

## Instructions for use

Adapters for Rotor S-4xUniversal (Centrifuge 5910 R)

English (EN)

This document is a supplement to the Centrifuge 5910 R manual and does not replace it. Therefore, please also read the manual of the centrifuge before using the rotors and accessories for the first time. The current version of the manual for all available languages can be found at [www.eppendorf.com/manuals](http://www.eppendorf.com/manuals).

## 1 Safety

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### **CAUTION! Risk of injury due to asymmetric loading of a rotor.**

- ▶ Always load all positions of a swing-bucket rotor with buckets.
  - ▶ Load rotors symmetrically with identical tubes and/or plates.
  - ▶ Only load adapters with suitable tubes or plates.
  - ▶ Always use the same type of tubes and plates (weight, material/density and volume). Always observe the max. *g*-force of the tubes and plates as indicated by the manufacturer.
  - ▶ Check that loading is symmetrical by balancing the adapters and tubes and/or plates used with a balance.
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The swing-bucket rotor runs more smoothly if all buckets are loaded symmetrically and with the same weight.

- ▶ To reduce noise and vibrations, load the buckets of the swing-bucket rotor with the same weight.

## 2 Application

### 2.1 Performing a swing-out test

If you are using tubes or plates with the adapter for the first time, make sure that the buckets can swing freely.

1. Insert the tube or plate.
2. Swing the buckets manually up to 90°.
  - Bucket swings freely.
  - The tubes do not touch the rotor cross.

### 2.2 Mixed loading with different adapters

Mixed loading of the S-4xUniversal rotor with different adapters is possible if the adapters are intended for the rotor.

- ▶ Always use adapters and tubes of the same type when loading opposite buckets.
- ▶ Load opposite buckets with the same weight (adapter, tubes, or plates and content).

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#### 2.3 Centrifugation of polystyrene plates

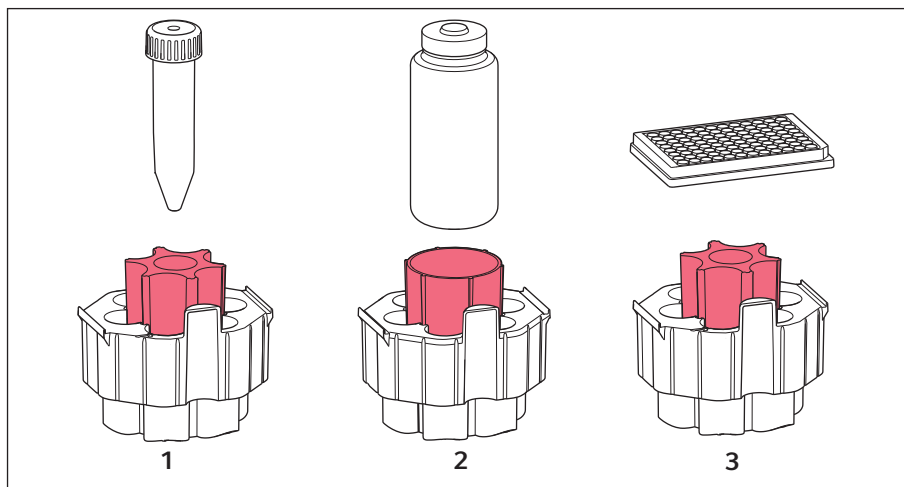
Polystyrene plates (e.g. cell-culture plates or ELISA plates) are often clear.

- ▶ In adapters 5910 751.001, 5910 752.008, and 5910 769.008 polystyrene plates can only be centrifuged up to a max. of  $1000 \times g$ .
- ▶ If a higher  $g$ -force is required, perform a test run using a plate filled with water at the required rotational speed and centrifugation time.
- ▶ Note the manufacturer's information regarding the material and centrifugation stability.
- ▶ If in doubt, use the bucket with the plate carrier (5910 753.004).

### 3 Product description

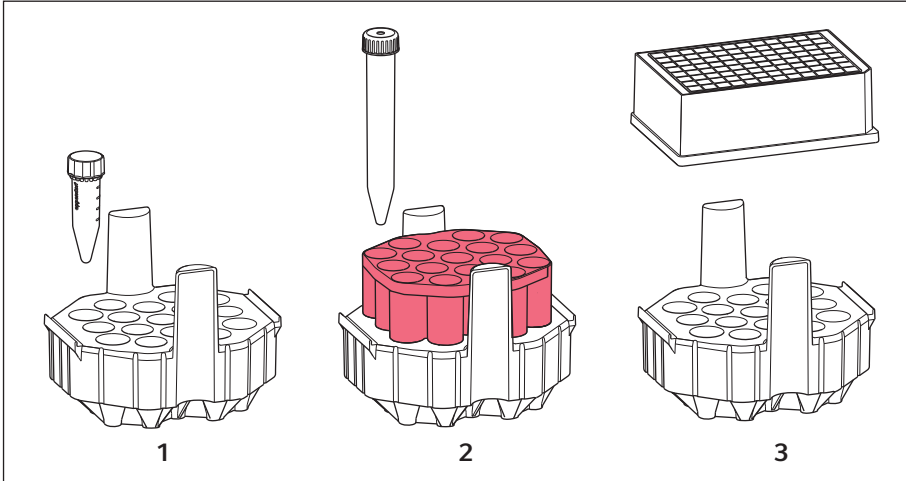
#### 3.1 Adapter for conical 50 mL tubes, 250 mL bottles and microplates (5910 751.001, color gray)

2 different inserts enable the use of conical 50 mL tubes or 250 ml bottles for centrifuging in the adapter.



No.	Tube/Plate	Quantity	Hint
1	Conical 50 mL tubes	7	▶ Use the insert for conical tubes.
2	250 mL flat bottle	1	▶ Use the insert for bottles.
	175 mL – 225 mL conical bottle	1	▶ For conical bottles, use the insert for bottles and, in addition, the adapter provided by the manufacturer of the bottle.
3	Microplate 96/384	1	▶ To prevent any damage to the plate, use the insert for conical tubes. ▶ MTP cannot be centrifuged aerosol-tight.

**3.2 Adapter for Eppendorf Tubes 5 mL, conical 15 mL tubes and microplates/ deepwell plates (5910 752.008, color orange)**



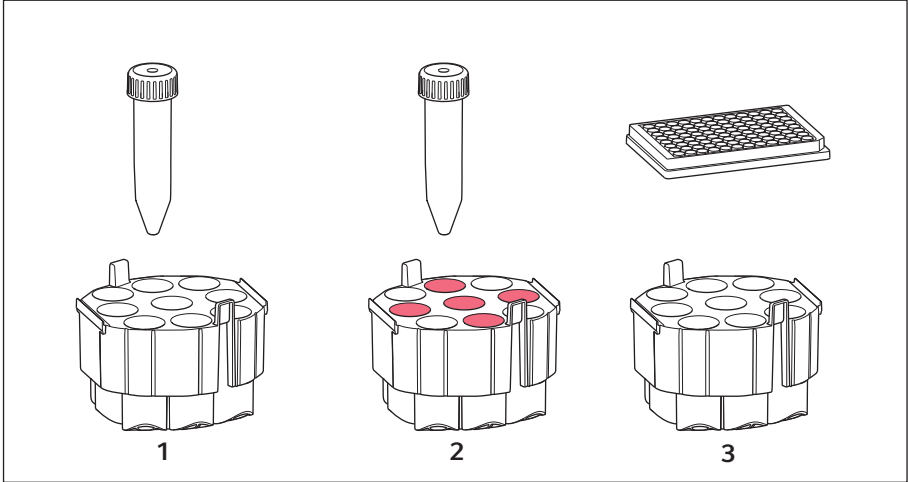
No.	Tube/Plate	Quantity	Note
1	Eppendorf Tubes 5 mL	17	▶ Only use the lower part of the adapter.
2	Conical 15 mL tubes	17	▶ Use the adapter with upper part.
3	Microplate 96/384 Deepwell plate	1	▶ Only use the lower part of the adapter. ▶ DWP 384/200 and DWP 96/500 can be centrifuged with an aerosol-tight cap. ▶ DWP 96/1000 and DWP 96/2000 cannot be centrifuged aerosol-tight.

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### 3.3 Adapter for conical 50 mL tubes and microplates (5910 769.008, color blue)



No.	Tube/Plate	Quantity	Notes
1	Conical 50 mL tubes	9	
2	Conical 50 mL tubes	5	▶ For centrifugation with an aerosol-tight cap, load the marked bores only.
3	Microplate 96/384	1	▶ MTP cannot be centrifuged aerosol-tight.



You can find more technical data such as the rcf values and the radii of the adapters in the manual of the centrifuge.

Your local distributor: [www.eppendorf.com/contact](http://www.eppendorf.com/contact)

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