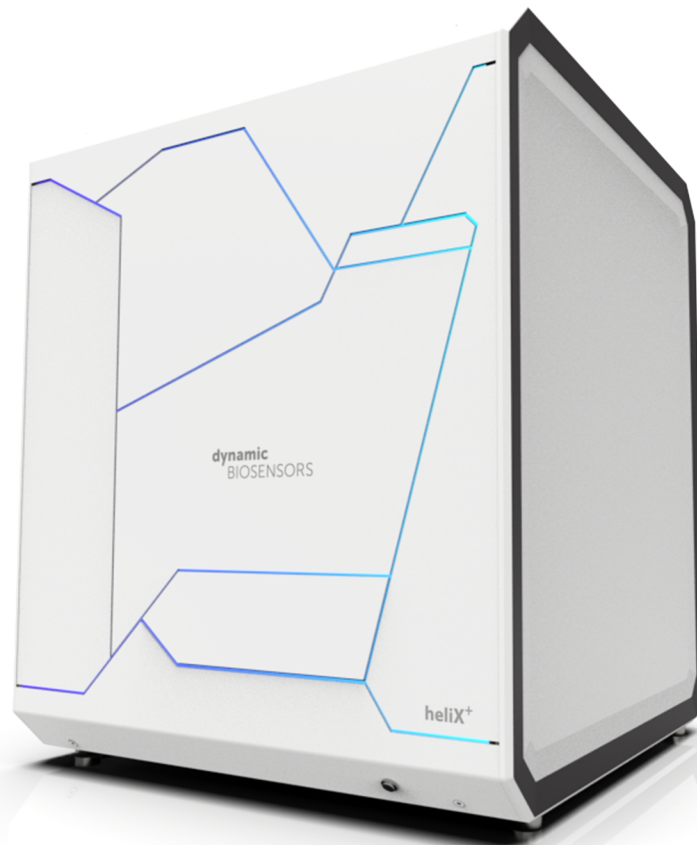


SYSTEM CHECK KIT

protocol for conducting QC of the **heliX⁺** device

Dynamic Biosensors GmbH
HK-QC-1 v1.0



Key Features

The **heliX⁺ System check** kit is designed to **evaluate the hardware components** of the device and conducts the following tests in sequence:

1. Three **fluidic tests (FT)** on the **heliX[®] Maintenance Chip**.
2. Two **heliX[®] Adapter Chip test (CT)**.
3. Three binding **kinetics tests (KT)** of a DNA analyte (7mer oligonucleotide) to its corresponding ligand (DNA-overhang) at 25°C.

Workflow



Load **heliX[®] Adapter Chip** and **heliX[®] Maintenance Chip**

Load buffer bottles, ready-to-use vials and a ready-to-use 96-well plate

Run the **heliX⁺ System Check** assay in **heliOS**

Interpret the data with **heliOS** automatic analysis

Product Description

Order Number: **HK-QC-1**

Table 1. Contents and Storage Information

Product	Format	Volume	Amount	Storage
<i>Test & Standby solution</i>	small glass vial, blue cap	400 µL	1	-20°C
<i>Regeneration solution</i>	small glass vial, black cap	1 mL	1	-20°C
<i>Passivation solution</i>	big glass vial, white cap	9 mL	1	-20°C
<i>Fluidic and Kinetic Test Kit</i>	96 well plate with sealing foil		1	-20°C
FT solution for heliX⁺	10 mL glass vial with white cap	9 mL	1	-20°C
Buffer PE140	PET bottle	250 mL	1	2-8°C
Buffer TE40	PET bottle	250 mL	1	2-8°C
heliX[®] Adapter Chip			1	-20°C
heliX[®] Maintenance Chip			1	RT

For research use only.

This product has a limited shelf life, please see expiry date on label.

NOTE | An additional vial with 10 mL DI water is needed for the assay.

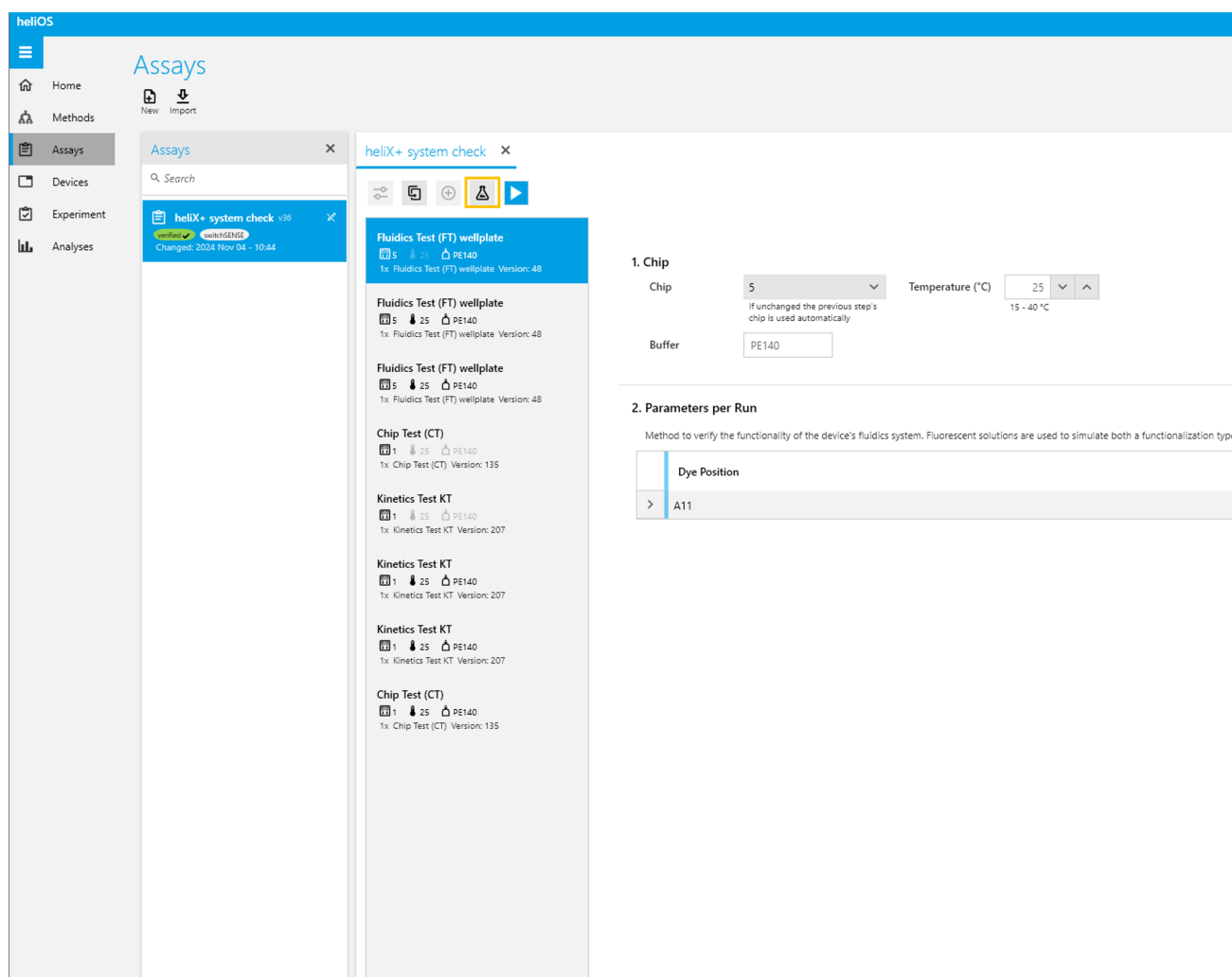
This kit is compatible with any **heliX⁺** device and provides all the materials needed to conduct the experiment in ready-to-use vials and a 96-well plate. Additionally, it includes buffers at the correct dilution and the necessary chips. An extra large vial of FT solution is also included for any additional fluidic tests that may be required. Please, in case of usage, vortex the vial after thawing.

Assay Setup in heliOS

IMPORTANT | Before starting the assay, power cycle the **heliX[®]** device and ensure it is in a clean state. If needed, run a **Clean & Sleep** cycle followed by **Wake Up & Prime** with fresh solutions.

- Go to **heliOS** > on the Assay page, click the search function and type **heliX⁺ system check** (it is tagged as verified and as **switchSENSE[®]**, and it is not editable) > select it; no modifications are necessary.

NOTE | If the assay does not appear, it means it has not been downloaded and imported yet. Please do so from the webshop under the description of this specific kit (**HK-QC-1**) before proceeding further.



The screenshot displays the heliOS software interface. On the left, a navigation menu includes Home, Methods, Assays, Devices, Experiment, and Analyses. The main area is titled 'Assays' and shows a search bar and a list of assays. The 'heliX+ system check v36' assay is selected, showing it is verified and tagged with 'switchSENSE'. The assay details on the right include:

- Fluidics Test (FT) wellplate**: 5 wells, 25 PE140, Version: 48
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- Fluidics Test (FT) wellplate**: 5 wells, 25 PE140, Version: 48
- Chip Test (CT)**: 1 well, 25 PE140, Version: 135
- Kinetics Test KT**: 1 well, 25 PE140, Version: 207
- Kinetics Test KT**: 1 well, 25 PE140, Version: 207
- Kinetics Test KT**: 1 well, 25 PE140, Version: 207
- Chip Test (CT)**: 1 well, 25 PE140, Version: 135

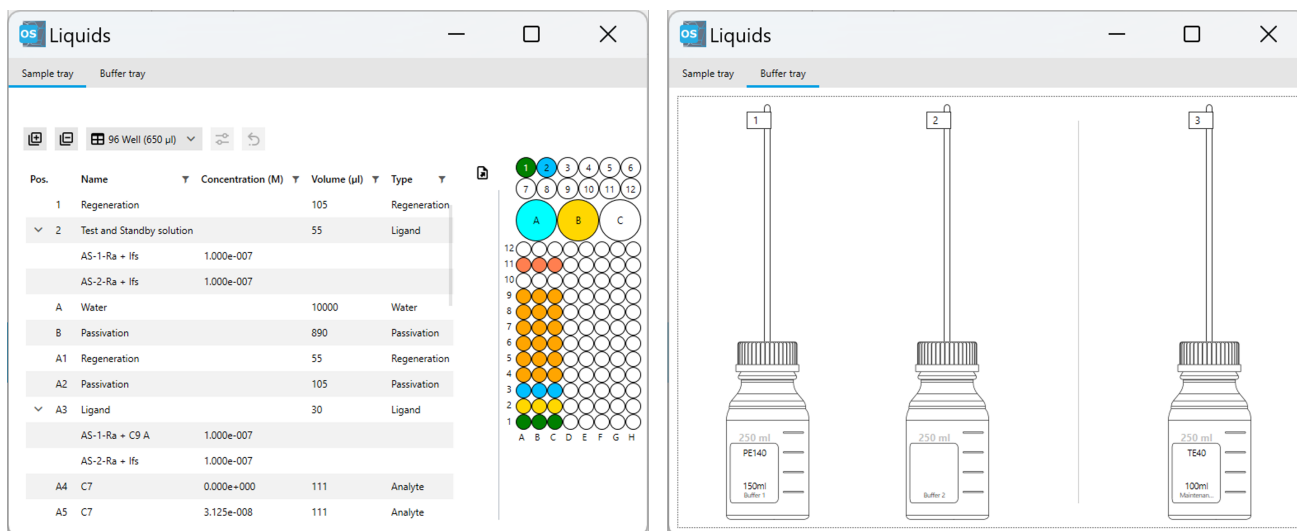
Configuration parameters for the selected assay are shown on the right:

- 1. Chip**: Chip is set to 5, Temperature (°C) is 25 (range 15 - 40 °C), Buffer is PE140.
- 2. Parameters per Run**: Method to verify the functionality of the device's fluidics system. Fluorescent solutions are used to simulate both a functionalization type <table border="1" data-bbox="515 610 915 645" style="display: inline-table; vertical-align: top;">| Dye Position |
| --- |
| > A11 |

- Click on the sample tray and arrange the buffers, the ready-to-use glass vials, and the 96-well plate as illustrated by the **heliOS** wizard (shown below).

IMPORTANT

The **heliX**[®] Adapter Chip must be placed in **position 1** of the chip tray, and the **heliX**[®] Maintenance Chip in **position 5**.
 The 96-well plate should be thawed at room temperature for 1 hour, ideally with gentle shaking.



- Click on Start and follow the instructions displayed in **heliOS**. The experiment takes approximately **4 hours**. Once completed, please export the results and send them to support.dbs@bruker.com for final evaluation.

IMPORTANT

The large glass vial containing the water should remain **without a lid** to prevent any potential cross-contamination.

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Instruments and chips are engineered and manufactured in Germany.

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