

Biacore™ Maintenance Kit, type 3

Instructions for Use

Product description

Product code: 29229054

Kit components: The table below shows the components of the kit.

Component	Description
One bottle of Biacore™ test solution, 65 mL	15% (w/w) sucrose in HBS-EP+ buffer
One bottle of BIA normalizing solution (70%), 90 mL	70% (w/w) glycerol
One Series S Maintenance Chip	Series S Maintenance Chip
Two bottles of BIA desorb solution 1, 500 mL	0.5% (w/v) sodium dodecyl sulphate (SDS)
Two bottles of BIA desorb solution 2, 500 mL	50 mM glycine-NaOH, pH 9.5

Additional materials required:

- Series S Sensor Chip CM5 (29104988, BR100530, or 29149603).
- HBS-EP+ 10× buffer (BR100826 or BR100669). Dilute 1+9 (v/v) with deionized, 0.2 µm filtered water to make the running buffer.
- Sodium hypochlorite, 10% to 15%.

- Storage on arrival:** Store kit at 2°C to 8°C, except BIAdesorb solution 1. BIAdesorb solution 1 should be stored at room temperature (SDS precipitates at low temperature).
- Kit capacity:** The solutions in the kit are sufficient for at least 6 months of normal use in Biacore 1 series or 2 months of normal use in Biacore 8 series systems.
- Safety:** For use and handling of the product in a safe way, refer to the Safety Data Sheet.

Intended use

Biacore Maintenance Kit, type 3 is intended to be used with the maintenance and testing procedures in Biacore 1 series and Biacore 8 series. For more information, refer to the Biacore system specific *Operating Instructions*.

Software procedures are identified in the text by **bold italic** text.

The table below shows the procedures to use with Biacore Maintenance Kit, type 3 and their recommended frequency.

Procedure	Purpose	Frequency
<i>Desorb</i>	Clean the flow system	Weekly
<i>Desorb and sanitize</i>	Disinfect the flow system	Monthly
<i>Normalize</i>	Normalize the detector	Monthly or if requested by service
<i>System check</i>	Check the instrument performance	Monthly or if requested by service

Note: *For research use only.*

Clean the flow system

Make sure that the running buffer is compatible with BIAdesorb solution 1 before cleaning the flow system. Do not use running buffer with additives containing metal ions as SDS in BIAdesorb solution 1 will precipitate with some common metal ions including potassium and magnesium.

Follow the steps below to clean the flow system.

Step	Action
1	Set the analysis and sample compartment temperatures to 25°C. Note: <i>SDS in BIAdesorb solution 1 can precipitate at low temperature.</i>
2	Make sure that the surface of the Series S Maintenance Chip is clean before use. If needed, rinse with water. Wipe the glass and support dry with a lint-free tissue. Note: <i>Store Series S Maintenance Chip in the enclosed plastic bag when not inserted in the system.</i>
3	Remove the used sensor chip from the docking station and insert Series S Maintenance Chip. Note: <i>The ligands and capture molecules on the sensor chip can be damaged by the Desorb procedure. If required, store used sensor chip in suitable storage buffer at 2°C to 8°C. For reuse, refer to the sensor chip Instructions for Use.</i>
4	Open Desorb and follow the instructions on the screen to place the tubing for running buffer, water, and reagent in the relevant solutions.
5	Prepare BIAdesorb solutions 1 and 2 in bottles or plates according to the Desorb instructions, and position these within the Biacore instrument.
6	Follow the instructions on the screen to run Desorb .

Disinfect the flow system

Sodium hypochlorite solution

Sodium hypochlorite, 10% to 15% is used to prepare the disinfectant solution used in **Desorb and sanitize**. The following products are recommended.

Product name	Contents	Manufacturer	Product Code
Sodium hypochlorite, 10% to 15%	500 mL	Acros Organics, part of Thermo Fisher Scientific	219255000
Sodium hypochlorite, 10% to 15%	500 mL	Alfa Aesar, part of Thermo Fisher Scientific	33369 ¹

¹ Contact the manufacturer and ask for the date of quality control of a certain lot.

Note: *The active chlorine concentration decreases with time. Do not use hypochlorite product longer than 12 months after the date of quality control to make sure that the concentration is sufficient for disinfection. The quality control date is stated in the Certificate of Analysis for the product.*

Disinfectant solution

The disinfectant solution used in **Desorb and sanitize** is sodium hypochlorite solution, 0.6% to 1.0%. This is prepared from sodium hypochlorite, 10% to 15% described above.

Prepare the disinfectant solution according to the following table. Mix and use within 12 hours.

Biacore system	Sodium hypochlorite, 10% to 15% (mL)	Distilled and filtered water (mL)	Total volume (mL)
Biacore 1 Series	12	160	172
Biacore 8 Series	27	360	387

The total consumption of sodium hypochlorite solution can be found in the Biacore system specific *Operating Instructions* and is stated in a software dialog box when starting the procedure.

Disinfect the flow system

Make sure that the running buffer is compatible with BIAdesorb solution 1 before disinfecting the flow system. Do not use running buffer with additives containing metal ions as SDS in BIAdesorb solution 1 will precipitate with some common metal ions including potassium and magnesium.

Do not use plain water as running buffer. Water rinses sodium hypochlorite insufficiently compared to running buffer. Residues of sodium hypochlorite can damage sensor chips.

Follow the steps below to disinfect the flow system.

Step	Action
1	<p>Set the analysis and sample compartment temperatures to 25°C.</p> <p>Note: <i>SDS in BIAdesorb solution 1 can precipitate at low temperature.</i></p>
2	<p>Make sure that the surface of the Series S Maintenance Chip is clean before use. If needed, rinse with water. Wipe the glass and support dry with a lint-free tissue.</p> <p>Note: <i>Store Series S Maintenance Chip in the enclosed plastic bag when not inserted in the system.</i></p>
3	<p>Remove used sensor chip from the docking station and insert Series S Maintenance Chip.</p> <p>Note: <i>The ligands and capture molecules on the sensor chip can be damaged by Desorb and sanitize procedure. If required, store used sensor chip in suitable storage buffer at 2°C to 8°C. For reuse, refer to the sensor chip Instructions for Use.</i></p>
4	<p>Open Desorb and sanitize and prepare recommended volumes of disinfectant solution, and BIAdesorb solutions 1 and 2 in bottles or plates according to the software instruction.</p>
5	<p>Follow the instructions on the screen to place the specified tubing for buffer, water, and reagent in the solutions during each step of Desorb and sanitize.</p> <p>Note: <i>Be careful when removing flow tubing from the disinfectant solution to avoid splashing.</i></p>

Step	Action
6	After completion of the procedure, run running buffer in standby mode for at least 3 to 4 hours or overnight before docking a new sensor chip.

Normalize the detector

Follow the steps below to normalize the detector.

Step	Action
1	Set BIA normalizing solution (70%) to room temperature.
2	Insert new sensor chip into the docking station.
3	Run Normalize and follow the instructions on the screen.

Check the instrument performance

Follow the steps below to check the instrument performance.

Step	Action
1	Set the flow cell and sample compartment temperatures to 25°C.
2	Prepare fresh HBS-EP+ running buffer: Dilute HBS-EP+ 10× buffer 1+9 (v/v) with deionized, 0.2 µm filtered water.
	Note: <i>A fresh dilution and accurate concentration of the running buffer is important for correct test results.</i>
3	Dock an unused Series S Sensor Chip CM5.
	Note: <i>The sensor surface is not affected by the System check procedure.</i>
4	Open the System check and follow the instructions on the screen.
5	Follow the instructions on screen to place the tubing for buffer, water, and reagent in the relevant solutions.
6	Prepare plates with HBS-EP+ buffer and Biacore test solution according to the sample volume and position information in the software.

Step	Action
7	Run System check and follow the instructions on the screen.
8	Refer to the Biacore system specific <i>Operating Instructions</i> to interpret the results of System check .

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