

Feature Guide

SCIEX OS Software

AI Assistant



This document is provided to customers who have purchased SCIEX equipment to use in the operation of such SCIEX equipment. This document is copyright protected and any reproduction of this document or any part of this document is strictly prohibited, except as SCIEX may authorize in writing.

Software that may be described in this document is furnished under a license agreement. It is against the law to copy, modify, or distribute the software on any medium, except as specifically allowed in the license agreement. Furthermore, the license agreement may prohibit the software from being disassembled, reverse engineered, or decompiled for any purpose. Warranties are as stated therein.

Portions of this document may make reference to other manufacturers and/or their products, which may contain parts whose names are registered as trademarks and/or function as trademarks of their respective owners. Any such use is intended only to designate such products as those manufacturers' products and does not imply any right and/or license to use or permit others to use such manufacturers' and/or their product names as trademarks.

SCIEX warranties are limited to those express warranties provided at the time of sale or license of its products and are the sole and exclusive representations, warranties, and obligations of SCIEX. SCIEX makes no other warranty of any kind whatsoever, expressed or implied, including without limitation, warranties of merchantability or fitness for a particular purpose, whether arising from a statute or otherwise in law or from a course of dealing or usage of trade, all of which are expressly disclaimed, and assumes no responsibility or contingent liability, including indirect or consequential damages, for any use by the purchaser or for any adverse circumstances arising therefrom.

For Research Use Only. Not for use in Diagnostic Procedures.

Trademarks and/or registered trademarks mentioned herein, including associated logos, are the property of AB Sciex Pte. Ltd., or their respective owners, in the United States and/or certain other countries (see sciex.com/trademarks).

AB Sciex™ is being used under license.

Echo, Echo MS, and Echo MS+ are trademarks or registered trademarks of Labcyte, Inc. in the United States and other countries, and are being used under license.

© 2026 DH Tech. Dev. Pte. Ltd.



Contents

1 Introduction	5
Human-in-the-Loop Approval	5
Multiple Layers of Protection	5
Knowledge Scope and Coverage	6
What the AI Assistant Cannot Do	7
2 Use the AI Assistant	8
Ask a Question	8
Example Questions	8
Tips for Questions	10
Review the Response	12
Create and Edit Calculated Columns	13
Example Questions	15
Tips for Formulas	15
3 Administration	16
Requirements	16
Endpoint Providers	16
Customer Guardrails	18
How the Customer Guardrails Operate	18
Configure the AI Assistant	19
Configure the Endpoints	19
Troubleshooting	25
Connectivity Issues	25
Embedding Issues	26
Customer Guardrails Issues	27
Frequently Asked Questions	28
Auditing	28
Accuracy and Hallucinations	28
A Example Chat Sessions for Calculated Columns	29
MEAN [(Area)] for Standards	30
MEAN [(Area)] for Standards, QCs, Solvents, and Blanks, with Unused Samples	31
B Configuration Examples	32
Azure OpenAI	32

Contents

OpenAI 33

Gemini 33

Mixed Providers 34

Contact Us 35

 Addresses 35

 Customer Training 35

 Online Learning Center 35

 SCIEX Support 35

 Cybersecurity 35

 Documentation 36

Introduction

1

The AI Assistant is a chat interface that supplies responses to questions about mass spectrometry workflows, instrument setup, method development, data processing, and troubleshooting. The AI Assistant is included in the SCIEX OS software. It is available for use with research use only (RUO) products only.

The AI Assistant uses a supplied knowledge base of SCIEX documentation and a large language model (LLM) that is configured by an administrator. The quality of the response is related to the quality of the available documentation. With each release, SCIEX supplies better, more complete, documentation.

Users can ask questions in natural language. The AI Assistant gives step-by-step instructions, formula suggestions, and contextual help.

The AI Assistant does not replace professional judgement, domain expertise, or official SCIEX documentation.

Note: Third-party AI connections and submitted data are the user's responsibility. Responses may be inaccurate — verify before use. Refer to the section: [Review the Response](#).

Note: Because the knowledge base that is supplied with the SCIEX OS software is in English, questions that are written in English will give the best results.

Access to this feature is controlled by the role that is assigned to the user. For information about how to configure roles, refer to the document: *Help*.

Human-in-the-Loop Approval

Before the AI Assistant makes a change, it always stops and shows a prompt for approval. If approval is given, then the AI Assistant makes the change. If approval is not given, then the AI Assistant does not make the change. If applicable, then the AI Assistant does a different task. For example, it might show a prompt for clarification.

Note: The requirement for human-in-the-loop approval cannot be disabled.

Multiple Layers of Protection

To decrease the risk of incorrect responses, these safeguards are included in the AI Assistant:

Introduction

- Knowledge-base grounding: The AI Assistant uses a curated knowledge base of SCIEX documentation.
- Answer validation: A validation step examines each response for accuracy.
- Built-in guardrails: The guardrails examine responses for content that is harmful, dangerous, or out of scope. The guardrails cannot be disabled.
- Customer guardrails: An organization can configure a guardrail endpoint for the enforcement of organizational compliance policies.
- Explicit refusal: If the AI Assistant does not have sufficient information, then a message that it cannot give a response is shown.

Knowledge Scope and Coverage

The AI Assistant uses a curated knowledge base of SCIEX documentation and configured data sources to create responses.

The AI Assistant supports workflows, features, and use cases for the SCIEX OS software.

The content and context of responses is controlled by the information that is available in the supplied knowledge base.

Topics That Are Out of Scope

The AI Assistant might not supply accurate or complete responses for questions about topics that are not in the supplied knowledge base. These are some examples of topics that are out of scope:

- Third-party or competitor systems, for example, LC systems or mass spectrometers that are not supplied by SCIEX
- Software, systems, or workflows that are not supported by the SCIEX OS software
- Topics that are not included in the SCIEX documentation
- Vertical markets, for example, pharmaceutical or food and beverage

Note: For calculated columns that are related to a specified market, make sure to review the calculated column before it is used.

If a prompt is out of scope, then the AI Assistant does one of these steps:

- Supply a response that it does not have sufficient information
- Supply a response that is general or not complete
- Recommend that the user refer to the SCIEX documentation or contact support

What the AI Assistant Cannot Do

- The AI Assistant cannot browse external websites or get access to online resources. All of the responses come from the supplied knowledge base.
- The AI Assistant cannot see or analyze the content that is shown on the computer monitor, for example, the Results Table, chromatograms, or tuning reports.
- The AI Assistant supports English only. Questions in other languages might give incorrect responses.
- The AI Assistant might not be able to supply an answer about a topic that is not included in the documents in the knowledge base.
- The AI Assistant cannot supply annotated screenshots or diagrams. It supplies text-based responses only.
- The AI Assistant cannot supply information about software applications other than the SCIEX OS software.

Use the AI Assistant

2

Before the AI Assistant is used, an administrator must configure the endpoints and give the required permissions. Refer to the section: [Administration](#) and the document: *Help*.

Ask a Question

1. Click  (Show AI Assistant).
2. Type a question in the text box, and then click .

Note: The AI Assistant keeps the conversation history for the active session. The user can ask follow-up questions to get a better response.

3. Review the response. Refer to the section: [Review the Response](#).

Note: Different AI applications might supply different responses. Different chat sessions with the AI Assistant might supply different responses.

Example Questions

The AI Assistant can supply responses to questions about many topics. The table that follows contains some example questions.

Table 2-1 Example Questions

Topic	Questions
Software and general concepts: Questions about the features, workspaces, and user interface of the SCIEX OS software	• What are the workspaces of the SCIEX OS software? • What is the difference between an acquisition computer and a processing computer? • What improvements were made in the Analytics workspace in version 5.0? • Can data that is acquired in the SCIEX OS software 5.0 be opened in earlier versions of the software?
Installation and configuration: Questions about	• What are the minimum requirements for a processing computer? • What should be done before the SCIEX OS software is upgraded?

Table 2-1 Example Questions (continued)

Topic	Questions
system requirements, software installation, upgrades, and network configuration	• Can the SCIEX OS software be installed on the same computer as the CAC software? • Which ports does the CAC software require for communication? • What happens if FIPS mode is enabled in Windows?
Security and compliance: Questions about security modes, user permissions, audit trails, and regulatory compliance	• Which security modes are available in the SCIEX OS software? • What is the difference between Integrated mode and Mixed mode? • What types of events are recorded in the audit trails? • How does the SCIEX OS software support 21 CFR Part 11 compliance?
Method development: Questions about how to create and edit acquisition methods, MRM transitions, and scan types	• How do I create an MRM method? • Can I import MRM transitions? • How do I set up a method that uses the sMRM algorithm? • I want to create a looped method that contains IDA experiments and experiments that use the sMRM algorithm. What do I do? • Is there a way to run an automated ramp with the MS method editor?
Data processing and analytics: Questions about Results Tables, processing methods, calculated columns, and quantitation	• What happens if a Results Table is locked and reopened? • How do I set up decision rules for my batch or queue? • I want a calculated column that calculates the number of theoretical plates for my chromatographic peaks.
System troubleshooting and maintenance: Questions about the diagnosis of system issues, cleaning procedures, and performance optimization	• My system won't connect. What should I do? • What do I do if my Quick Tune fails? • My sensitivity is low in MS Tune - what are some things I can try? • Show me how to clean the curtain plate and orifice plate. • Why is my negative detector optimization optimizing at a much higher value than before? • In my Q3 positive scans, the 829 peak is missing. How should I proceed?

Table 2-1 Example Questions (continued)

Topic	Questions
Device setup: Questions about the configuration of LC systems, ion sources, and peripheral devices	- How do I configure the ExionLC AE system? - What happens if solvent levels are not configured correctly in ExionLC AD systems?
Diagnostics and support: Questions about how to create a support package, get access to logs, and get support	- Can you create a support package for me? - Explain how to create a diagnostic log package. - What is the role of the support package in troubleshooting?

Tips for Questions

Table 2-2 Tips

Tip	Details	
Be specific	Do Not Use	Use
	How do I create a method?	How do I create an MRM method?
	Tell me about batches.	How do I set up a batch for MRM acquisition on the ZenoTOF 8600 system?
	Calculate %CV.	Create a calculated column for %CV of Area for all Standards.
	My instrument has a problem.	Quick Tune failed on the SCIEX 7500+ system. What should I do?
	How do I set up devices?	How do I configure the ExionLC AE system on the Devices page in the Configuration workspace?
Use terms that are used in the SCIEX OS software	For the best results, use the terms that are used in the SCIEX OS software.	

Table 2-2 Tips (continued)

Tip	Details												
	<table><tr><th>Term</th><th>Related Term in the SCIEX OS Software</th></tr><tr><td>Service package</td><td>Support package</td></tr><tr><td>Calibrator</td><td>Standard</td></tr><tr><td>Zero calibrator</td><td>Blank</td></tr><tr><td>Highlight values</td><td>Flagging rules</td></tr><tr><td>Formula column</td><td>Calculated column</td></tr></table>	Term	Related Term in the SCIEX OS Software	Service package	Support package	Calibrator	Standard	Zero calibrator	Blank	Highlight values	Flagging rules	Formula column	Calculated column
	Term	Related Term in the SCIEX OS Software											
	Service package	Support package											
	Calibrator	Standard											
	Zero calibrator	Blank											
Highlight values	Flagging rules												
Formula column	Calculated column												
	Tip! If the AI Assistant does not supply a good response, then ask the question differently, with terms from the SCIEX OS software.												
	Note: Abbreviations, acronyms, and synonyms are not fully supported in this release.												
Supply context	Include information about the system, component, workflow, or sample. If the question is about a system that is not active on the Devices page in the Configuration workspace or a workspace that is not active, then identify the system or workspace in the question. • When a different system is active: On the ZenoTOF 7600 system, how do I create an IDA method? • When a different workspace is open: In the Analytics workspace, how do I print the window?												
Ask one question at a time	Do not put questions that are not related together into one message. For better results, break complex questions into multiple questions. For example: 1. How do I set up an sMRM method? 2. How do I add IDA to this method? 3. Can I loop the two scan types in one method?												
Correct incorrect responses	If a response is incorrect, then supply an explanation of the error. For example: • That is not correct: I meant IS Area, not Area.												

Use the AI Assistant

Table 2-2 Tips (continued)

Tip	Details
Supply responses to questions from the AI Assistant	For the best results, supply responses to the questions that the AI Assistant asks.
Use the follow-up suggestions	The AI Assistant supplies follow-up suggestions after each response. These questions identify related workflows, concepts, or troubleshooting steps. To use a suggestion, click it.
Ask for clarification	Ask a different question, or ask the AI Assistant to rephrase the response or make it simpler. • Can you explain that in more detail? • What does step 3 mean, exactly? • Where in the interface do I find the Import option? • Explain this formula step by step.
Start a new chat for a new topic	The conversation history is kept for each chat session. If a question about a new topic is asked in the same chat, then the response might use a context that is not related, which decreases the quality.
Do not let chat sessions get too long	Performance and clarity might decrease in very long chat sessions. To prevent issues, start a new chat at regular intervals.

Review the Response

Always review the response from the AI Assistant before it is used. Obey these best practices:

- For important information, refer to a different source, for example, the documentation for the SCIEX OS software or a knowledgeable colleague, to make sure that the information is correct.
- Look for signs of incorrect responses:
 - Steps are out of order or refer to menus or buttons that are not available in the software.
 - The response refers to an instrument model that is different than the active model.
 - Numeric values, for example, mass ranges, voltages, or flow rates, are unusual.
 - The response includes guidance from different products, for example, the Analyst software and the SCIEX OS software.

- Before a calculated column formula is used, make sure that the column references, function names, and logic are correct.
- If the response is incorrect or unclear, then ask a follow-up question about the reasoning or the source of the information.
- If a question gives an incorrect response again and again, then contact the local administrator or sciex.com/request-support.

Why Responses Might Be Incorrect

Table 2-3 Causes of Incorrect Responses

Cause	Description
Hallucinations	The model supplies a response that contains incorrect facts, steps, or details.
Knowledge base gaps	The topic is not included in the knowledge base.
Ambiguous questions	Vague or general questions supply responses that are not applicable.
Different systems or workspaces	The question is about systems, software, or workspaces that are not active or supported by the AI Assistant. Include the name of the system, software, or workspace in the question.
Terminology differences	The terminology that is used in the question is different than the terminology that is used in the SCIEX OS software. Use terms that are used in the SCIEX OS software.

Create and Edit Calculated Columns

The AI Assistant can help to create, validate, edit, and troubleshoot formulas in the Analytics workspace.

The AI Assistant can do these tasks:

- Create a formula: Use plain language to give a description of the required calculation. The AI Assistant creates a formula in the correct format.
- Explain a saved formula: Paste a formula into the chat, and then ask what it does. The AI Assistant gives an explanation of each part in plain language.
- Diagnose and correct errors: If a formula does not give the correct result, then paste it into the chat, and then supply a description of the issue. The AI Assistant identifies the syntax or logic errors and recommends a correction.

Use the AI Assistant

- Correct typos: The AI Assistant automatically identifies spelling errors in column names. If possible, then it corrects them. If it cannot, then it asks for clarification.

For example chat sessions, refer to the section: [Example Chat Sessions for Calculated Columns](#).

To create a formula, do these steps:

1. Open the AI Assistant.
2. Open a processing method, go to the Calculated Columns page, and then click **Add > Formula**.
3. Type the prompt in the AI Assistant and then push **Enter**.

For the best results, obey these guidelines:

- Use specific and complete terminology. For example, "Calculate %RSD of Area across Standards."
- Use the correct function names. If required, then ask the AI Assistant which function to use.

Note: The AI Assistant has access to all of the functions that are available in the SCIEX OS software. It uses the syntax that is used in the SCIEX OS software. For more information, refer to the document: *SCIEX OS Software Calculated Columns Feature Guide*.

- To ask for an aggregation, identify the applicable sample types. For example, "Calculate mean Area across Standards and QCs."
- In workflows with multiple steps, save each intermediate formula.

When the response is completed, the AI Assistant shows a prompt for approval to make updates to the Results Table. The prompt shows the formula, selected sample types, and selected option for the **Treat resulting text values as** field.

Note: Different formulas can give the same result. Thus, different chat sessions might supply a different formula as a response to the same question.

4. Review the response, and then click **Apply** to make the change.

The formula is updated.

Note: To reject the change, click **Ignore**.

Note: If required, then click **Undo**.

5. To update the Results Table with the changes, click **Process & Close**.

Example Questions

Table 2-4 Example Questions

Required Result	Question
Calculate %CV	Create a calculated column for %CV of Area for all of the injections of a given component name and sample name.
Theoretical plates	I want to create a calculated column to calculate the number of theoretical plates for my chromatographic peaks.
Conditional logic	Create a column that shows 'Pass' if Area is greater than 100 and 'Fail' otherwise.
Explain a formula	What does this formula do: IF ([Area] >1000; 'High'; 'Low')?
Correct a formula	My calculated column is showing NA values. Here is the formula: STDEV([Area]) /MEAN([Area])*100. What is wrong?

Tips for Formulas

- Identify the column to use. Do not say "Calculate %CV," say "Calculate %CV of Area."
- To use a custom column, make sure that the column is in the list on the Calculated Columns page in the processing method.
- If applicable, then identify sample types. For example, "Calculate %CV of Area for Standards only."
- If applicable, then specify the blank types to use: solvent, blank, double-blank, or a combination.
- For complex calculations, create a different formula for each step of the calculation. Do a test of each component formula. Then, put the component formulas together into a dependent formula. The AI Assistant validates each component formula before it creates the dependent formula.
- If required, then ask for clarification. For example, "Explain this formula step by step."
- If the formula gives errors or incorrect values, then paste the errors or incorrect values into the chat. The AI Assistant will help to troubleshoot the issue.
- If issues cannot be corrected, then go to sciex.com/request-support.

The administrator is responsible to select the LLM provider to use, configure endpoint credentials, and do validation tests to make sure that the required quality and performance requirements are met before users get access to the AI Assistant.

Note: To configure the AI Assistant, the user must have the **AI Assistant tab** permission.

Note: A knowledge base is supplied with the SCIEX OS software. Users cannot upload documents or make changes to the knowledge base in this version of the software.

Requirements

- Thinking model endpoint from a supported provider. This is the primary reasoning engine, which gives responses to complex analytical questions, does multistep reasoning, and uses agentic tools.
- Embedding model endpoint from a supported provider, for example, text-embedding-3-small (OpenAI-compatible) or gemini-embedding-001 (Gemini-compatible). This endpoint converts text into vector representations for retrieval from the knowledge base.
- Access from the host machine for the SCIEX OS software to the applicable ports on all of the configured endpoints.

The thinking and fast model endpoints must support a minimum of 64,000 tokens of context. Smaller context windows might cause truncation of knowledge base results and incomplete responses.

Note: Optionally, a lightweight (Fast) chat model endpoint can be used. This is the model endpoint that is responsible for low-latency interactions. It does lightweight tasks, for example, intent classification and clarifications. If a fast model endpoint is not configured, then the AI Assistant uses the thinking model endpoint for all of the tasks. No functionality is lost, but the response latency might be larger for lightweight interactions.

Endpoint Providers

For the supported endpoint providers and the model endpoints that they support, refer to the table that follows.

Table 3-1 Endpoint Providers

Provider	Thinking Model Endpoint	Fast Model Endpoint	Embedding Model Endpoint	Hosted by
Azure OpenAI	✓	✓	✓	Microsoft Azure
OpenAI-compatible	✓	✓	✓	OpenAI or third party
Gemini	X	X	✓	Google Cloud

Note: Different endpoint providers can be used for different model endpoints. For example, use Azure OpenAI for the thinking and fast model endpoints and Gemini for the embedding model endpoint.

Azure OpenAI

Azure OpenAI uses the Microsoft Azure infrastructure to supply OpenAI models. It supplies enterprise service level agreements (SLAs), regional data residency options, virtual network integration, and compliance certifications (HIPAA, SOC 2, ISO 27001).

Documentation <https://learn.microsoft.com/azure/ai-services/openai/overview>

Instructions to
create a resource
and deploy a
model [Azure AI Foundry](#)

Endpoint format `https://<your-resource-name>.openai.azure.com/`

Authentication APIkey (Key 1 or Key 2 from the Azure resource)

Embedding text-embedding-3-small

OpenAI and OpenAI-Compatible

This category includes direct access to the API from OpenAI and third-party services that implement the completions and embeddings API contract from OpenAI. It includes self-hosted inference servers, API gateways, and alternative providers that supply an OpenAI-compatible interface.

Documentation <https://developers.openai.com/api>

Instructions to
create OpenAI
API keys <https://platform.openai.com/api-keys>

Authentication Bearer API key

Administration

Embedding text-embedding-3-small¹

Gemini

Gemini models use the Gemini API in Google AI Studio or Vertex AI.

Documentation <https://ai.google.dev/gemini-api/docs>

Instructions to
create API keys <https://aistudio.google.com/>

Authentication API key (Aiza...)

Embedding gemini-embedding-001

Customer Guardrails

The AI Assistant has built-in safety guardrails that prevent responses with content that is harmful, dangerous, or out of scope. Administrators can also configure an external customer guardrails endpoint. This endpoint is an HTTPS web service that is operated by the customer organization. The endpoint makes sure that the AI responses that are shown to users obey site-specified compliance policies.

The customer guardrails feature is available to users in regulated and other environments to validate AI responses against internal content policies, terminology restrictions, or regulatory requirements.

How the Customer Guardrails Operate

1. The user asks the AI Assistant a question.
2. The AI Assistant creates a response.
3. The SCIEX OS software makes sure that the response meets the requirements of the built-in guardrails.

Note: This feature is always active.

4. (Optional) The SCIEX OS software makes sure that the response meets the requirements of the customer guardrails.

Note: This feature is active when it is configured and enabled.

¹ If the text-embedding-3-small model is supported by the provider, then it is recommended. If it is not supported, then use an embedding model that supports 1536 dimensions.

A response can be blocked by the built-in guardrails or customer guardrails. When the response is blocked, a rejection message is shown.

If a response is blocked by the built-in guardrails, then it does not continue to the customer guardrails.

If the customer guardrails endpoint is not available, then a prompt that the software cannot get access to the endpoint is shown and an error is written to the Event log.

Configure the AI Assistant

To configure the AI Assistant, do these tasks:

1. Select an endpoint provider. Refer to the section: [Endpoint Providers](#).
2. Create an endpoint and get the required credentials from the provider. Refer to the documentation that is supplied by the endpoint provider.
3. In the SCIEX OS software, configure the thinking, embedding, and fast (optional) model endpoints. Refer to the section: [Configure the Endpoints](#).
4. (Optional) Configure the customer guardrails. Refer to the section: [Customer Guardrails](#).
5. Do the validation tests and make sure that all of the tests pass. Refer to the section: [Configure the Endpoints](#).
6. Give the **Access UI Assistant** permission to all of the users who require access to the AI Assistant. For information about how to configure users and roles, refer to the document: *Help*.

Configure the Endpoints

1. Open the Configuration workspace.
2. Click **AI Assistant**.
3. On the Thinking, Fast, and Embedding Model tabs, configure the thinking, fast (optional), and embedding model endpoints. For descriptions of the fields, refer to the section: [AI Assistant Page](#).
4. (Optional) On the Custom Guardrails tab, configure the endpoint. For descriptions of the fields, refer to the section: [AI Assistant Page](#).
5. Click **Run Validation**.

Note: The tests require a maximum of 30 minutes to complete. Endpoint latency and the number of models that are selected to test control the time that is required.

If the validation completes without errors, then the **Save** button is available.

Administration

6. Close the SCIEX OS, and then open it again.
7. Make sure that all of the applicable tests have a check mark or the status `Good`.

Tip! For more information about a status, hover the cursor over the status.

For a description of the tests and corrective actions, refer to the section: [Tests](#).

For troubleshooting instructions, refer to the section: [Troubleshooting](#).

8. Click **Save**.
9. Close the SCIEX OS, and then open it again.

AI Assistant Page

To open this page, in the Configuration workspace, click **AI Assistant**.

Note: Third-party AI connections and submitted data are the user's responsibility. Responses may be inaccurate — verify before use. Refer to the section: [Review the Response](#).

Table 3-2 Model Tabs

Label	Description
Enable fast model	Select to use the fast model.
	Note: This check box is shown on the Fast tab.
Provider	Select the endpoint provider: • AzureOpenAI • OpenAI² • Gemini
Endpoint	Type the base URL of the API service.
	Note: This field is not required for OpenAI but is required for OpenAI-compatible endpoint providers.
Deployment name	For Azure OpenAI, type the deployment name. For other endpoint providers, type the model ID. For recommended values, refer to the table: Table 3-3 .
API Key	Type the authentication credential.

² Select this option for OpenAI and OpenAI-compatible endpoint providers.

Table 3-2 Model Tabs (continued)

Label	Description
	Note: API keys are encrypted at rest in the database for the SCIEX OS software. They are never written to log files, traces, or diagnostic output.
Max Tokens	(Optional) To override the maximum output token count, type a value. To use the default value for the provider, keep the field empty.
Dimensions	The output dimensions of the selected embedding model. For the values for the recommended embedding models, refer to the table: Table 3-3. Note: This check box is shown on the Embedding Model tab.

Table 3-3 Recommended Model Names

Endpoint Provider	Fast	Thinking	Embedding	
			Model	Dimensions
Azure OpenAI	gpt-5.4-mini or a smaller or lower-cost variant of the selected thinking model	gpt-5.4 or later	text-embedding-3-small	1536
OpenAI-compatible	gpt-5.4-mini or a smaller or lower-cost variant of the selected thinking model	gpt-5.4 or later	text-embedding-3-small ²	1536
Gemini	N/A	N/A	gemini-embedding-001	1536

Table 3-4 Custom Guardrails Tab

Label	Description
Enable Custom Guardrails	Select to use custom guardrails.
Provider	Select the endpoint provider:

² If the text-embedding-3-small model is supported by the provider, then it is recommended. If it is not supported, then use an embedding model that supports 1536 dimensions.

Table 3-4 Custom Guardrails Tab (continued)

Label	Description
	• AzureOpenAI • OpenAI⁴ • Gemini
Endpoint	Type the base URL of the guardrails service.
Deployment name	For Azure OpenAI, type the deployment name. For other endpoint providers, type the model ID. For recommended values, refer to the table: Table 3-3 .
API Key	Type the authentication credential. Note: API keys are encrypted at rest in the database for the SCIEX OS software. They are never written to log files, traces, or diagnostic output.
Input risks	Identify the user requests that will not be processed by the AI Assistant.
Output risks	Identify the responses that will not be shown to the user.

Table 3-5 Validation Section

Label	Description
Run Validation	Click to do a test of the configuration of all of the model endpoints and the custom guardrails.
Save	Click to save the changes for all of the model endpoints. Note: This button is available only after validation is completed.
Revert Changes	Click to go back to the initial settings for all of the model endpoints.
Clear Configuration	Click to clear all of the configuration fields.

⁴ Select this option for OpenAI and OpenAI-compatible endpoint providers.

Tests

Table 3-6 Tests

Test	Description
Embedding Model Endpoint	
Static Embedding Configuration Test	The software makes sure that the configuration of the embedding model is correct without an API call: • The Provider is a supported endpoint provider. • The Deployment name is correct for the selected endpoint provider. • The Dimensions value is correct for the selected embedding model. If this test completes without errors, then the software continues with the remaining tests.
Thinking and Fast Model Endpoints	
Connectivity	The software makes sure that the endpoint provider is available, the API key is valid, and the deployment or model is correct. The software sends a prompt to the configured thinking and fast model endpoints. When the test is completed, one of these results is shown: • : The test completed without errors. • : No response was received from the endpoint provider, or the API key or model name is not correct. Make sure that the URL of the endpoint provider, API key, and model name are correct. Refer to the section: Connectivity Issues. Timeout: 30 seconds
Latency	The software makes sure that the response times are in the range that is specified in the service level agreements (SLAs) for the model endpoints. The software sends two warm-up calls followed by five timed calls. It uses the timed calls to calculate the latency. When the test is completed, one of these results is shown: • : The response time is in the required range. • : The response time is more than the response time that is specified in the SLA. Use a faster model, a nearer region, or a different endpoint provider. Timeout: 5 minutes

Table 3-6 Tests (continued)

Test	Description
Accuracy	The software makes sure that the configured model endpoint correctly uses the documentation for the SCIEX OS software to supply responses to questions. It sends a set of questions to the model endpoint, and then calculates the quality of the responses. When the test is completed, one of these results is shown: ✓: A minimum of 80% of the responses are accurate. ⚠: More than 60% but less than 80% of the responses are incomplete or inaccurate. Use a larger or instruction-tuned model. ✗: More than 60% of the responses are not correct for this use case. Use a larger or instruction-tuned model. Timeout: 10 minutes
Security	The software makes sure that the model ignores unsafe prompts. It sends a set of prompts that include system prompt disclosure questions, jailbreaks, dangerous-substance questions, medical advice questions, hacking instructions, and prompt injection attacks. When the test is completed, one of these results is shown: ✓: The model is safe. All unsafe prompts are ignored. ⚠: There is some safety risk. More than 75% of the unsafe prompts are ignored. ✗: The model is not safe. Less than 75% of the unsafe prompts are ignored. Use a different model. Timeout: 10 minutes
Tool Calling	The software makes sure that the model has access to the required internal tools, for example, the search plugin for the knowledge base. The software sends prompts that require the use of a specified tool, and then makes sure that the tool operated correctly. When the test is completed, one of these results is shown: ✓: The model uses the required tools correctly 80% of the time. ⚠: The model uses the required tools correctly more than 60% but less than 80% of the time.

Table 3-6 Tests (continued)

Test	Description
	✗: Do not use the model. It uses the required tools less than 60% of the time. Use a model that is known to have good access to the required tools. Timeout: 10 minutes

Troubleshooting

Connectivity Issues

Table 3-7 Connectivity Test Failures

Test	Cause	Corrective Action
Latency	The response time is more than the SLA.	- Fast model: - Use a smaller or faster model variable (for example, gpt-5.4-mini). - Azure OpenAI: Use a nearer region. - Thinking model: - Use a nearer region. - Make sure that the deployment is not overloaded and has sufficient resources.
Accuracy	The model is too small or not tuned for instruction.	Azure OpenAI and OpenAI: Use the gpt-5.4 model or later.
Security Guardrails	The model is not safe.	Do not deploy the model in a production environment: Azure OpenAI and OpenAI: Use a gpt-5.4 model.

Table 3-7 Connectivity Test Failures (continued)

Test	Cause	Corrective Action
Tool Calling	The model does not support function calling.	- Refer to the document: <i>Release Notes</i> for the model to make sure that tool use and function calling are supported. Note: The Azure OpenAI and OpenAI gpt-5.4 models support tool calling. - Third-party Open-AI-compatible endpoints: Make sure that the service supports the OpenAI function-calling API.

Embedding Issues

Table 3-8 Troubleshoot Embedding Issues

Issue	Cause	Corrective Action
Embedding check failure	The configuration of the embedding model is incorrect.	Refer to the section: AI Assistant Page .
Responses are unsatisfactory or not applicable	The configuration of the embedding model is incorrect.	- Refer to the section: AI Assistant Page. - Make sure that the Static Embedding Configuration Test completes without errors. - If there is an issue with the integrity of the knowledge base, contact sciex.com/request-support.

Customer Guardrails Issues

Table 3-9 Troubleshoot Customer Guardrails Issues

Issue	Cause	Corrective Action
A connection failure occurs during the test	1. The endpoint URL is not available. 2. The API key is incorrect. 3. The service does not return the required JSON structure.	1. Make sure that the endpoint URL is incorrect and uses HTTPS. 2. Make sure that the API key is correct. 3. Contact the service.
This message is shown: Guardrail endpoint cannot be reached	The endpoint is not available.	• Make sure that the network is available. • Make sure that the firewall is configured correctly to let the software communicate with the endpoint. • Make sure that operation of the guardrail service is correct.
All responses are blocked	The endpoint service supplies the response <code>allowed: false</code> for all inputs.	Make sure that the logic for the guardrail service is correct, and then do a test with representative questions.
The endpoint URL is rejected during the save step	The endpoint URL uses HTTP.	Change the endpoint URL to use HTTPS.
A timeout occurs	The service does not send a response in 10 seconds.	Optimize the response time or increase the capacity of the infrastructure.

Frequently Asked Questions

Auditing

Are audit records that are created for the AI Assistant audited?

Yes. If a task is audited when it is done manually, then it is also audited when it is done by the AI Assistant. The audit trail record shows the name of the user who used the AI Assistant to do the task.

Where are events for the AI Assistant logged?

Events that change the system status that are done by the AI Assistant and approved by the user are written to the Event log for the SCIEX OS software.

Accuracy and Hallucinations

Can the AI Assistant supply incorrect responses?

The AI Assistant uses standard large language model (LLM) technology, which might supply plausible but incorrect responses, also known as hallucinations. Multiple methods are used to keep hallucinations to a minimum, for example, knowledge-base grounding, built-in guardrails, and validation tests, but hallucinations can still occur. Always make sure that information is accurate before it is used.

Example Chat Sessions for Calculated Columns

A

This section includes these examples:

- **MEAN** [(**Area**)] for Standards
- **MEAN** [(**Area**)] for Standards, QCs, Solvents, and Blanks, with Unused Samples

MEAN [(Area)] for Standards

This example creates a formula that calculates the mean area for standards. It replaces text values with zeroes.

Figure A-1 Example: MEAN [(Area)] for Standards

The screenshot displays the SCIEX OS Software AI Assistant interface for creating a calculated column formula. The main window has a dark blue header with a close button. Below the header, there's a prompt: "the calculator to create a new formula." The "Column name" field is set to "MeanArea". The "Option" field is set to "Type a description for the formula". A grid of functions is visible, including COUNT, MAX, STDEV, Clear, SUM, MIN, MEDIAN, (, MEAN, ABS, IF,), LEFT, RIGHT, ISNUMBER, +, /, *, -, and =. The formula editor shows "MEAN([Area])". The "Formula Details" section is expanded, showing a list of columns with "Area" selected. The "Regression parameters" section is also expanded, showing "MEAN value will be calculated using the following sample types:" with "Standards" selected. The "Resulting text values as" dropdown is set to "Zero".

AI Assistant

create a calculated column named "MeanArea" to ...

create a calculated column named "MeanArea" to calculate mean of area for standards only with resulting text as zero

Calculated column formula

Column name: MeanArea

Calculates the arithmetic mean of the [Area] values. The aggregate scope is configured for Standards only, so the mean is computed using only standard samples. The resulting text handling is set to Zero as requested.

Aggregate sample types: Standards

Treat resulting text values as: Zero

Include unused samples: false

MEAN([Area])

Calculated column reads #0.000000 calculates the

AI-generated outputs may be inaccurate, incomplete, or misleading. Results are advisory only and should be independently verified before use.

MEAN[(Area)] for Standards, QCs, Solvents, and Blanks, with Unused Samples

This example creates a formula that calculates the mean area for standards, QCs, solvents, and blanks. It includes unused samples and replaces text values with N/A.

Figure A-2 Example: MEAN[(Area)] for Standards, QCs, Solvents, and Blanks, with Unused Samples

The screenshot displays the 'AI Assistant' interface for creating a calculated column. The main window is titled 'Use the calculator to create a new formula.' and shows a formula editor with the formula name 'MeanArea' and a description 'Type a description for the formula'. A grid of functions is visible, including COUNT, MAX, STDEV, SUM, MIN, MEDIAN, MEAN, ABS, IF, LEFT, RIGHT, ISNUMBER, and mathematical operators. The formula 'MEAN([Area])' is entered in the formula field. Below the grid, a note states: 'Note: The "Original text" option is recommended for formulas that contain functions, such as the IF function, that compare non-numeric values to numeric values.' A dropdown menu for 'Treat resulting text values as' is set to 'Error (N/A)'. The 'Formula Details' section shows a list of columns on the left and a list of sample types on the right. The sample types list includes 'Standards', 'QCs', 'Blanks', 'Solvent', 'Blank', and 'Include Unused Samples', all of which are checked. The 'MEAN value will be calculated using the following sample types:' section shows the same list of sample types. The 'AI Assistant' chat window on the right shows the user's request: 'create a calculated column with name "MeanArea..."'. The assistant's response is: 'create a calculated column with name "MeanArea" to calculate mean of area including unused samples'. The assistant also provides the calculated column formula: 'Column name: MeanArea. Calculates the mean of the [Area] values using the MEAN aggregate function. The aggregation is configured for sample types Unknowns, Standards, QCs, and Blanks, and unused samples are included so rows with the Use checkbox cleared are also part of the average. Aggregate sample types: Unknowns, Standards, QCs, Blanks. Treat resulting text values as: Error. Include unused samples: true. MEAN([Area])'. The assistant concludes with: 'Calculated column prepared successfully. This column calculates the "mean of the [Area] values" using MEAN, with aggregation configured for Unknowns, Standards, QCs, and Blanks. Unused samples are included.' The bottom of the chat window shows a disclaimer: 'AI-generated outputs may be inaccurate, incomplete, or miss critical information.'

← Accept changes and return to Calculated Columns ✕ Discard

Use the calculator to create a new formula.

Formula name: MeanArea

Description: Type a description for the formula

COUNT	MAX	STDEV	Clear
SUM	MIN	MEDIAN	(
MEAN	ABS	IF	)
LEFT	RIGHT	ISNUMBER	+
/	*	-	=

Note: The "Original text" option is recommended for formulas that contain functions, such as the IF function, that compare non-numeric values to numeric values.

Treat resulting text values as: Error (N/A)

Formula Details

Columns: Search

Regression parameters: MEAN value will be calculated using the following sample types:

- ☒ Standards
- ☐ Only if the sample name contains...
- ☒ QCs
- ☐ Only if the sample name contains...
- ☒ Blanks
- ☒ Solvent
- ☒ Blank
- ☐ Double
- ☒ Include Unused Samples

AI Assistant

create a calculated column with name "MeanArea..."

create a calculated column with name "MeanArea" to calculate mean of area including unused samples

Calculated column formula

Column name: MeanArea

Calculates the mean of the [Area] values using the MEAN aggregate function. The aggregation is configured for sample types Unknowns, Standards, QCs, and Blanks, and unused samples are included so rows with the Use checkbox cleared are also part of the average.

Aggregate sample types: Unknowns, Standards, QCs, Blanks

Treat resulting text values as: Error

Include unused samples: true

MEAN([Area])

Calculated column prepared successfully.

This column calculates the "mean of the [Area] values" using MEAN, with aggregation configured for Unknowns, Standards, QCs, and Blanks. Unused samples are included.

AI-generated outputs may be inaccurate, incomplete, or miss critical information.

Configuration Examples

B

Azure OpenAI

Thinking or Fast

Go to the [Azure AI Foundry](#) to create an Azure OpenAI resource and deploy the selected model. Use the resource endpoint URL and one of the two API keys that are shown on the Keys and Endpoint page for the resource. For instructions, refer to the Microsoft documentation.

Table B-1 Thinking or Fast Model Endpoint

Field	Example Value
Provider	AzureOpenAI
Endpoint	<code>https://companyname-ai.openai.azure.com/</code>
Deployment name	<code>gpt-5.4</code> (The deployment name that was created in Azure AI Foundry. The name is case sensitive.)
API Key	<code>alb2c3d4e5f6...</code> (Key 1 or Key 2 from the Azure resource.)
Max Tokens	(Keep empty.)

Embedding

In the [Azure AI Foundry](#), deploy the text-embedding-3-small model. This model can be in the same resource as the thinking or fast models or a different one.

Table B-2 Embedding Model Endpoint

Field	Example Value
Provider	AzureOpenAI
Endpoint	<code>https://companyname-ai.openai.azure.com/</code>
Deployment name	<code>text-embedding-3-small</code> (The deployment name that was created in Azure AI Foundry. The name is case sensitive.)
API Key	<code>alb2c3d4e5f6...</code> (Key 1 or Key 2 from the Azure resource.)
Dimensions	<code>1536</code>

OpenAI

Thinking or Fast

Go to <https://platform.openai.com/api-keys> to create an API key. For instructions, refer to the OpenAI documentation.

Table B-3 Thinking or Fast Model Endpoint

Field	Example Value
Provider	OpenAI
Endpoint	(Keep empty. The provider URL is built in.)
Deployment name	gpt-5.4
API Key	sk-proj-abc123...
Max Tokens	(Keep empty.)

Embedding

Table B-4 Embedding Model Endpoint

Field	Example Value
Provider	OpenAI
Endpoint	(Keep empty. The provider URL is built in.)
Deployment name	text-embedding-3-small
API Key	sk-proj-abc123...
Dimensions	1536

Gemini

Embedding

Table B-5 Embedding Model Endpoint

Field	Example Value
Provider	Gemini
Endpoint	https://generativelanguage.googleapis.com/
Deployment name	gemini-embedding-001

Configuration Examples

Table B-5 Embedding Model Endpoint (continued)

Field	Example Value
API Key	AizaSy...
Dimensions	1536

Mixed Providers

This example uses Azure OpenAI for the thinking and fast model endpoints and Gemini for the embedding model endpoint.

Table B-6 Mixed Provider Configuration

Parameter	Thinking	Fast	Embedding
Provider	AzureOpenAI	AzureOpenAI	Gemini
Endpoint	https:// companyname- ai.openai.azure. com/	https:// companyname- ai.openai.azure. com/	https:// generativelangua ge.googleapis.co m
Deployment name	gpt-5.4	gpt-5.4	gemini- embedding-001
API Key	Azure API key	Azure API key	Google AI API key
Max Tokens	(Keep empty.)	(Keep empty.)	N/A
Dimensions	N/A	N/A	1536

Contact Us

Addresses



AB Sciex Pte. Ltd.
Blk33, #04-06 Marsiling Industrial Estate Road 3
Woodlands Central Industrial Estate, Singapore 739256

SCIEX Headquarters

AB Sciex LLC
250 Forest Street
Marlborough, MA 01752
USA

Customer Training

- Global: sciex.com/contact-us

Online Learning Center

- [SCIEX Now Learning Hub](#)

SCIEX Support

SCIEX and its representatives have a global staff of fully-trained service and technical specialists. They can supply answers to questions about the system or any technical issues that might occur. For more information, go to the SCIEX website at sciex.com or use one of the links that follow to contact us.

- sciex.com/contact-us
- sciex.com/request-support

Cybersecurity

For the latest guidance on cybersecurity for SCIEX products, visit sciex.com/productsecurity.

Documentation

This version of the document supersedes all of the previous versions of this document.

To see this document electronically, Adobe Acrobat Reader is required. To download the latest version, go to <https://get.adobe.com/reader>.

To find software product documentation, refer to the release notes or software installation guide that comes with the software.

To find hardware product documentation, refer to the documentation that comes with the system or component.

The latest versions of the documentation are available on the SCIEX website, at sciex.com/customer-documents.

Note: To request a free, printed version of this document, contact sciex.com/contact-us.
