MCP SERVER | NO CODE | CLOUD HOSTED

Grape Brix Distribution Analysis MCP

Turn raw Brix readings into actionable harvest decisions.

Grape Brix Distribution Analysis MCP gives vineyard managers the statistical tools needed to evaluate grape ripeness. Your AI client uses this MCP to calculate sugar content, measure ripening consistency, and identify problematic fruit clusters. It helps you decide whether to segregate or blend loads to maintain juice quality.

A+ Quality Score 100/100

brix | grapes | ripeness | statistics | vineyard

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vinkius.com/en/ai-agent-connect/grape-brix-distribution-analysis

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.

Grape Brix Distribution Analysis MCP

4 tools available
Cloud-hosted on Vinkius

You can stop guessing if a grape load is ready for processing. This MCP gives your AI client the ability to run precise statistical profiles on your Brix data. Instead of looking at a single number, you can see the full picture of how sugar is distributed across a load. You'll get the mean sugar content, standard deviation, and coefficient of variation instantly. This lets you know if you're looking at a uniform load or a mixed-pick that needs careful handling. If you find fruit clusters that don't fit the profile, the MCP flags them immediately. You can then use those insights to decide if you should blend the load to hit a target or keep it separate to protect your juice quality. It's about moving from simple readings to actual harvest intelligence.

Core Capabilities

01 — Statistical Profiling

Your agent calculates mean, standard deviation, and coefficient of variation from raw Brix data.

02 — Uniformity Assessment

The AI determines if a load is suitable for single-batch processing based on ripening consistency.

03 — Outlier Detection

Your client identifies specific samples that don't match the rest of the load.

04 — Logistical Planning

The MCP suggests whether to blend or segregate loads to hit specific juice quality targets.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/en/ai-agent-connect/grape-brix-distribution-analysis** — connect your AI agent in three steps.

01 Connect your preferred MCP-compatible client to Vinkius.

02 Provide your Brix readings to your AI client.

03 The AI uses the MCP tools to run statistical calculations.

04 Receive specific recommendations for handling or blending the load.

Connect your AI client to Vinkius and start analyzing Brix data immediately.

Built For

This MCP is built for professionals managing vineyard harvests and juice quality.

Vineyard Managers

They hand off Brix datasets to the AI to get quick ripeness profiles.

Winemakers

They use the statistical outputs to decide on blending or segregation strategies.

Harvest Supervisors

They use the tool to identify problematic fruit clusters during picking.

What Changes When You Connect

01 Calculates precise sugar distribution metrics instantly.

02 Identifies uneven ripening before it affects juice quality.

03 Provides data-driven decisions for blending or segregating loads.

04 Flags problematic fruit samples that deviate from the average.

Real-World Applications

Single-Batch Verification

Check if a load is uniform enough to process as one single batch without blending.

Blending Decisions

Determine if a low-sugar load should be blended with a high-sugar load to hit a target Brix.

Quality Control

Use outlier detection to find fruit clusters that could ruin a batch's consistency.

Harvest Planning

Evaluate the coefficient of variation to assess overall vineyard ripening uniformity.

4 Tools Available

#	TOOL	DESCRIPTION
01	`detect_outlying_samples`	This tool identifies specific Brix readings that deviate significantly from the group average. It helps you spot problematic fruit clusters in a dataset.
02	`suggest_handling_strategy`	This tool recommends logistical moves like segregation or blending. It helps you decide how to handle a load to optimize final juice quality.
03	`evaluate_ripeness_uniformity`	Use this to check if a load is consistent enough for single-batch processing. It determines if the ripening is even or if the fruit is too varied.
04	`analyze_load_statistics`	This tool generates a full statistical profile of a grape load's sugar content. It provides the mean, standard deviation, and coefficient of variation for your Brix data.

See It in Action

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

U Analyze these Brix readings for a Cabernet Sauvignon load of 5000kg: [22.5, 23.0, 21.8, 22.2, 24.5, 19.0, 22.8]

The load has a mean Brix of 22.21 with a standard deviation of 1.54. The coefficient of variation is 0.069, indicating a relatively uniform load, though one outlier was detected at 19.0 Brix.

U Is this load suitable for a single batch? Brix readings: [24.1, 23.9, 24.0, 24.2]

Yes, the load is highly uniform with a very low coefficient of variation, making it ideal for single-batch processing.

U Suggest a strategy for a load with 21.5 mean Brix, 0.15 CV, and a target Brix of 24.0.

The recommended strategy is Blending with a high-sugar load to reach the target Brix of 24.0.

Frequently Asked Questions

01 **What can this MCP do with my Brix data?**

It calculates the mean, standard deviation, and coefficient of variation. It also identifies outliers and suggests whether to blend or segregate your grape loads.

02 **Which AI clients can I use with this MCP?**

You can use this MCP with any compatible client like Claude, Cursor, Windsurf, or VS Code.

03 **How does it help with juice quality?**

By detecting uneven ripening and outliers, it helps you decide on handling strategies like segregation to ensure consistent juice quality.

04 **Do I need to host the MCP myself?**

No, Vinkius hosts and manages the MCP for you. You just connect your client and start working.

05 **Can it help me decide between blending and segregation?**

Yes, the suggest_handling_strategy tool specifically recommends these logistical decisions based on your data.

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 `"grape-brix-distribution-analysis": { "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

Grape Brix Distribution Analysis 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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Platform	Vinkius Cloud for AI Agents
Endpoint	`https://edge.vinkius.com/{token}/mcp`

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