Keto or Carnivore impact their mineral status.

Health Trackers

They provide daily intake numbers to get immediate feedback on electrolyte deficits.

What Changes When You Connect

- 01 Calculates exact milligram requirements for supplementation.

- 02

Identifies mineral risks associated with specific dietary frameworks.
- 03

Provides whole-food alternatives for natural mineral recovery.
- 04

Accounts for environmental factors like heat and physical activity.

Real-World Applications

Keto Management

Use the tool to see how much sodium and potassium you are losing due to the keto diet.

Supplement Precision

Get specific milligram targets instead of guessing how much magnesium or sodium to take.

Heat Stress Recovery

Calculate how much extra mineral intake you need when training in hot climates.

Natural Mineral Loading

Find specific food sources to fix a deficit without using processed supplements.

4 Tools Available

#	TOOL	DESCRIPTION
01	calculate_electrolyte_status	This tool determines your current balance of key electrolytes. It checks for sodium, potassium, or magnesium deficits based on your specific diet and activity levels.
02	evaluate_dietary_risk	This tool analyzes how your specific diet type affects your mineral needs. It identifies if your current nutritional framework increases the risk of electrolyte depletion.
03	get_food_recovery_sources	This tool suggests whole foods to help you recover from a deficit. It provides natural dietary options to restore specific minerals like sodium or magnesium.
04	get_supplementation_plan	This tool generates exact milligram requirements for mineral supplements. It provides the specific amounts needed to correct your identified deficits.

See It in Action

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

U I've been eating a keto diet, exercising intensely in a hot climate, and my sodium intake is 2000mg, potassium is 1500mg, and magnesium is 300mg. What is my status?



Your status shows a sodium deficit of 1200mg and a potassium deficit of 2500mg due to the high demands of your keto diet and intense activity in heat.

U I have a sodium deficit. What foods can I eat to fix this?



To address your sodium deficit, you can consume foods such as sea salt, olives, or celery.

U Is my carnivore diet increasing my electrolyte risk?



Yes, the carnivore diet is classified as high risk because it can increase the excretion of essential minerals like sodium and potassium.

Frequently Asked Questions

01 How does this MCP help with Keto diets?

It evaluates the dietary risk of Keto and calculates the specific sodium and potassium deficits often caused by the diet.

02 Can I get specific milligram amounts for supplements?

Yes, the `get_supplementation_plan` tool provides the exact milligram requirements needed to correct your identified deficits.

03 Does it account for exercise and weather?

Yes, the status calculation considers your physical activity and the climate you are in to determine mineral needs.

04 What clients can I use this with?

You can use this MCP with any compatible client including Claude, Cursor, and Windsurf.

05 Can it suggest foods instead of supplements?

Yes, the `get_food_recovery_sources` tool suggests specific whole-food options to address your mineral deficits.

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 <code>"electrolyte-balance-calculator": { "url": "..." }</code>
 Windsurf	MCP Settings → <code>mcp_settings.json</code> → 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

Electrolyte Balance 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 →

vinkius.com · support@vinkius.com

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DOCUMENT INFORMATION

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Server ID	01a0b680-4f1a-7327-bf3b-70787a64f846
Platform	Vinkius Cloud for AI Agents
Endpoint	<code>https://edge.vinkius.com/{token}/mcp</code>

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