VPAT Accessibility Conformance Report

(Based on ITI VPAT[©])

Name of Product	Reaxys
Date Last Updated	December 3rd, 2024
Completed by	Madison Russell (Digital Accessibility Team)
Applicable Standards/Guidelines	This document rates Reaxys according to the W3C WCAG 2.1 A and AA requirements.
Contact for More Information	Elsevier Digital Accessibility Team accessibility@elsevier.com
Testing Tools and Methods	Hands-on keyboard operation Firebug/Code inspection JAWS 17 on Chrome V 108 on Windows 10 NVDA screen reader v2022.1 Wave Extension aXe Extension for Chrome Color Contrast Analyzer W3C WAI Pages Elsevier Accessibility Checklist: http://romeo.elsevier.com/accessibility_checklist/
Document Sections	The review document below includes all WCAG 2.1 A and AA checkpoints and is organized into 6 logical sections: • Visuals • Keyboard • Headings and Structure • Labeling • Multimedia • Usability
Pages Covered	Sign In, Header, Footer, Quick Search, Quick Search Results, Query Builder, Document Results, Substances Results, Preparations, Reactions Results, Targets Results, Retrosynthesis, History, Structure Editor, Feedback, Resource Center
Terms	 Supports: The functionality of the product has at least one method that meets the criteria without known defects or meets with equivalent facilitation. Partially supports: Some functionality of the product does not meet the criteria. Does not support: Majority of functionality of the product does not meet the criteria. Supports (N/A): According to W3C on conformance, "If there is no content to which a success criterion applies, the success criterion is satisfied."
Notes/Terminology	"AT" stands for Assistive Technology such as screen readers, voice input, etc.

WCAG 2.1 Success Criterion	Level	Evaluation
1.1.1 Non-text Content	Α	Partially supports
1.2.1 Audio-only and Video-only (Prerecorded)	A	Supports (N/A)
1.2.2 Captions (Prerecorded)	Α	Supports (N/A)
1.2.3 Audio Description or Full Text Alternative	A	Supports (N/A)
1.2.4 Captions (Live)	AA	Supports (N/A)
1.2.5 Audio Description	AA	Supports (N/A)
1.3.1 Info and Relationships	А	Partially supports
1.3.2 Meaningful Sequence	Α	Supports
1.3.3 Sensory Characteristics	Α	Supports
1.3.4 Orientation (2.1)	AA	Supports
1.3.5 Identify Input Purpose (2.1)	AA	Partially supports
1.4.1 Use of Color	А	Partially supports
1.4.2 Audio Control	Α	Supports (N/A)
1.4.3 Contrast (Minimum)	AA	Partially supports
1.4.4 Resize text	AA	Partially supports
1.4.5 Images of Text	AA	Supports
1.4.10 Reflow (2.1)	AA	Partially supports
1.4.11 Non-Text Contrast (2.1)	AA	Partially supports
1.4.12 Text Spacing (2.1)	AA	Supports
1.4.13 Content on Hover or Focus (2.1)	AA	Supports
2.1.1 Keyboard	А	Partially supports
2.1.2 No Keyboard Trap	А	Partially supports
2.1.4 Character Key Shortcuts (2.1)	А	Supports (N/A)
2.2.1 Timing Adjustable	Α	Supports
2.2.2 Pause, Stop, Hide	Α	Supports
2.3.1 Three Flashes or Below Threshold	Α	Supports (N/A)
2.4.1 Bypass Blocks	Α	Does not support
2.4.2 Page Titled	Α	Supports
2.4.3 Focus Order	А	Partially supports
2.4.4 Link Purpose (In Context)	A	Supports
2.4.5 Multiple Ways	AA	Supports
2.4.6 Headings and Labels	AA	Supports
2.4.7 Focus Visible	AA	Partially supports
2.5.1 Pointer Gestures (2.1)	А	Supports (N/A)
2.5.2 Pointer Cancellation (2.1)	A	Supports
2.5.3 Label in Name (2.1)	Α	Supports
2.5.4 Motion Actuation (2.1)	A	Supports (N/A)
3.1.1 Language of Page	A	Supports
3.1.2 Language of Parts	AA	Does not support
3.2.1 On Focus	A	Supports
3.2.2 On Input	A	Supports

WCAG 2.1 Success Criterion	Level	Evaluation
3.2.3 Consistent Navigation	AA	Supports
3.2.4 Consistent Identification	AA	Supports
3.3.1 Error Identification	А	Supports (N/A)
3.3.2 Labels or Instructions	A	Partially supports
3.3.3 Error Suggestion	AA	Supports
3.3.4 Error Prevention (Legal, Financial, Data)	AA	Supports (N/A)
4.1.1 Parsing	A	Supports
4.1.2 Name, Role, Value	A	Partially supports
4.1.3 Status Messages (2.1)	AA	Supports

Visuals			
WCAG 2.1 Checkpoint	Supporting Features	Remarks	
1.1.1: Non-Text Content (A) Provide text	Partially supports	Reaxys does not contain a lot of non-text content and most non-text content provides text alternatives.	
alternatives for non- text content (e.g.		Exceptions:	
images)		Preparations: Transfer to retrosynthesis image has no alt text	
		Reactions Results: Arrow image under Transfer to Retrosynthesis does not have alt text	
		Retrosynthesis: Project View arrow does not have alt text	
1.3.3: Sensory Characteristics (A) Do not rely on sensory characteristics of components such as shape, size, visual location, orientation, or sound	Supports	Instructions provided for understanding and operating content do not rely solely on sensory characteristics of components such as shape, size, visual location, orientation, or sound.	
1.4.1: Use of Color (A) Color is not used as the only visual means of	Partially supports	Most content on Reaxys does not use color only to convey meaning.	
conveying info		Exceptions:	
		Global: use of color only to indicate links (blue text color)	
		Quick Search Results: color only is used in the druglikeness chart	
		Query Builder: periodic table uses color only to indicate type of element	
1.4.3: Color Contrast (Minimum) (AA)	Partially supports	Most text within Reaxys has a color contrast of at least 4.5:1.	
Text has enough			

contrast with the		
background (4.5:1 for		Exceptions:
small text and 3:1 for		
large text)		Quick Search: "Search for" text has a contrast ratio of 1.8:1
large text)		Quick Search: "Search for" text has a contrast ratio of 1.8:1 Quick Search Results: "Results for" text has a contrast ratio of 1.8:1, Commercial Substances light grey text ("Please take a moment") has a text color contrast of 3.5:1, Commercial Substances table headings have a color contrast ratio of 3.5:1, Substances Identification light grey text ("Chemical Names: ", etc) have a text contrast ratio of 3.5:1, Substances Patent-Specific Data table headers have a color contrast ratio of 3.5:1, Substances Druglikeness table row headings have a contrast ratio of 3.5:1, Substances Bioactivity (All) In vitro table headings have a contrast ratio of 3.5:1 Query Builder: When receiving focus filter category text has a contrast ratio of 2.2:1 Substances Results: Druglikeness row headers have a contrast ratio of 3.5:1, Identification row headers have a contrast ratio of 3.5:1, Commercial Supplier "Please take a moment" text has a contrast ratio of 3.5:1, Commercial Suppliers table headings text have a contrast ratio of 3.5:1, Bioactivity visualization blue #1 marker has a contrast ratio of 2.6:1,
		Preparations: Table headings have a contrast ratio of 3.5:1 Retrosynthesis: "My synthesis projects" has a contrast ratio of 3.2:1, "Predicted" text has a contrast ratio of 3.5:1, "Marvin JS" text has a contrast ratio of 1.8:1, My Synthesis Projects table headers have a contrast ratio of 3.5:1, Project View table headers have a contrast ratio
		of 3.5:1, Tree View table headers have a contrast ratio of 3.5:1
		History: "Recent" and "Saved" orange text has a contrast ratio of 2.6:1
		Header: Orange text has a contrast ratio of 2.8:1
1.4.4: Resize Text (AA) Text can be enlarged up to 200% without loss of functionality.	Partially supports	Text can be enlarged up to 200% on most pages without loss of functionality. Exceptions: Query Builder: Import dialog cannot be properly viewed when magnified
1.4.5: Images of Text (AA) Text is used rather than images of text, except where the	Supports	Reaxys pages do not contain images of text.
CACCEL WHELE CHE		

presentation of text is		
essential, such as logos 1.4.10 Reflow (AA) (2.1) Content can be presented without loss of information or functionality, and without requiring scrolling in two dimensions for: Vertical scrolling content at a width equivalent to 320 CSS pixels; Horizontal scrolling content at a height equivalent to 256 CSS pixels.	Partially supports	Most Reaxys content can be presented without loss of information and functionality and without requiring scrolling in two dimensions when magnified. Exceptions: Reactions Results: Structure zoom-in requires scrolling in two dimensions when magnified Retrosynthesis: Structure View in 3D requires scrolling in two dimensions when magnified
1.4.11 Non-Text Contrast (AA) (2.1) User interact components and graphical objects have a contrast ratio of at least 3:1 against adjacent color(s).	Partially supports	Overall Reaxys provides good contrast between graphical objects and backgrounds. Exceptions: Global: Light grey text color used throughout has a contrast ratio of 3.5: (rbga(83,86,90,.7), radio button and checkbox fill color has a contrast ratio of 2.8:1 Quick Search: border of search input has a contrast ratio of 1.2:1 Preparations: buttons ("Create synthesis plan", "zoom in", etc) have a contrast ratio of 2.9:1 Retrosynthesis: checkboxes have a contrast ratio of 1.7:1, My Synthesis Projects buttons ("zoom in, "see details", etc) have a color contrast of 2.9:1, My Synthesis Projects checkboxes have a contrast ratio of 2:1, Tree View export reactions radio buttons have a contrast ratio of 2:1, Tree View outline of structure has a color contrast ratio of 2:3:1, Export Reactions radio buttons have a contrast ratio of 2:1 Structure Editor: Radio buttons have a contrast ratio of 1.9:1 Feedback: Close button has a contrast ratio of 1.6:1
1.4.12 Text Spacing (AA) (2.1) In content implemented using	Supports	All text-based CSS settings within Reaxys can be changed to certain minimum values without loss of content or functionality.

markup languages that		
support the following		
text style properties,		
no loss of content or		
functionality occurs by		
setting all the		
following and by		
changing no other		
style property:		
, , , ,		
Line height (line		
spacing) to at least 1.5		
times the font size;		
Spacing following		
paragraphs to at least		
2 times the font size;		
Letter spacing		
(tracking) to at least		
0.12 times the font		
size;		
Word spacing to at		
least 0.16 times the		
font size.		
1.4.13 Content on	Partially supports	Most content that displays on hover or focus is dismissible, hoverable,
Hover or Focus (AA)	, с	and persistent.
(2.1)		
Where receiving and		
then removing pointer		Exceptions:
hover or keyboard		
focus triggers		Quick Search Results: Commercial Substances button tooltips pointer
additional content to		cannot move to tooltip text without disappearing (hoverable),
become visible and		Substances button tooltips pointer cannot move to tooltip text without
then hidden, the		disappearing (hoverable)
following are true:		and predicting (noverable)
 Dismissable 		
Hoverable		
Persistent		
2.3.1: Three Flashes or	Supports (N/A)	Reaxys does not contain flashing content.
Below Threshold (A)	Supports (N/A)	nearys does not contain hashing content.
No more than three		
flashes in a 1-second		
period, or the flashes		
are below the defined		
thresholds		
		Keyboard
WCAG 2.1	Supporting	Remarks
Checkpoint	Features	Nemarks
1.3.2: Meaningful	Supports	The correct reading sequence can be programmatically determined on
Sequence (A)	24661.0	all Reaxys pages.
<u> </u>		
L		i e

The correct reading		
sequence can be		
programmatically		
determined		
2.1.1: Keyboard (A)	Partially supports	Overall Reaxys provides keyboard access to most of the interactive links
All functionality is		and buttons.
available from a		
keyboard, except for		Supporting Remarks:
tasks such as drawing		
		The majority of buttons and links are keyboard operable, along with the
		navigation.
		Exceptions:
		Quick Search: import browse file button is not keyboard accessible
		Quick Search Results: Number of suppliers tooltip is not keyboard
		accessible, Commercial Substances CAS Registry Number tooltip is not
		keyboard accessible, Substances "View in 3D" buttons are not keyboard
		operable ("zoom in", "zoom out" etc), Substances "View in 3D"
		structure not keyboard operable (cannot select elements and move
		them with keyboard only), Documents Index Terms hit and Abstract hit
		cannot be expanded via keyboard
		Reactions Results: "Find similar" tooltip is not accessible by keyboard
		when button is unavailable but is accessible with mouse, Search tooltip
		"Edit search in query builder" is not keyboard accessible
		Datus a such asia. Duradiated and Dublished information to altimate and
		Retrosynthesis: Predicted and Published information tooltips are not
		keyboard accessible
		Resource Center: entire pop-up inaccessible for keyboard users, cannot
		open using keyboard
2.1.2: No Keyboard	Partially supports	There are no keyboard traps on most pages in Reaxys.
Trap (A)	,	, , , ,
The user can use the		
keyboard to move		Exceptions:
through page elements		
and is not trapped on a		Retrosynthesis: Keyboard trap after tabbing through ChemDrawJS
particular element		buttons
2.1.4 Character Key	Supports	Reaxys content does not have any keyboard shortcuts using single keys.
Shortcuts (A)	pp 0. to	nearly server asses her have any negotiar a shorteath doing shighe keys.
(2.1)		
If a keyboard shortcut		
is implemented in		
content using only		
letter (including upper-		
and lower-case		
letters), punctuation,		

number, or symbol		
characters, then at		
least one of the		
following is true:		
• Turn off		
• Remap		
Active only on		
focus 2.4.3: Focus Order (A)	Partially supports	Reaxys users can mostly tab through the interface in a logical order,
Users can tab through	Partially Supports	where elements receive focus from top to bottom, left to right.
the elements of a page		where elements receive focus from top to bottom, left to right.
in a logical order		
		Exceptions:
		Quick search: focus jumps from header to footer before moving to the
		main content
		Quick Search Results: Entire result (substances, documents, etc) should
		not receive focus as it is not interactive
		Query Builder: Advanced Search close button does not receive focus,
		"Save" should not be in the tab order when unavailable, number of
		results for molecular formula receives focus but is not interactive
		Churching Editor, Undo and rode buttons should not be in the tole and a
		Structure Editor: Undo and redo buttons should not be in the tab order when they are unavailable
2.4.7: Focus Visible	Partially supports	Most page elements have a visible focus indicator.
(AA)	, , ,	
The page element with		Exceptions:
the current keyboard		
focus has a visible		Quick Search Results: Documents Index Terms hit does not have a
focus indicator		visible focus indicator, Documents Abstract hit does not have a visible
		focus indicator
		Structure Editor: As Drawn and edit buttons do not have a visible focus
		indicator
3.2.1: On Focus (A)	Supports	UI components on Reaxys do not trigger unexpected actions when
When a UI component		receiving focus.
receives focus, this		
does not trigger		
unexpected actions.		
		Headers and Structure
WCAG 2.1 Checkpoint	Supporting Features	Remarks
1.3.1: Information and	Partially supports	On most pages, information, structure, and relationships can be
Relationships (A)	, 23 1 2 30	programmatically determined.
Info, structure, and		
relationships can be		

programmatically		Exceptions:
determined		
		Query Builder: page should contain an H1 heading, search field headings should not skip a level and should be H2
		Documents Results: Headings skip levels, Number of documents should be H1 and filters should be H2
		Substances Results: Number of substances should be H1 rather than H3
		Preparations: Number of reactions should be H1 rather than H3
		Targets Results: Number of targets should be H1 rather than H3, "Filters" should be H2 heading
		Retrosynthesis: "Cannot translate the name/ID you entered" should not be a heading, Export Reactions skips heading levels and should be H1 rather than H4
2.4.1: Bypass Blocks (A) Users can bypass repeated blocks of	Does not support	"Skip to main content" link appears on all pages but does not skip header or footer on majority of pages
content.		Supporting remarks:
		Skip to main content link works on Structure Editor
2.4.6: Headings and	Supports	Reaxys pages have clear and consistent headings and labels
Labels (AA) Headings and labels		
are clear and		
consistent.		
3.1.1: Language of	Supports	All pages on Reaxys have the language of the page specified, using
Page (A)		lang="EN".
The language of the		
page is specified 3.1.2: Language of	Does not support	For content in a language other than English, the language of the part is
Parts (AA)		not specified.
Specify the language of		
text passages that are		
in a different language than the default		
language of the page.		
4.1.1: Parsing (A)	Supports	All page elements have complete start and end tags, elements are
Use valid, error-free		nested according to their specifications, elements do not contain
HTML		duplicate attributes, and IDs are unique.
		Labeling
WCAG 2.1 Checkpoint	Supporting Features	Remarks
1.3.5 Identify Input	Partially supports	Most Reaxys pages do not contain input fields related to the user.
Purpose (AA)	,	, , , ,
Page 9		

(2.4)		
(2.1)		Formation
The purpose of each		Exceptions:
input field collecting		
information about the		Sign In: Username and password fields do not have an autocomplete
user can be		attribute
programmatically		
determined when:		
The input field serves a		
purpose identified in		
the Input Purposes for		
User Interface		
Components section;		
and the content is		
implemented using		
technologies with		
support for identifying		
the expected meaning		
for form input data.		
2.4.2: Page Titled (A)	Supports	Reaxys pages have specific titles, which describe the topic or purpose of
The page has a title		the pages, other than the home screen.
describing its topic or		
purpose		
2.4.4: Link Purpose (In	Supports	Links have descriptive and unique names.
Context) (A)		
The purpose of each		
link can be determined		
from the link text or		
surrounding context.		
2.5.3 Label in Name (A)	Supports	UI components with labels that include text have an accessible name
(2.1)		that includes that text.
For user interface		
components with		
labels that include text		
or images of text, the		
name contains the text		
that is presented		
visually.		
3.2.4: Consistent	Supports	UI components are identified consistently and on every page.
Identification (AA)		
UI components used		
across the web site are		
identified consistently		
on every page.		
3.3.1: Error	Supports	Reaxys identifies input errors in a variety of ways including text which
Identification (A)		appears below form inputs, popups, and alerts.
Input errors are clearly		
marked and described		
to the user.		
3.3.2: Labels and	Partially supports	Most form inputs provide an accessible name using the <label> tag or</label>
Instructions (A)		aria-label.

Items requiring user		Exceptions:
input are clearly		
labeled or have clear instructions.		Document Results: Substances buttons ("Create synthesis plan", "zoom in", etc) do not have accessible names, checkboxes have no accessible
ilisti uctions.		names/labels
		Traines, razers
		Substances results: "No of references" drop down has no accessible
		name, checkboxes have no accessible name/label
		Preparations: checkboxes have no accessible name/label
		,
3.3.3: Error Suggestion	Supports	Suggestions for valid input are clear and easy to understand.
(AA) When the user makes		
an input error, give		
suggestions for valid		
input.		
4.1.2: Name, Role,	Partially supports	The name, role, and value can be programmatically determined for
Value (A)		most UI components.
For all UI components, the name, value, and		Exceptions:
role can be		Exceptions.
programmatically		Quick Search Results: Documents "Full Text" should be a link rather
determined.		than a button, Substances Structure "as drawn" button does not have a
		label or accessible name, Substances buttons ("Create synthesis plan",
		"Shipping time", etc) do not have button labels, Commercial Substances
		("Create synthesis plan", "zoom in", etc) do not have button labels, Commercial Substances identification close button does not have an
		accessible name
		Preparations: buttons ("Create synthesis plan", "zoom in", etc) do not
		have accessible names
		Reactions results: Buttons ("Create synthesis plan", "zoom in", etc) do
		not have accessible names
		Targets results: Buttons ("Create synthesis plan", "zoom in", etc) do not
		have accessible names
		Retrosynthesis: My Synthesis Projects buttons ("Zoom in", "see details",
		etc) do not have accessible names, Tree View Published Route
		thumbnails should have a role of button rather than link
		Structure Editor: As Drown adit button does not have an accessible
		Structure Editor: As Drawn edit button does not have an accessible name
		Tidine .
4.1.3 Status Messages	Supports	Reaxys uses status messages to alert the user that a change was
(AA)		successful or that an error was made.
(2.1)		
In content		
implemented using		

markup languages,		
status messages can be		
programmatically		
determined through		
role or properties such		
that they can be		
presented to the user		
by assistive		
technologies without		
receiving focus.		
receiving recess		Multimedia
WCAC 2.4	C	
WCAG 2.1	Supporting	Remarks
Checkpoint	Features	
1.2.1: Audio-only or	Supports (N/A)	There is no pre-recorded audio-only or video-only content on the site.
<u>Video-only</u>		
(Prerecorded) (A)		
Provide alternatives		
for pre-recorded		
audio-only or video-		
only content.		
1.2.2: Captions	Supports (N/A)	There is no pre-recorded audio on the site.
(Prerecorded) (A)		
Provide captions for		
pre-recorded audio		
1.2.3: Audio	Supports (N/A)	There is no pre-recorded synchronized audio/video on the site.
<u>Description or Media</u>		
<u>Alternative</u>		
(Prerecorded) (A)		
Provide alternatives		
for pre-recorded		
synchronized		
audio/video		
1.2.4: Captions (Live)	Supports (N/A)	There is no live audio in synchronized audio/video.
(AA)		
Provide captions for		
live audio in		
synchronized		
audio/video.		
1.2.5: Audio	Supports (N/A)	There is no pre-recorded video on the site.
Description		
(Prerecorded) (AA)		
Provide an audio		
description of pre-		
recorded video.		
1.4.2: Audio Control	Supports (N/A)	There is no audio content on the site.
(A)	,, , , ,	
Audio can be paused		
and stanned or the		

changed.

and stopped, or the audio volume can be

2.2.2: Pause, Stop,	Supports	Most pages do not have moving, blinking, scrolling, or auto-updating
Hide (A)		information.
Users can stop, pause,		
or hide moving,		
blinking, scrolling, or		
auto-updating		
information.		
		Usability
WCAG 2.1	Supporting	Remarks
Checkpoint	Features	
2.2.1: Timing	Supports	Reaxys users are warned of time limits and time limits can be extended.
Adjustable (A)		
Users are warned of		
time limits shorter		
than 20 hours and time		
limits can be turned off		
or extended		
2.4.5: Multiple Ways	Supports	There is more than one way to navigate to Reaxys Pages
(AA)		and the same of th
More than one way is		
available to navigate to		
other web pages.		
3.2.2: On Input (A)	Supports	Reaxys pages do not trigger unexpected changes in context when
Changing the setting of	Supports	changing the setting of a checkbox, radio button, or other UI
a checkbox, radio		component.
button, or other UI		component.
component does not		
trigger unexpected		
changes in context.		
3.2.3: Consistent	Supports	Reaxys's navigation menus are in the same location and order on every
Navigation (AA)	oupports	page.
Navigation menus are		P496.
in the same location		
and order on every		
web page.		
3.3.4: Error Prevention	Supports (N/A)	No data submissions on the site require legal or financial commitments.
(Legal, Financial, Data)	1 1 2 2 (4, 7, 4)	No data submissions allow for a users' profile to be deleted.
(AA)		,
For web pages with		
legal or financial		
commitments, input		
can be reviewed and		
corrected before final		
submission, and		
submissions can be		
reverted.		
		Mobile User Experience
WCAG 2.1	Supporting	Remarks
Checkpoint	Features	
1.3.4 Orientation	Supports	Content on Reaxys does not restrict to a single display orientation.
	11.	

(0.0)		
(AA)		
(2.1)		
Content does not		
restrict its view and		
operation to a single		
display orientation,		
such as portrait or		
landscape, unless a		
specific display		
orientation is essential.		
2.5.1 Pointer Gestures	Supports (N/A)	Reaxys does not contain multipoint or path-based gestures.
(A)		
(2.1)		
All functionality that		
uses multipoint or		
path-based gestures		
for operation can be		
operated with a single		
pointer without a path-		
based gesture, unless a		
multipoint or path-		
based gesture is		
essential.		
2.5.2 Pointer	Supports	Reaxys allows for pointer cancellation.
Cancellation (A)		
(2.1)		
For functionality that		
can be operated using		
a single pointer, at		
least one of the		
following is true:		
 No Down-Event 		
Abort or Undo		
 Up Reversal 		
Essential		
2.5.4 Motion Actuation	Supports (N/A)	Reaxys does not contain motion actuation.
(A)		
(2.1)		
Functionality that can		
be operated by device		
motion or user motion		
can also be operated		
by user interface		
components and		
responding to the		
motion can be disabled		
to prevent accidental		
actuation, except		
when:		
WITCH.		

•	Supported	
	Interface	
•	Essential	