fig. pluriPlix®

pluriPlix® Content

Number	Components
1	1-armed pluriPlix® or 2-armed pluriPlix®
1 or 2	Sample holder - with magnetic connectors
1	Manual

Important Notes to Read before Use

Attention: Magnetism - Magnetic field: Note that the mixer and the sample holder contain powerful magnets. Avoid direct contact with magnetic media. Malfunction or failure of cardiac pacemakers may be caused through strong magnetic fields. Disturbance of „non anti-magnetic“ clocks and other mechanical devices. Disruption and loss of media possible. Threat to electronic or other devices: The magnetic field of the magnets is very strong and far reaching. Among the most vulnerable devices are TVs and monitors, credit cards, computer diskettes and other storage devices, video tapes, hearing aids and heart pacemakers, etc. pluriPlix® works in conjunction with a magnetic stirrer only. When used on a magnetic stirrer, the heating unit of the magnetic stirrer must be turned off and cooled off.

Product Information
pluriPlix® is a non-electric universal mixer. It can be used for the incubation of fluid samples.

Loading Capacity
pluriPlix® is designed for a maximum load of 4 x 50 ml reaction tubes per sample holder. The maximum weight of 240 g per holder should not be exceeded. For maximum load operation we recommend a magnetic stirrrer with 10 watt power output. The driving energy is low, so overloading should be avoided. There is no hazard to the user through the input power.

Blocking the Rotation of pluriPlix®
Do not block the rotation movement of the pluriPlix®. Mind the correct adjustment of the reaction tubes in the sample holder.

Storage & Stability
pluriPlix® should be stored and operated in a dry environment (humidity 0-70%). pluriPlix® works at a temperature range of 0°C to 45°C. Deviant usage will result in reduced performance.

Safety Information
To avoid the risk of infection (e.g. from HIV or hepatitis B viruses) or injury when working with biological and chemical materials, always wear a suitable lab coat, disposable gloves and protective goggles.

Warnings & Limitations
- When using pluriPlix® on a magnetic stirrer the heating unit must be turned off and cooled off.
- This product is developed for laboratory use only. Users must follow the appropriate laboratory guidelines.
- This product contains no electrical components.
- Do not open the device. Components can not be reassembled.

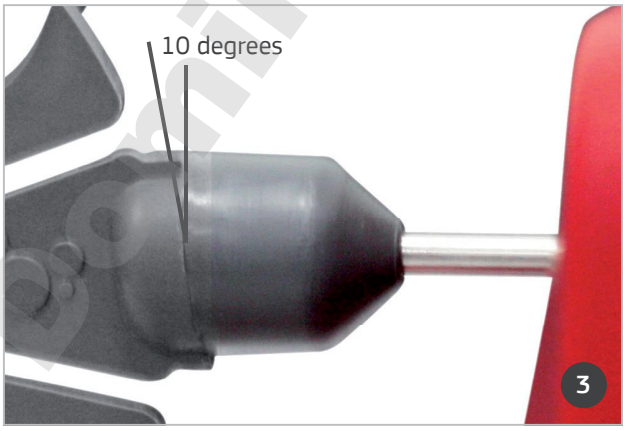
Additional materials required when using pluriPlix® with pluriBead®
- Disposable gloves
- Pipettes
- Filter tips or Pipette tips
- Sample tubes

Maintenance & Cleaning
pluriPlix® operates maintenance free. Clean the base unit with cleaning tissue or with 70% alcohol. The mixer or any components should not be submerged in liquids or cleaned in a dish washer. Autoclaving will lead to the destruction of the mixer and the tube holder.

Step 01 place pluriPlix® on magnetic stirrer

Place the pluriPlix® mixer on a magnetic stirrer. Make sure that the heating unit of your magnetic stirrer is turned off and cooled off. Position the mixer in the center of the magnetic stirrer so that the magnetic force of the stirrer is optimally transferred to the pluriPlix® drive shaft.

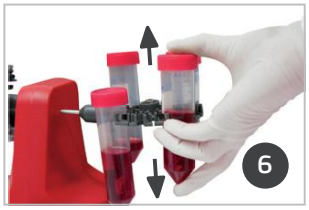
Step 02 attach sample holder in favored angle for overhead or tilting rotation mixing



1. Attach the sample holder to pluriPlix® in vertical position.
2. Attach the sample holder to pluriPlix® in horizontal position.
3. Attach the sample holder to pluriPlix® in the favored angle.

- 0 degree angle: Bring the shortest mark on the sample holder fitting in alignment with the nose of the axle.
- 10 degree angle: Bring the longest mark on the sample holder fitting in alignment with the nose of the axle.
- 2.5, 5 or 7.5 degree angle: Use the intervals to attach the sample holder to pluriPlix®

Step 03 load pluriPlix® with samples and adjust tubes



4. The pluriBead® mixing container should be positioned in the sample holder so that it fits tightly.
5. Lids of larger reaction tubes (e.g. 50 ml tubes) should face the pluriPlix® housing. Adjust the lids close to the sample holder to avoid blocking of the rotation.

6 For overhead mixing, tubes should be centered in the sample holder.

7 Differently sized slots in the sample holder also allow for the mixing of small reaction tubes (e.g. 1 - 2 ml tubes).

Load your samples onto the pluriPlix® sample holder. Make sure that the lids are properly closed to prevent leakage of sample material. Adjust the reaction tubes so as to allow the sample holder to rotate freely without being blocked. Tubes may be adjusted so that the screw cap of the reaction tube faces the pluriPlix® housing.

Step 04 adjust rotation speed

Slowly increase the speed of your magnetic stirrer to adjust the rotation speed.

Step 05 mix samples

Rotate / mix your samples for the designated period of time.

Step 06 switch off magnetic stirrer

After completing the mixing procedure, switch off the magnetic stirrer, remove the sample holder from pluriPlix® and remove the reaction tubes from the sample holder.

06 Using pluriPlix® in connection with pluriBead®

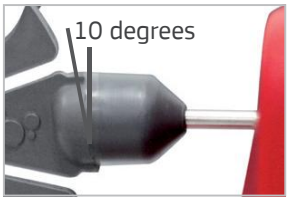
Using pluriPlix® in connection with pluriBead® cell separation systems ensures thorough and gentle mixing of all samples as well as very low cell stress. For the use of pluriBead® cell isolation systems please refer to the pluriBead® manual.

- add pluriBead®
- add sample
- close lids

Add the appropriate amount of pluriBead® to the mixing container. Add your sample material and close the lids of the mixing container tightly. For more detailed information refer to pluriBead® manual.

- place pluriPlix® on magnetic stirrer
- load pluriPlix® with samples

Place the pluriPlix® mixer on a magnetic stirrer. Make sure to turn off the heating unit of your magnetic stirrer. Load your samples onto the pluriPlix® sample holder. Make sure that the lids are properly closed to prevent leakage.



- attach sample holder in 10 degree angle

Attach the sample holder to pluriPlix® in a 10 degree angle for thorough and gentle mixing of the sample. For that purpose, bring the longest mark on the sample holder fitting in alignment with the nose of the axle.

- adjust tubes

Larger 50 ml reaction tubes should be adjusted so that the screw cap faces the pluriPlix housing.

- adjust rotation speed
- mix samples
- switch off magnetic stirrer

Slowly increase the speed of your magnetic stirrer and mix your samples. Afterwards, switch off the magnetic stirrer, remove the reaction tube holder from pluriPlix® and remove the tubes from the tube holder. Afterwards, switch off the magnetic stirrer, remove the sample holder from pluriPlix and unload the tubes from the sample holder.

Question	Supporting Note	Solution
Why does my pluriPlix not mix ?	• pluriPlix® drive shaft is not in contact with the magnetic field of the magnetic stirrer	• place pluriPlix in the center of magnetic stirrer
	• speed of magnetic stirrer is increased too fast	• switch off speed of the magnetic stirrer and then slowly increase it again
	• pluriPlix® is overloaded	• do not exceed the total weight of 240 g per sample holder and balance out the tubes evenly
	• samples on pluriPlix® are portioned unequally	• arrange the samples so that the weight on every sample holder is nearly equal
	• tubes are blocking the rotation of the sample holder	• adjust the tubes so that they do not obstruct the rotation of the sample holder
How do I calculate the rotation speed of my samples ?	• the rotation speed of the samples can be adjusted with the speed dial of the magnetic stirrer.	• Method 1 (magnetic stirrer has no RPM display): place pluriPlix® onto the magnetic stirrer. Locate the nose on the axle and set the speed dial of the mixer to a specific speed. Count the revolutions per 1 minute. If the count is between 10 and 15, speed is appropriate for use with pluriBead® separation kit.
	• For the use with the pluriBead® cell separation kit we recommend a rotation speed setting of 10 - 15 rpm in tilting rotation mode.	• Method 2 (stirrer with RPM display): divide RPM setting of stirrer by 40 to obtain pluriPlix® rotation speed, e.g. 600/40 = 15 rpm