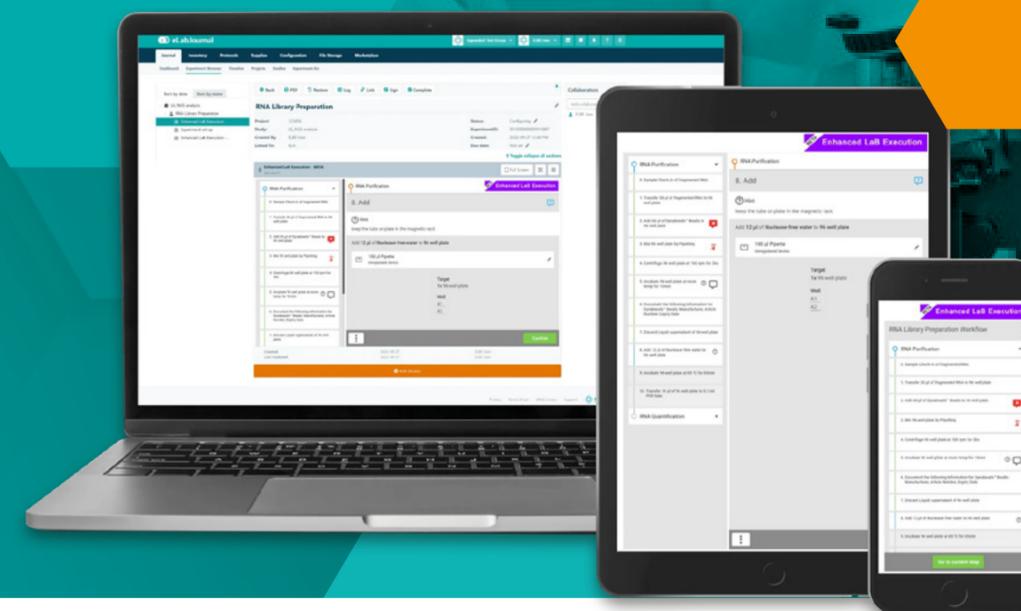


Installation guide

Enhanced LaB Execution add-on

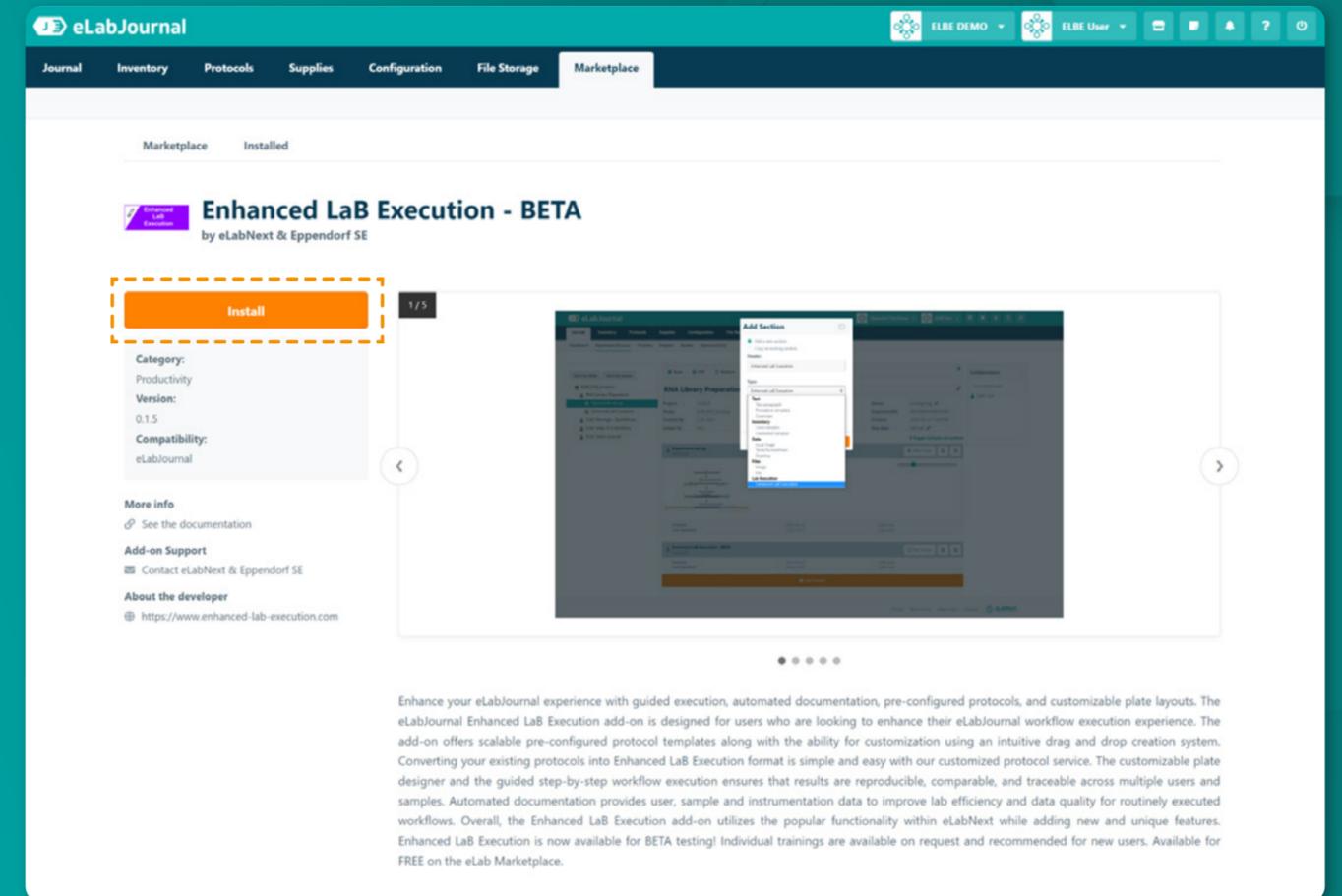
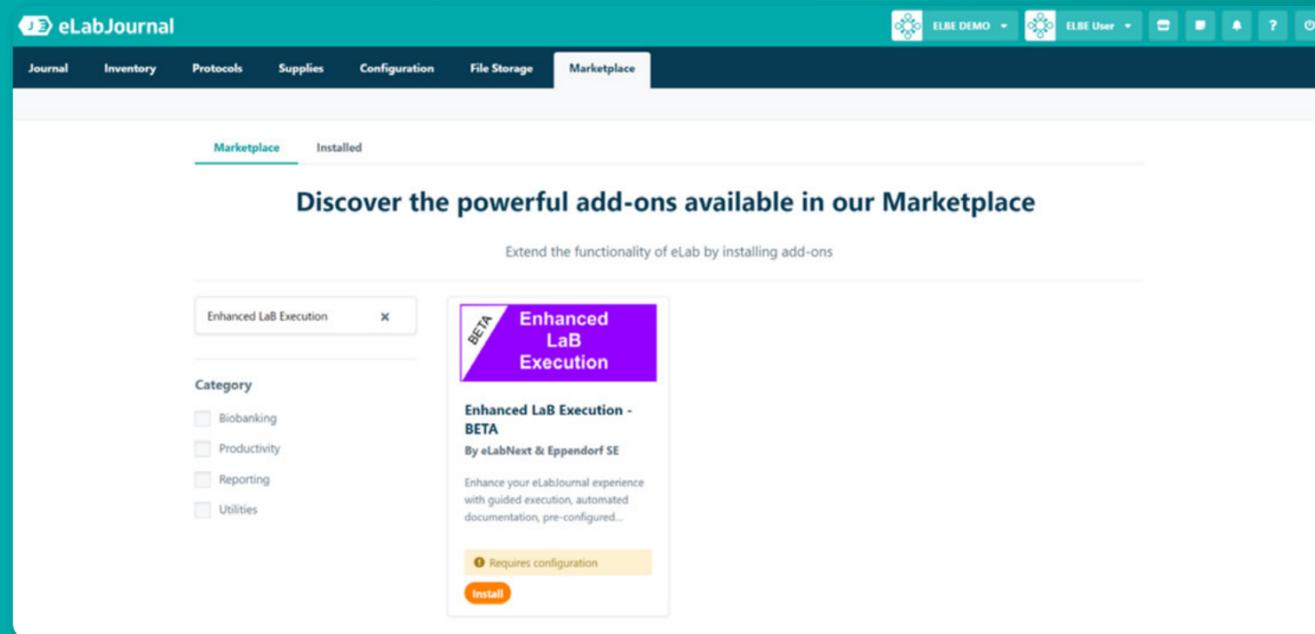
To utilise the Enhanced LaB Execution add-on, users must have a valid eLabJournal account. Check requirements or get in contact at www.enhanced-lab-execution.com.



Installation

1

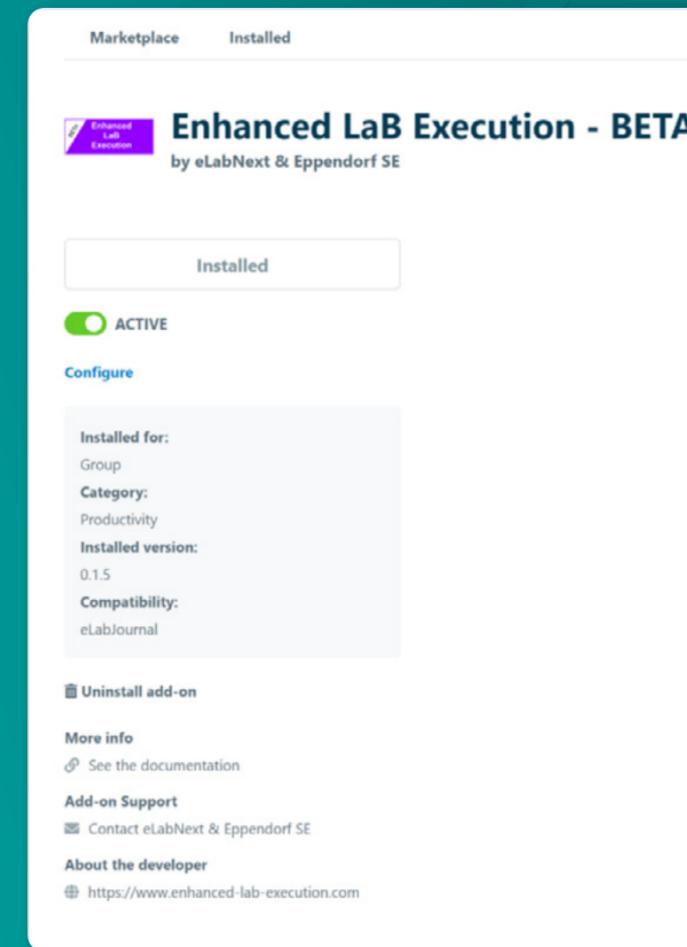
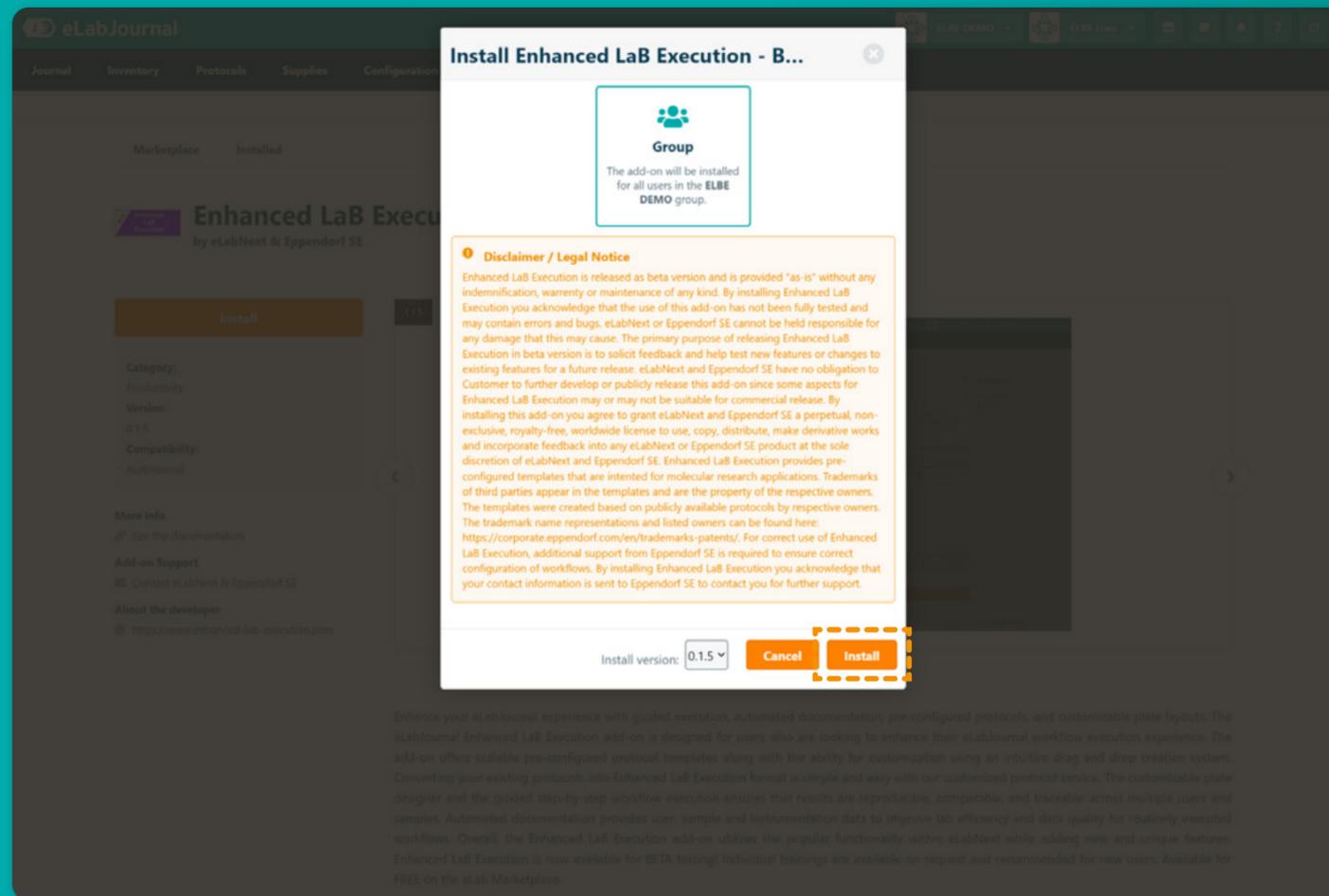
Find 'Enhanced LaB Execution' in the eLab Marketplace and install the add-on.



Installation

2

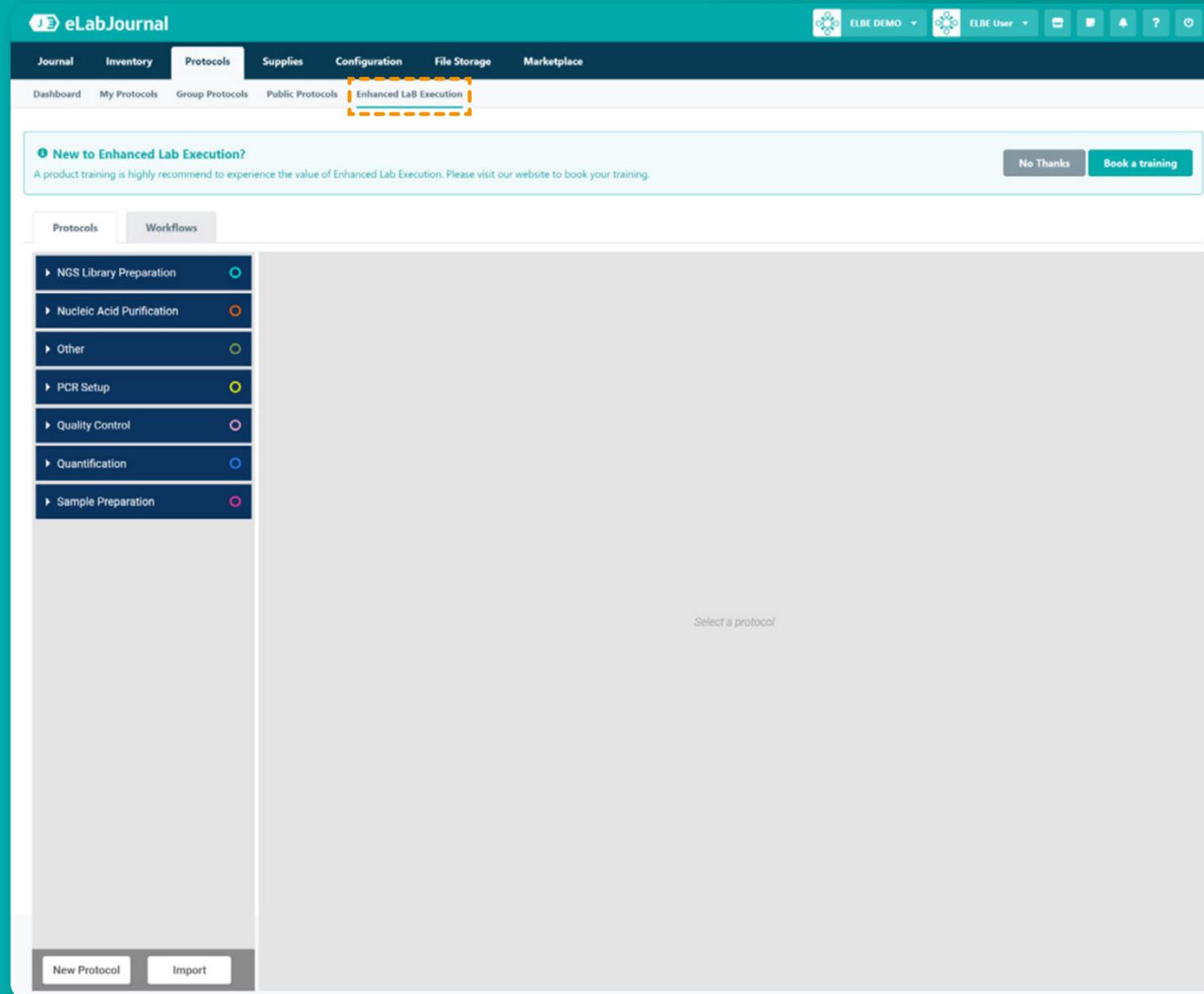
Select the *'Install'* button to confirm the disclaimer. The installation will start immediately.



3

Installation

Navigate to the Protocols module. A new sub-menu will be created for the Enhanced LaB Execution add-on. Select the sub-menu.



Optional: Book a product training. A product training is highly recommended to experience the complete benefits of this add-on.

4

Create a protocol template

Select 'Protocols' to create, copy, edit, or import an Enhanced LaB Execution protocol.

The screenshot displays the eLabJournal web interface. The top navigation bar includes 'Journal', 'Inventory', 'Protocols', 'Supplies', 'Configuration', 'File Storage', and 'Marketplace'. Below this, there are sub-navigation options: 'Dashboard', 'My Protocols', 'Group Protocols', 'Public Protocols', and 'Enhanced LaB Execution'. A notification banner at the top asks if the user is 'New to Enhanced Lab Execution?' with buttons for 'No Thanks' and 'Book a training'. The main content area is divided into a left sidebar with protocol categories (e.g., NGS Library Preparation, Nucleic Acid Purification, PCR Setup, Quality Control, Quantification, Sample Preparation) and a central panel showing the details of a selected protocol: 'Thermo Scientific™_Pierce™ BCA Protein Assay'. The protocol details include a description, a list of steps (e.g., '1. Prepare Material Working Reagent', '2. Get Labware 96-well micro plate'), and a '96-well micro plate' section. On the right, there is a 'General Information' sidebar with fields for 'Protocol Type' (Quantification), 'Sample Range' (unrestricted), 'Created' (11/10/2022), 'Last edited' (12/10/2022), 'Protocol Content' (Input Type: Protein sample, Output Type: Quantified protein), 'Used Materials' (Working Reagent, Reagent A, Reagent B, Standard A-F), and 'Output' (#2: 96-well micro plate). At the bottom, there are buttons for 'New Protocol', 'Import', 'Delete', 'Export', 'Copy', and 'Edit'.

➤ Pre-configured protocol templates are available for molecular research applications.

➤ Optional: Utilize the Converting Service. The Enhanced LaB Execution team will convert your protocols into the new format so you don't have to.

5

Manage a workflow

Select 'Workflows' to copy or edit an Enhanced LaB Execution workflow.

The screenshot shows the eLabJournal interface. The top navigation bar includes 'Journal', 'Inventory', 'Protocols', 'Supplies', 'Configuration', 'File Storage', and 'Marketplace'. Below this, there are sub-navigation options: 'Dashboard', 'My Protocols', 'Group Protocols', 'Public Protocols', and 'Enhanced LaB Execution'. A notification banner at the top asks 'New to Enhanced Lab Execution?' with 'No Thanks' and 'Book a training' buttons. The main content area is divided into a left sidebar with categories like 'Cell Based Assays', 'Next Generation Sequencing', 'Illumina_DNA Prep', 'RNA Purification_V02', 'Other', 'PCR Analysis', and 'Protein Analysis'. The central workspace shows a workflow titled 'RNA Purification_V02' with steps: 1. Transfer 30 µl of fragmented RNA to 96 well plate; 2. Add 60 µl of Dynabeads® Magnetic Beads to 96 well plate; 3. Mix 96 well plate by Pipetting; 4. Centrifuge 96 well plate at 100 rpm for 30s; 5. Transfer 10 µl of 96 well plate to 0.2 ml PCR tube; 6. Transfer 10 µl of RNA to Labware 3; 7. Prepare Material Working Solution (Quantifluor Dye 1 µl, 1x TE Buffer 399 µl); 8. Add 200 µl of Working Solution to Labware 3; 9. Measure Fluorescence of Labware 3 by Glomax Reader (Wavelength Emission 531 nm, Wavelength Extinction 504 nm). The right sidebar contains 'General Information' (Workflow Type: Next Generation Sequencing, Sample Range: 2-96, Created: ELBE User on 02/11/2022, Last edited: ELBE User on 03/11/2022) and 'Protocol Content' (Input Type: fragmented RNA, Output Type: Not specified, Used Materials: Dynabeads® Magnetic Beads, Working Solution, Quantifluor Dye, 1x TE Buffer). At the bottom, there are buttons for 'New Workflow', 'Delete', 'Copy', and 'Edit'.

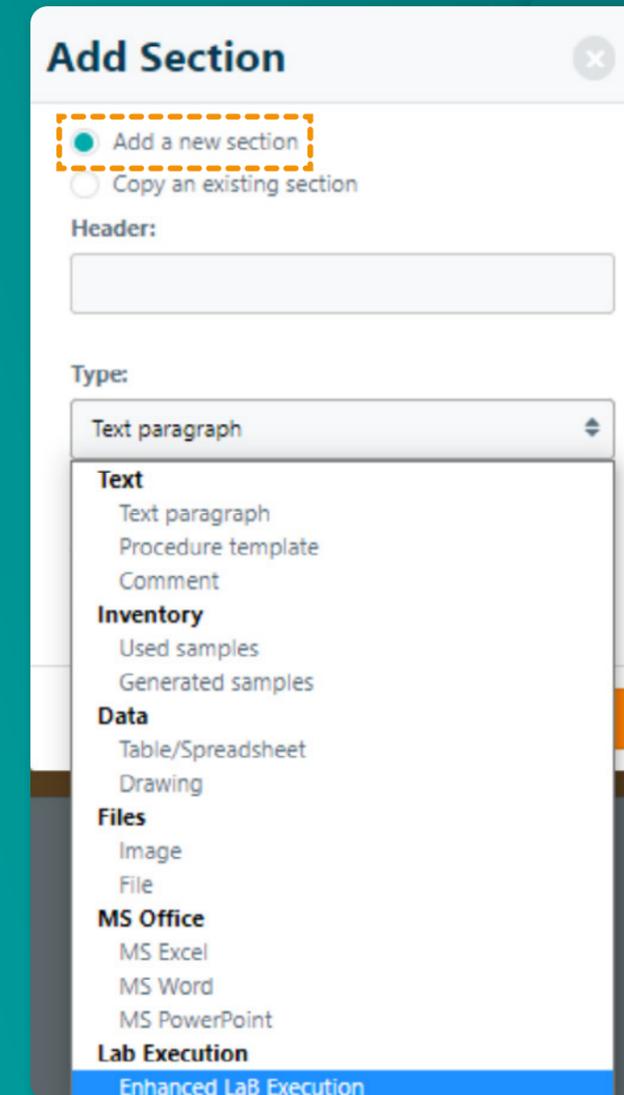
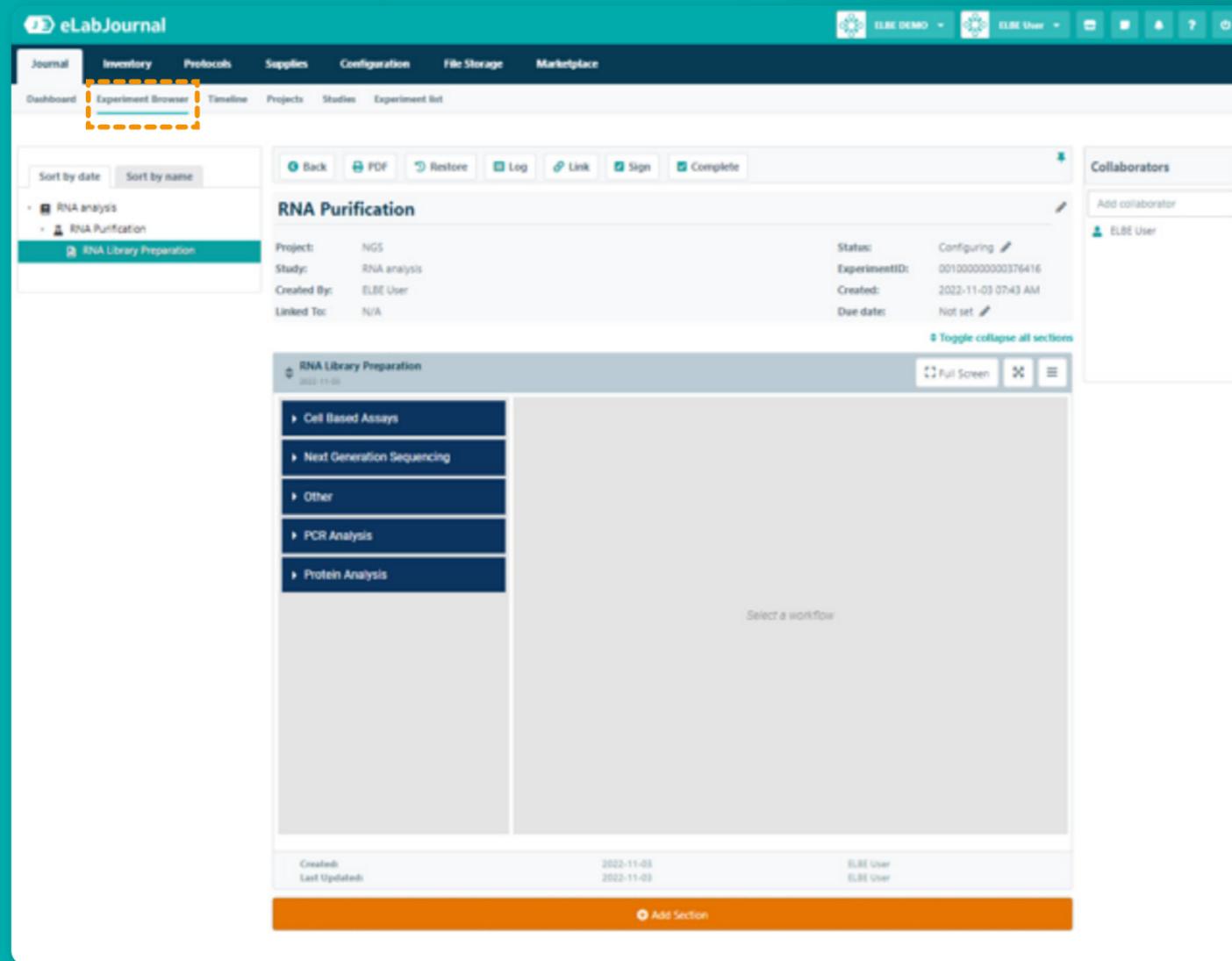
➤ Before navigating to the eLabJournal experiment sections, for execution of Enhanced LaB Execution workflows, a valid workflow is needed.

➤ Note: Once you are in the eLabJournal experiment section, you won't be able to create or modify workflows.

6

Navigate to eLabJournal experiment

Navigate to eLabJournal 'Experiment Browser'. Add a new Enhanced LaB Execution section. The workflow library is displayed.



7

Manage a workflow

Select a workflow from the workflow library and click 'Next' to open the planning editor.

The screenshot displays the eLabJournal web interface. At the top, there's a navigation bar with 'Journal' selected and other options like 'Inventory', 'Protocols', 'Supplies', 'Configuration', 'File Storage', and 'Marketplace'. Below this is a secondary navigation bar with 'Dashboard', 'Experiment Browser', 'Timeline', 'Projects', 'Studies', and 'Experiment list'. The main content area shows a workflow titled 'RNA Purification' with details like 'Project: NGS', 'Study: RNA analysis', 'Created By: ELBE User', and 'Status: Configuring'. A sidebar on the left lists various workflow categories, with 'RNA Library Preparation' selected. The main workspace shows a detailed view of the 'RNA Purification_V02' workflow, including a list of steps: 1. Transfer 30 µl of fragmented RNA to 96 well plate; 2. Add 60 µl of Dynabeads® Magnetic Beads to 96 well plate; 3. Mix 96 well plate by Pipetting; 4. Centrifuge 96 well plate at 100 rpm for 30s; 5. Transfer 10 µl of 96 well plate to 0.2 ml PCR tube. A green 'Next' button is located at the bottom right of the workflow view, highlighted with a dashed orange box. The bottom of the interface shows a footer with 'Created: 2022-11-03', 'Last Updated: 2022-11-03', and 'Add Section'.

8

Manage a workflow

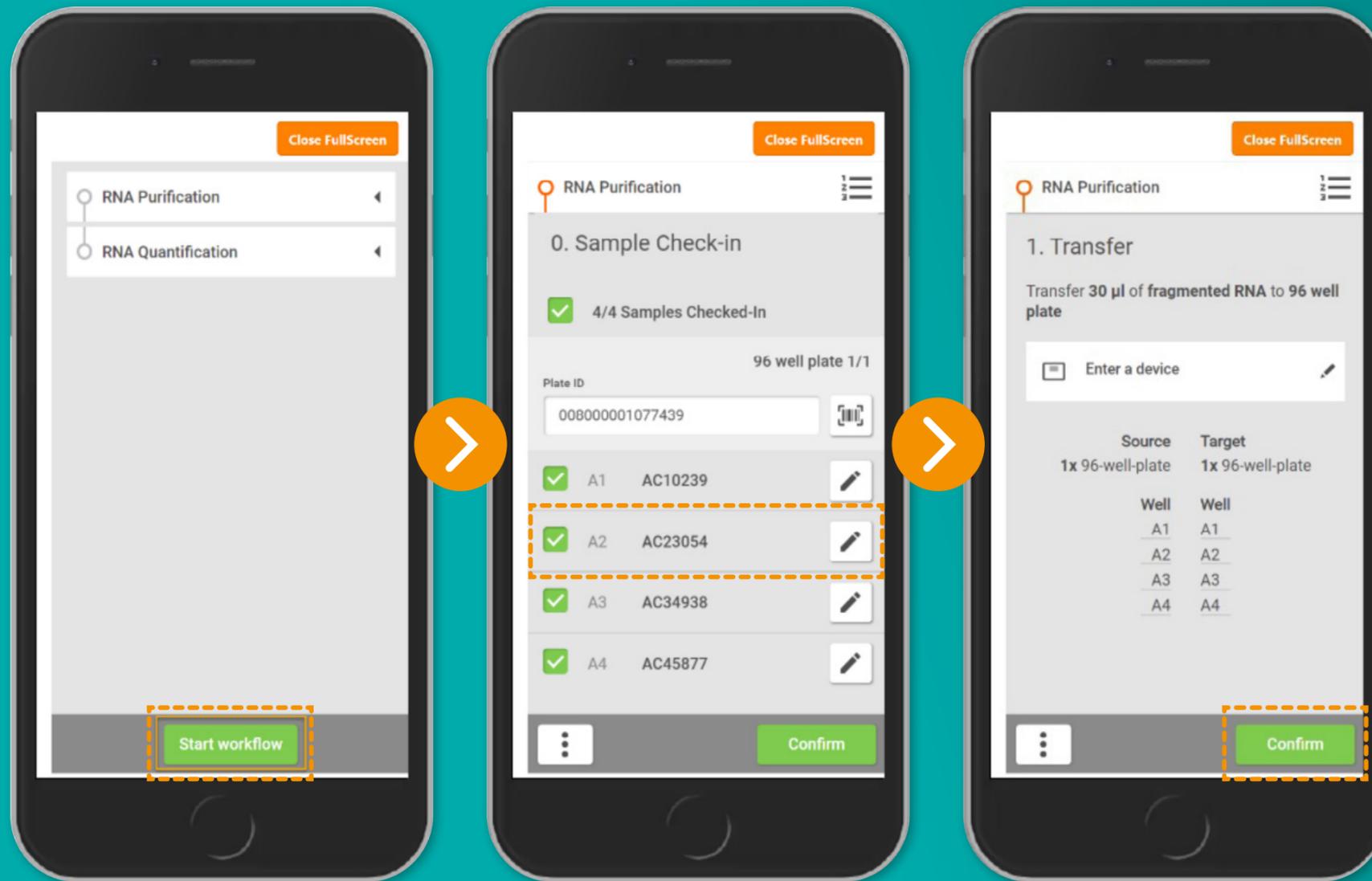
Plan the selected workflow. Determine the number of samples and adjust the layout as needed. Select 'Add Workflow' to confirm all entries.

The screenshot displays the 'RNA Library Preparation' software interface. At the top, the title bar shows 'RNA Library Preparation' and the date '2022-11-03'. Below this is a 'Workflow Planning' section with a purple 'Enhanced LaB Execution' badge. The 'Number of Samples' is set to 4. The 'Default Labware Type' is 'Plate' (selected over 'Tube'). The 'Default Labware Size' is '96 Well'. The 'Labware Description' field is empty. Below this, a workflow step 'RNA Purification_V02' is shown with a '2-96 Sample Range' and a dropdown menu for 'fragmented RNA' and 'purified fragmented RNA'. A 96-well plate grid is displayed with columns 1-12 and rows A-H. The first four wells in row A are highlighted with colored circles (1: purple, 2: pink, 3: green, 4: blue). To the right of the grid are configuration options: 'Default' and 'Custom' buttons; 'Labware Type' with 'Tube' and 'Plate' buttons; 'Size' with a '96 Well' dropdown; 'Sample Direction' with 'Columns' and 'Rows' buttons; 'Group Direction' with 'Columns' and 'Rows' buttons; and 'Group Overflow' with 'Seamless' and 'Separate' buttons. At the bottom right, there are 'Close' and 'Add Workflow' buttons, with the 'Add Workflow' button highlighted by a dashed orange border.

9

Utilise a workflow

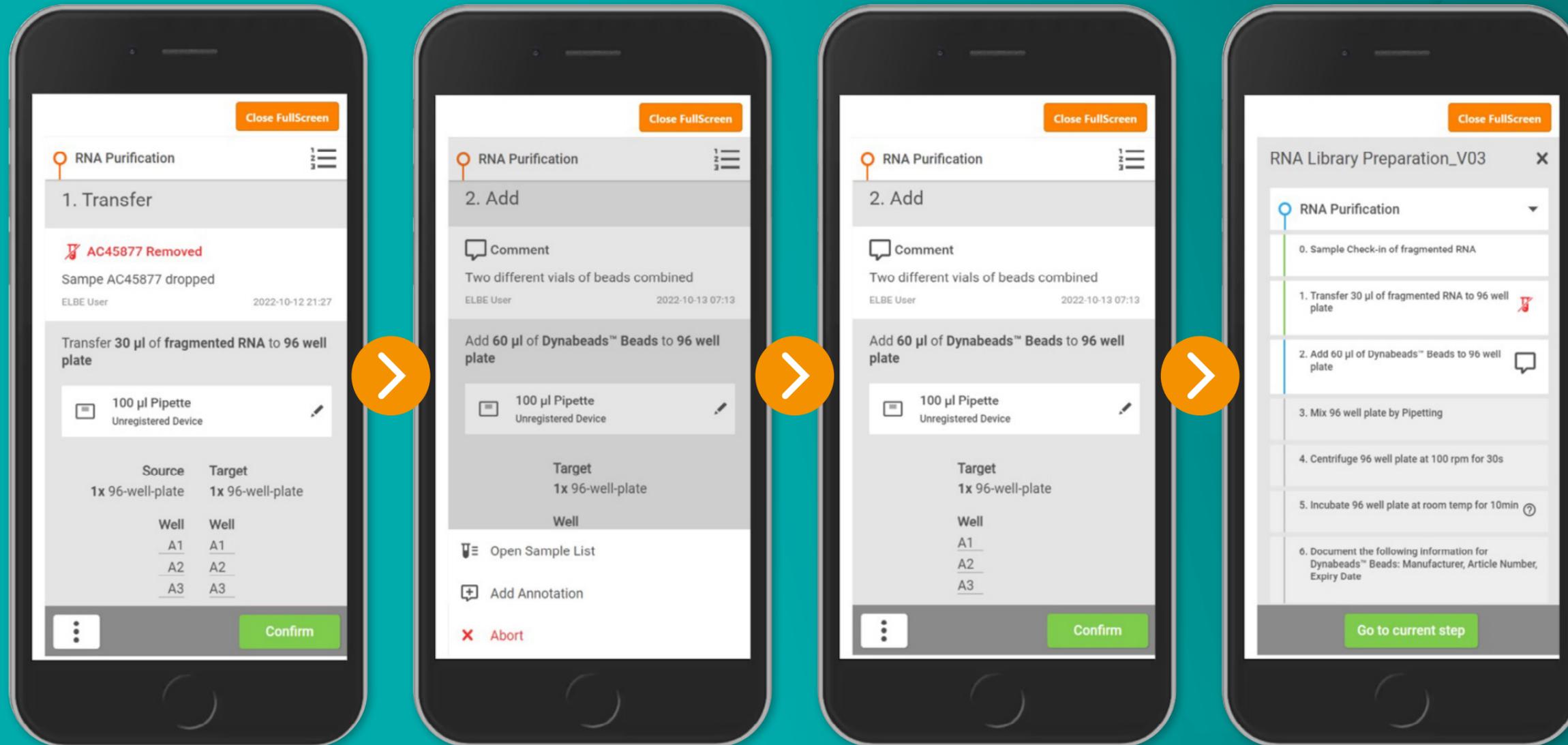
Click on *'Start Workflow'* to start the execution. Define sample name and select the sample to be processed. To complete the sample check-in, click *'Confirm'*. The first protocol step is displayed.



10

Utilise a workflow

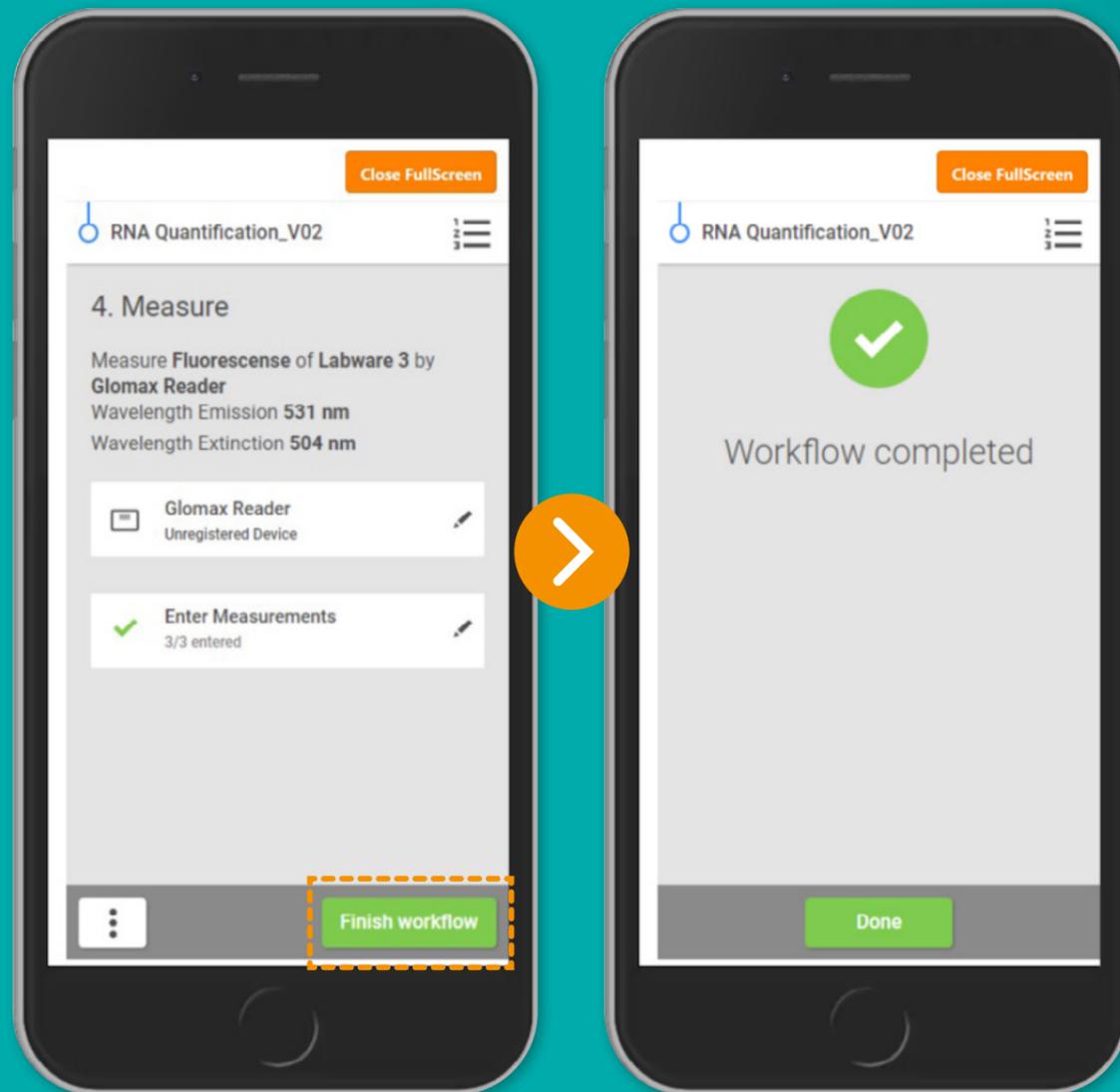
Here you can see the step-by-step execution of a workflow. Add annotations, remove samples or select devices.



Utilise a workflow

11

Click *'Finish Workflow'* to complete the execution. The documentation is automatically displayed.



Workflow documentation

The workflow documentation is automatically generated after completion of the execution.

The screenshot displays a web interface for a workflow titled "RNA Library Preparation" (dated 2022-11-03). The main section is "RNA Purification_V02", which is marked as "Completed with deviations!". It includes a table of metadata: Executed by: ELBE User; Input Type: fragmented RNA; Output Type: Not specified; Samples: 4; Category: Not specified; Created: Not specified; Last edited: Not specified; Version: Not specified. Below this is a "Protocol" section with two steps: "RNA Purification_V02" (2-96 Sample Range) and "RNA Quantification_V02" (unrestricted). The "RNA Purification_V02" step shows a red warning icon and a dropdown menu with "fragmented RNA" and "purified fragmented RNA". Other sections include "Measurements", "Sample List", "Labware Layout", "Materials", and "Devices". At the bottom, it shows "Created: 2022-11-03" and "Last Updated: 2022-11-03" by "ELBE User".

- All entries are non-editable.
The documentation can be printed and signed in eLabJournal.
- The documentation compiles all user, sample and instrumentation data collected during the execution process.
- Expand the dedicated view to review the content.