

American Chemical Society Accessibility Conformance Report

WCAG Edition

(Based on VPAT[®] Version 2.4)

Name of Product/Version: ACS Essentials of Lab Safety for Organic Chemistry

Report Date: March 14, 2024

Product Description:

ACS Essentials of Lab Safety for Organic Chemistry is a 2-hour online course that provides students with the vital concepts of chemical safety and prepares them for the safety considerations in an organic chemistry educational lab.

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Notes:

Evaluation Methods Used:

The evaluation was conducted in accordance with the WCAG 2.1 (Level AA) Accessibility Guidelines that cover the Revised Section 508 Accessibility Standards of the Rehabilitation Act.

Testing was done between December 27 2022 – January 27 2023.

The evaluation was conducted in four different operating systems using the following browser/screen reader configurations:

Operating System	Browser	Assistive Technology
Windows OS	Chrome	JAWS 2023
	Firefox	NVDA 2023.3.4
MacOS	Safari	Voiceover
iOS	Safari	Voiceover

The evaluators looked for the presence of relevant accessibility barriers. The evaluation was performed in multiple testing environments outlined in the table above.

The accessibility assessment was executed per the following steps:

- I. Four accessibility experts conducted an overall technical analysis to identify issues of technical compliance that would affect blind, mobility impaired, deaf/hearing impaired and low vision users.
- II. Keyboard accessibility analysis (for mobility and physically challenged users) was conducted by attempting to thoroughly navigate the website through the keyboard, without using a mouse. Voice control testing was also performed.
- III. For deaf and hard of hearing users, testing was performed for proper captioning.
- IV. The web portal's accessibility for low vision users was evaluated: (1) using the screen magnification, palette, and contrast controls provided by the operating systems; (2) using the font resizing capability offered by the browser, (3) using WebAim Contrast Checker, (4) testing reflow by setting the screen width to 1280 pixels and increasing the page zoom to 400%, and (5) testing font sizing.
- V. An expert accessibility evaluator conducted the screen reader testing. The goal was to identify accessibility barriers that are likely to be experienced by users who are blind. The evaluator worked through selected functions using the appropriate screen reader. Any pages found to have screen reader issues were re-examined in interactive sessions with the evaluation team.

Items in the Supports category are coded in one of the acceptable methods outlined by W3C.

Applicable Standards/Guidelines

This report covers the degree of conformance for the following accessibility standard/guidelines:

Standard/Guideline	Included In Report
Web Content Accessibility Guidelines 2.0	Level A (Yes)

Standard/Guideline	Included In Report
	Level AA (Yes) Level AAA (No)
Web Content Accessibility Guidelines 2.1	Level A (Yes) Level AA (Yes) Level AAA (No)

Terms

The terms used in the Conformance Level information are defined as follows:

- **Supports:** The functionality of the product has at least one method that meets the criterion without known defects or meets with equivalent facilitation.
- **Partially Supports:** Some functionality of the product does not meet the criterion.
- **Does Not Support:** The majority of product functionality does not meet the criterion.
- **Not Applicable:** The criterion is not relevant to the product.
- **Not Evaluated:** The product has not been evaluated against the criterion. This can be used only in WCAG 2.0 Level AAA.

WCAG 2.x Report

Note: When reporting on conformance with the WCAG 2.x Success Criteria, they are scoped for full pages, complete processes, and accessibility-supported ways of using technology as documented in the [WCAG 2.0 Conformance Requirements](#) and [WCAG 2.1 Conformance Requirements](#).

Table 1: Success Criteria, Level A

Criteria	Conformance Level	Remarks and Explanations, January 2023	Progress as of March 2024
1.1.1 Non-text Content (Level A)	Partially Supports	<p>With minor exceptions, functional images have sufficient text description.</p> <p>Exceptions: Unlabeled decorative graphics at the beginning of most slides.</p> <p>The text description for a small number of images does not adequately describe the image.</p>	All images within course content are adequately described.
1.2.1 Audio-only and Video-only (Prerecorded) (Level A)	Supports	All audio content has transcripts.	
1.2.2 Captions (Prerecorded) (Level A)	Supports	All audio content has closed captions.	
1.2.3 Audio Description or Media Alternative (Prerecorded) (Level A)	Supports	All videos have audio descriptions.	
1.3.1 Info and Relationships (Level A)	Partially Supports	<p>Some content appearing as headings is not marked up as such.</p> <p>Some headings are not in a hierarchical order.</p>	The Docebo LMS was used for testing this product. Users of other LMS platforms will not encounter these issues.

Criteria	Conformance Level	Remarks and Explanations, January 2023	Progress as of March 2024
		<p>Incorrect use of list markup in a small number of cases.</p> <p>Some field labels are not associated with form fields.</p>	
1.3.2 Meaningful Sequence (Level A)	Partially Supports	Most course content is in a meaningful sequence with minor exceptions, where content is not correctly exposed to assistive technology.	
1.3.3 Sensory Characteristics (Level A)	Supports		
1.4.1 Use of Color (Level A)	Supports	Color alone is not used to convey information.	
1.4.2 Audio Control (Level A)	Supports		
2.1.1 Keyboard (Level A)	Partially Supports	<p>Interactive controls used throughout the application are keyboard accessible with minor exceptions. Example: Some modal dialogs cannot be dismissed using the Esc key.</p>	Although the escape key doesn't work, there is a keyboard-accessible "close" button.
2.1.2 No Keyboard Trap (Level A)	Supports		
2.1.4 Character Key Shortcuts (Level A 2.1 only)	Supports		
2.2.1 Timing Adjustable (Level A)	Supports		
2.2.2 Pause, Stop, Hide (Level A)	Supports		

Criteria	Conformance Level	Remarks and Explanations, January 2023	Progress as of March 2024
2.3.1 Three Flashes or Below Threshold (Level A)	Supports		
2.4.1 Bypass Blocks (Level A)	Supports		
2.4.2 Page Titled (Level A)	Supports		
2.4.3 Focus Order (Level A)	Partially Supports	Minor exception - after closing Content Review modals at the end of the course, focus is placed at the beginning or end of the course slide and not on the activating element.	
2.4.4 Link Purpose (In Context) (Level A)	Supports		
2.5.1 Pointer Gestures (Level A 2.1 only)	Supports		
2.5.2 Pointer Cancellation (Level A 2.1 only)	Supports		
2.5.3 Label in Name (Level A 2.1 only)	Supports	While most controls used throughout the course are correctly labeled, a small number have visible labels that are not included in their accessible labels.	Controls used throughout the course are correctly labeled, with visible labels that are included in their accessible labels. This improvement shifted the conformance level from Partially Supports in the January 2023 audit to Supports in the April 2024 review.
2.5.4 Motion Actuation (Level A 2.1 only)	Supports		

Criteria	Conformance Level	Remarks and Explanations, January 2023	Progress as of March 2024
3.1.1 Language of Page (Level A)	Supports		
3.2.1 On Focus (Level A)	Supports		
3.2.2 On Input (Level A)	Supports		
3.3.1 Error Identification (Level A)	Supports		
3.3.2 Labels or Instructions (Level A)	Partially Supports	<p>Edit fields are not labeled in a descriptive manner.</p> <p>A small number of interactive controls are mislabeled, not labeled descriptively, or are labeled in a manner that may be confusing.</p>	<p>The main issue is multiple “Next” buttons that are not clearly labeled. In past versions, some activities had inadequate labels. These activities have all been reworked to be accessible.</p>
4.1.1 Parsing (Level A)	Supports		
4.1.2 Name, Role, Value (Level A)	Partially Supports	<p>A modal message disrupts screen reader access to the application with some screen readers and browsers.</p> <p>The modal does not get focus when using Voiceover with Safari in iOS and cannot be dismissed. For this reason and others, course content is unavailable for IOS/Safari/Voiceover users.</p> <p>The modal does not get focus when using NVDA or JAWS with Firefox in Windows and cannot be dismissed. Course content is</p>	<p>The Docebo LMS was used for testing this product. Users of other LMS platforms will not encounter these issues.</p>

Criteria	Conformance Level	Remarks and Explanations, January 2023	Progress as of March 2024
		<p>unavailable for users of Firefox and JAWS or NVDA.</p> <p>“Hotspot” activity controls do not indicate their state when visited.</p> <p>Some elements that should be visible are hidden from assistive technology.</p> <p>Course modal is not implemented as such, and the LMS controls remain visible to assistive technology when they should be hidden.</p>	

Table 2: Success Criteria, Level AA

Notes:

Criteria	Conformance Level	Remarks and Explanations, January 2023	Progress as of March 2024
1.2.4 Captions (Live) (Level AA)	Supports		
1.2.5 Audio Description (Prerecorded) (Level AA)	Supports		
1.3.4 Orientation (Level AA 2.1 only)	Supports		
1.3.5 Identify Input Purpose (Level AA 2.1 only)	Supports		

Criteria	Conformance Level	Remarks and Explanations, January 2023	Progress as of March 2024
1.4.3 Contrast (Minimum) (Level AA)	Partially Supports	Text elements throughout the application provide sufficient contrast with minor exceptions.	The Docebo LMS was used for testing this product. Users of other LMS platforms will not encounter these issues.
1.4.4 Resize text (Level AA)	Does not Support	When using browser zoom, course content becomes unusable due to the inability to scroll the content container.	
1.4.5 Images of Text (Level AA)	Supports		
1.4.10 Reflow (Level AA 2.1 only)	Supports		
1.4.11 Non-text Contrast (Level AA 2.1 only)	Supports	The focus indicator used throughout the application for interactive elements provides sufficient contrast against most background colors. In some “Hotspot” activities, selectable items do not have sufficient contrast for their boundaries.	In “Hotspot” activities, selectable items have sufficient contrast for their boundaries. This improvement shifted the conformance level from Partially Supports in the January 2023 audit to Supports in the April 2024 review.
1.4.12 Text Spacing (Level AA 2.1 only)	Does not Support	Cannot use custom stylesheets with course content. Slide text is fixed, and its properties cannot be adjusted.	
1.4.13 Content on Hover or Focus (Level AA 2.1 only)	Supports	Volume Controls are only available when the volume button is focused; with instructions provided in the Accessibility pop-up.	This has been fixed. This improvement shifted the conformance level from Partially Supports in the January 2023 audit to Supports in the April 2024 review.
2.4.5 Multiple Ways (Level AA)	Supports		
2.4.6 Headings and Labels (Level AA)	Partially Supports	Most slides have appropriate heading structure with two minor exceptions.	
2.4.7 Focus Visible (Level AA)	Supports		
3.1.2 Language of Parts (Level AA)	Supports		

Criteria	Conformance Level	Remarks and Explanations, January 2023	Progress as of March 2024
3.2.3 Consistent Navigation (Level AA)	Supports		
3.2.4 Consistent Identification (Level AA)	Supports		
3.3.3 Error Suggestion (Level AA)	Supports		
3.3.4 Error Prevention (Legal, Financial, Data) (Level AA)	Supports		
4.1.3 Status Messages (Level AA 2.1 only)	Supports		

Table 3: Success Criteria, Level AAA

Notes:

Criteria	Conformance Level	Remarks and Explanations
1.2.6 Sign Language (Prerecorded) (Level AAA)	Not Evaluated	
1.2.7 Extended Audio Description (Prerecorded) (Level AAA)	Not Evaluated	
1.2.8 Media Alternative (Prerecorded) (Level AAA)	Not Evaluated	
1.2.9 Audio-only (Live) (Level AAA)	Not Evaluated	
1.3.6 Identify Purpose (Level AAA 2.1 only)	Not Evaluated	
1.4.6 Contrast (Enhanced) (Level AAA)	Not Evaluated	
1.4.7 Low or No Background Audio (Level AAA)	Not Evaluated	
1.4.8 Visual Presentation (Level AAA)	Not Evaluated	
1.4.9 Images of Text (No Exception) (Level AAA)	Not Evaluated	
2.1.3 Keyboard (No Exception) (Level AAA)	Not Evaluated	
2.2.3 No Timing (Level AAA)	Not Evaluated	
2.2.4 Interruptions (Level AAA)	Not Evaluated	
2.2.5 Re-authenticating (Level AAA)	Not Evaluated	
2.2.6 Timeouts (Level AAA 2.1 only)	Not Evaluated	
2.3.2 Three Flashes (Level AAA)	Not Evaluated	

Criteria	Conformance Level	Remarks and Explanations
2.3.3 Animation from Interactions (Level AAA 2.1 only)	Not Evaluated	
2.4.8 Location (Level AAA)	Not Evaluated	
2.4.9 Link Purpose (Link Only) (Level AAA)	Not Evaluated	
2.4.10 Section Headings (Level AAA)	Not Evaluated	
2.5.5 Target Size (Level AAA 2.1 only)	Not Evaluated	
2.5.6 Concurrent Input Mechanisms (Level AAA 2.1 only)	Not Evaluated	
3.1.3 Unusual Words (Level AAA)	Not Evaluated	
3.1.4 Abbreviations (Level AAA)	Not Evaluated	
3.1.5 Reading Level (Level AAA)	Not Evaluated	
3.1.6 Pronunciation (Level AAA)	Not Evaluated	
3.2.5 Change on Request (Level AAA)	Not Evaluated	
3.3.5 Help (Level AAA)	Not Evaluated	
3.3.6 Error Prevention (All) (Level AAA)	Not Evaluated	

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