



O P E R A T I N G  
M A N U A L

**slee** solutions  
for  
pathology

CENTRIFUGE  
**CS II**

FLEXIBLE USE OF THE SYSTEM  
INCREASES LABORATORY EFFICIENCY  
INDIVIDUALLY CUSTOMIZABLE

DESIGN &  
MANUFACTURING  
MADE IN GERMANY



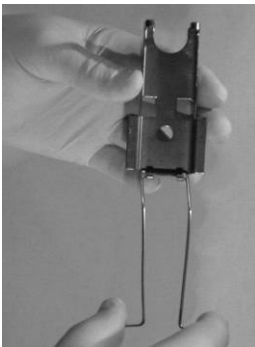
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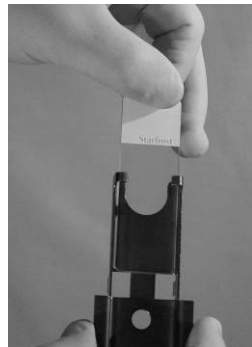
## 1. INTENDED USE

The cytocentrifuge CS II is intended for separation and deposit of a monolayer of cells on microscope slides for professional use in routine and research laboratories in the fields of biology, medicine and industry.

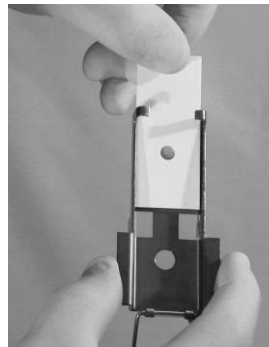
The system consists of a centrifuge, a specific rotor (Cellcliprotor) and a sample preparation system composed of a cellclip, a microscope slide, a filter card and a reusable or disposable cell funnel.



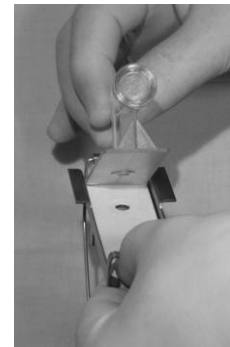
Cellclip



Microscope slide



Filter card



Cytologyfunnel

## 2. SYMBOLS



Dangers, warnings and cautions are marked by this symbol



Special instructions regarding the operation of the instrument are marked by this symbol

### 3. SAFETY NOTES

Before the initial operation of your centrifuge you should read and pay attention to the operating instructions. Only personnel that has read and understood the operating instructions are allowed to operate the device.

#### 3.1 SAFETY FEATURES

The Slee cytocentrifuge CS II is provided with the following safety features:

**Imbalance control**

**Alarm functions**

**Lid Lock**

CS II
●
●
●

The institution which owns the unit and the persons working with the unit, servicing or repairing it have the responsibility for a hazard-free use.

#### 3.2 ELECTRICAL POWER CONNECTION

Do not use any extension lead.



Make sure that electric power is constant:

- This should be examined during installation of the unit by a competent person
- Use a dedicated fuse for the unit
- Do not connect another unit to the same power circuit.
- Before turning on the instrument, check if the voltage of the mains supply is identical with the name plate of the unit

### 3.3 WORKING WITH CENTRIFUGES

- Along with the operating instructions and the legal regulations on accident prevention, you should also follow the recognized professional regulations for working in a safe and professional manner.
- This centrifuge is a state-of-the-art piece of equipment which is extremely safe to operate. However, it can lead to danger for users or others if used by untrained staff, in an inappropriate way or for a purpose other than that it was designed for.
- Before using the centrifuge absolutely check the rotor for firm placement.
- When the centrifuge is running, according to IEC 61010-2-020, no persons, dangerous substances or objects may be within the safety margin of 300 mm around the centrifuge.
- The centrifuge must not be moved or knocked during operation.
- In case of fault or emergency release, never touch the rotor before it has stopped turning.
- To avoid damage due to condensate, when changing from a cold to a warm room the centrifuge must either heat up for at least 3 hours in the warm room before being connected to the mains, or run hot for 30 minutes in the cold room.
- Only the rotors and accessories approved by the manufacturer for this device may be used.
- The centrifuge may only be operated when the balance is within the bounds of acceptability.
- The centrifuge may not be operated in explosion-endangered areas.
- The centrifuge must not be used with inflammable or explosive materials or materials that react with one another producing a lot of energy.
- If users have to centrifuge hazardous materials or compounds contaminated with toxic, radioactive or pathogenic micro-organisms, they must take appropriate measures.
- Repairs must only be carried out by personnel authorized to do so by the manufacturer.
- The following safety regulations apply: IEC 61010-1 and IEC 61010-2-020 as well as their national deviations.

## 4. COMPONENTS

The Slee cytocentrifuge CS II is provided with the following standard components:

**Operation manual**

**Cellcliprotor**

(12 positions)

**12x Stainless steel Cellclips**

(applicable for reusable and disposable Cytologyfunnels)

<b>CS II</b>
●
●
●

## 5. SPECIFICATIONS

<b>Power supply</b>	200 – 240 V / 50/60 Hz
<b>Power Consumption</b>	400 VA
<b>Operating temperature range</b>	+10 to +35 °C
<b>Operating humidity</b>	max. rel. 80 % non-condensing
<b>Storage temperature range</b>	+5 to +55 °C
<b>Storage humidity</b>	max. rel. 80 % non-condensing
<b>Chamber volume</b>	<b>Cytologyfunnel</b> Single 0.5 ml per chamber Double 0.5 ml per chamber <b>ECOfunnel</b> 5 ml
<b>Rotor Slide Capacity</b>	<b>Cellcliprotor</b> Up to 12 microslides
<b>Max. RPM (speed)</b>	<b>Cellcliprotor</b> 2.000 min <sup>-1</sup> <b>Centrifuge with applicable rotor</b> 6.000 min <sup>-1</sup>
<b>Running time</b>	1 – 99 minutes, ∞ continuous run, short cycle mode (impulse key)
<b>Safety</b>	Imbalance switch-off Automatic rotor recognition Lid locking and holding
<b>Dimensions</b> [width x depth x height]	395 mm x 520 mm x 346 mm
<b>Weight</b> without accessories	31 kg



## **6. UNPACKING AND INSTALLATION**

### **6.1 UNPACKING THE INSTRUMENT**

Remove the upper cover.

Remove the upper supporting foams.

Lift the centrifuge on both sides with an appropriate number of helpers and place it on the laboratory table.

For repacking use the original cases. Keep the packing material.

### **6.2 INSTALLATION SITE REQUIREMENTS**

The site for installation should meet the following requirements:

- Place the instrument onto a vibration free level surface.
- No direct sunlight onto the instrument. No sources for heat or cold in the proximity of the instrument.
- A minimum distance of 10 – 20 cm between the instrument and walls or other laboratory equipment.

### **6.2 INSTALLATION**

Remove the transportation safety device from the bottom of the housing.

Position the centrifuge in a stable and level manner in a suitable place.

Connect the power line of the instrument to the power outlet on the rear.

Turn on the mains switch. Switch position "I".

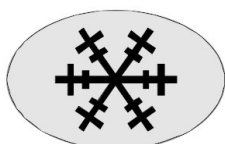
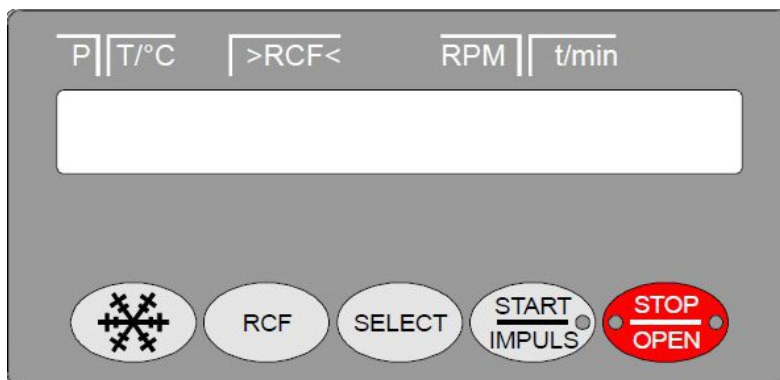
The last used centrifuge data will be displayed.

Open the lid.

## 7. INITIAL OPERATION

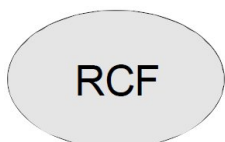
### 7.1 DISPLAY AND CONTROL PANEL

Software settings and motor operation can be operated with the control panel on the front side of the instrument.



#### Start pre-cooling

The pre-cooling speed is pre-adjusted to 2800 RPM, but can be set to an individual speed.



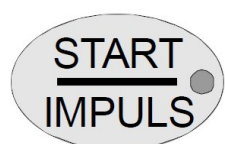
#### Change between RPM to RCF

RCF (Relative Centrifugation Force) is displayed in angle brackets >XXX<.



#### Select

Parameter selection, where pushing again guides to the next parameter



#### Start / Impuls

The Start/Impuls button has three functions:

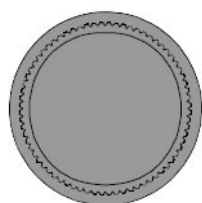
1. Start the centrifugation run. Function is confirmed by the LED.
2. Short term centrifugation. The centrifugation is active as long as the button is operated. The LED confirms the function.
3. Store the inputs and changes.



#### Stop / Open

The Stop/Open button has three functions:

1. End the centrifugation run. The right hand LED is activated until the rotor has stopped completely running down with the pre-selected brake step. The left hand LED flashes when the rotor is standing. Pressing the button twice causes an emergency stop.
2. Unlocking the lid. The left hand LED stops lighting.
3. Cancel inputs and changes.





#### Control Knob

Adjusting the parameters, whereby turning clockwise raises the parameters, turning counter clockwise reduces the parameters.

## 7.2 ADJUSTABLE PARAMETERS


The following list displays the parameters which can be influenced by the user. All the parameters can be selected by pressing the "Select"-button. The parameters can be raised by turning the "Control-Knob" clockwise; decreasing the values is done by turning the "Control-Knob" counter clockwise.

Adjustable parameter	Explanation
PROG RCL	Program position of the called-up program
t [min]	Running time, settable from 0 – 99 min in 1 min steps
t [sec]	Running time, settable from 0 – 59 s in 1 second steps
RPM	Revolutions per minute: a numerical value from 500 RPM up to the maximum speed of the rotor can be set. Maximum speed of the rotor, see Chapter "Anhang/Appendix, Rotoren und Zubehör/Rotors and accessories". Settable in increments of 10.
RAD [mm]	Centrifugation radius. Input in mm. For centrifugation radius see Chapter "Anhang/Appendix, Rotoren und Zubehör/Rotors and accessories". The input of the radius is only possible if the RCF display (> RCF <) is selected.
RCF	Relative centrifugal force. A numerical value can be set, which gives a speed between 500 RPM and the maximum speed of the rotor. Adjustable up to 100 in intervals of 1, and from 100 in intervals of 10. The RCF value is automatically rounded up or rounded down with regard to the RPM interval. The input of the RCF is only possible if the RCF display (> RCF <) is selected.
	Starting steps 1 - 9. Step 9 = shortest starting time, Step 1 = longest starting time.
	Brake steps 0 - 9. Step 9 = shortest run-down time, Step 1 = long run-down time, Step 0 = longest run-down time (brakeless run-down).
T [°C]	Temperature Set Point (only in centrifuges with cooling). Adjustable from -20°C to +40°C, in 1°C intervals. The lowest obtainable temperature depends on the rotor (see Chapter "Anhang/Appendix, Rotoren und Zubehör/Rotors and accessories").
PROG STO	Program position on which the program is stored. 9 programs can be stored (program positions 1 - 2 - 3 - ... 9). The programme position # serves as temporary storage for altered adjustments.

## 8. OPERATION OF CYTOCENTRIFUGE

### 8.1 OPENING THE LID

Swing handle rail on the lid upwards.

The symbol  (lid open) illuminates in the rotation indicator.

Open the lid.



The lid can only be opened when the centrifuge is switched on and the rotor is at rest. If it cannot be opened under these circumstances, see the section on “Emergency release”.

### 8.2 INSERTION AND REMOVAL OF ROTOR

#### Removal of rotor

Take the rotor out of the centrifuge by pulling at the center holder of the rotor.

Place the rotor carefully onto the supplied bench-top rotor holder.



Removal of Cellcliprotor out of the centrifuge.



Placement of Cellcliprotor onto the rotor holder.

### Insertion of rotor

Lift Cellcliprotor carefully from rotor holder.

Place Cellcliprotor centered into the centrifuge.

Ensure that the safety pin locks into holder at the centrifuge hub.



Safety pin on bottom side of the Cellcliprotor.



Safety pin lock at the centrifuge hub.

## Closed rotor

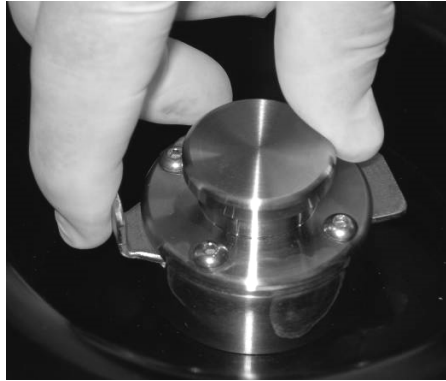
Take the closed rotor out of the centrifuge by pulling at the center holder of the rotor.

Unlock lid by pushing the lever on the lid to the center and lift the lid.

Inside the rotor may develop a vacuum during centrifugation. In this case hold the lower part of the closed rotor with the other hand upon lifting of the lid.



Removal of closed rotor out of the centrifuge.



Unlocking and lifting of rotor lid.

Insert Cytologyfunnels or ECOfunnels into the rotor.



**ATTENTION:** Always load the rotor symmetrically!!

Position lid centered onto the rotor and press until you here the activation of the lock (click sound).

Place closed rotor centered into the centrifuge.

Ensure that the safety pin locks into holder at the centrifuge hub.



Loading of closed rotor.



Closing of rotor lid.

## Cleaning of closed rotor

Do not clean the closed rotor in the dishwasher or with aggressive chemicals or cleaning solutions!

### Step 1

Open the rotor.

### Step 2

Remove the four screws at the center of the rotor.



### Step 3

Lift the Cellclip holder from the rotor.



### Step 4

Remove the gasket from the outer rotor.

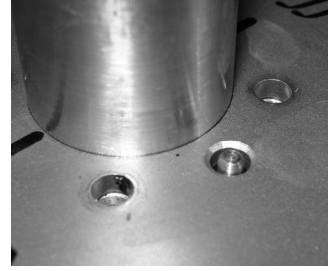


**Step 5**

Clean and disinfect all components (i.e. rotor, Cellclip holder, lid and gasket). Dry the components before reassembly.

**Step 6**

Assemble the Cellclip holder centred onto the rotor. Ensure that the guiding pin locks into the respective opening in the rotor.

**Step 7**

Fasten the four screws in the centre of the rotor.

**Step 8**

Grease the pivot a little bit.

**Step 9**

Place the gasket onto the outer ring of the rotor. Ensure that the gasket is evenly fixed!



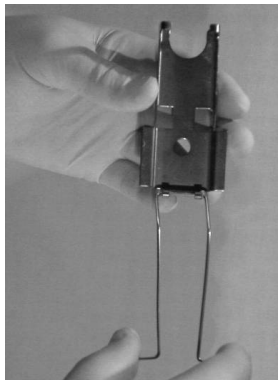
- Always fill the centrifuge containers outside of the centrifuge.
- No liquid should be allowed to enter the centrifugal chamber during filling and swinging out of the hangers.
- The maximum filling quantity for Cytologyfunnels and ECOfunnels specified must not be exceeded.
- In order to maintain the weight differences within the centrifuge container as marginal as possible, a consistent fill level in the containers is to be heeded.



### 8.3 PREPARATION AND USE OF CYTOLOGYFUNNELS

#### Step 1

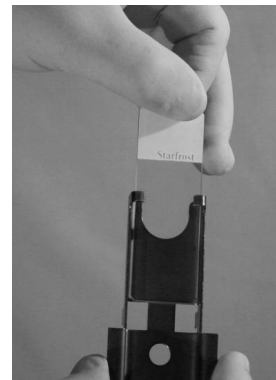
Open the Cellclip.



Step 1

#### Step 2

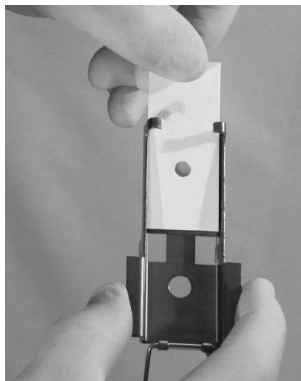
Insert microscope slide with labelled side away from bracket.



Step 2

#### Step 3

Insert filter card.

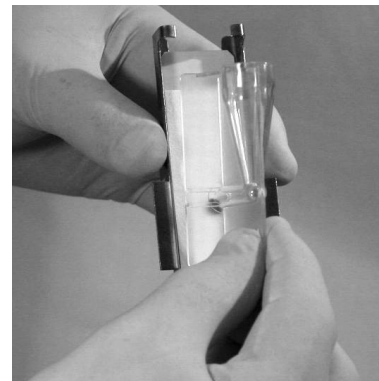


Step 3

#### Step 4

Insert Cytologyfunnel

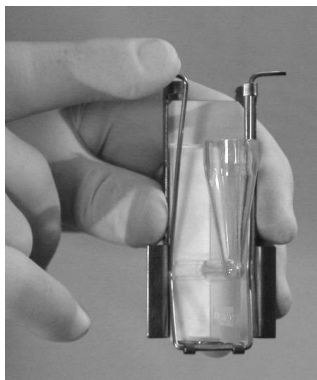
All Cytologyfunnels fit into the Cellclip.



Step 4

#### Step 5

Fix the assembly by pulling the brackets together and hook them into the holder.

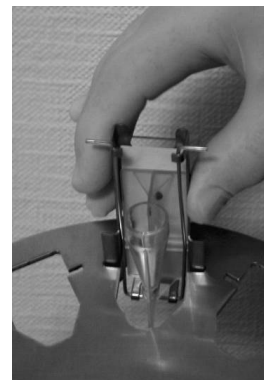


Step 5

#### Step 6

Insert the assembly into the rotor.

The Cytologyfunnel chamber should face into the centre of the rotor.



Step 6

#### Step 7

Open the Cytologyfunnel lid and pipette 0.5 ml of sample into the chamber.

Close the Cytologyfunnel lid.



Step 7

### Step 8

Close the centrifuge lid

Set centrifugation time and centrifugation speed

Press start.

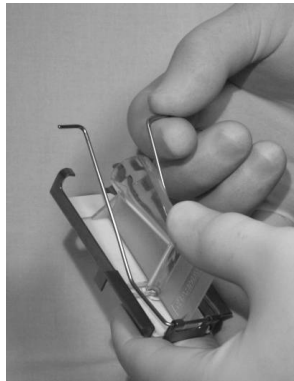
### After centrifugation

Open the centrifuge lid

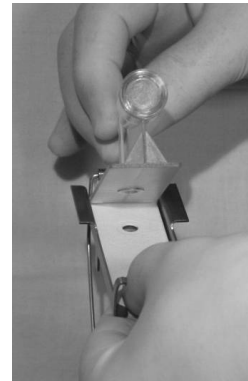
Take the Cytologyfunnel assemblies out of the rotor.

### Step 9

Open the Cytologyfunnel assembly by pulling the brackets out of the holder and simultaneous pressing of the Cytologyfunnel onto the microslide.



Step 9



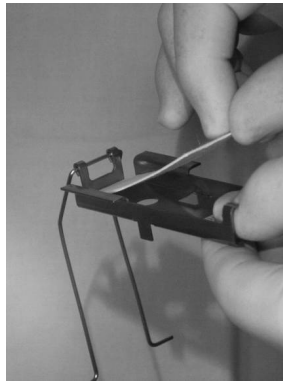
Step 10

### Step 10

Remove Cytologyfunnel and dispose (disposable) or put it into a disinfecting solution (reusable).

### Step 11

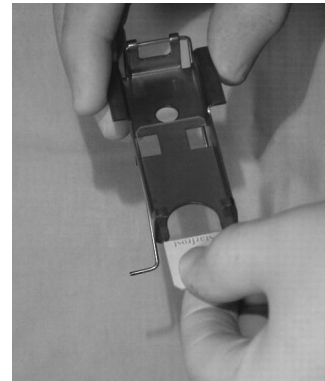
Press thumb on the labelled areas of the microslide and carefully remove the filtercard.



Step 11

### Step 12

Take out the microslide for further staining and incubate Cellclip in disinfecting solution.

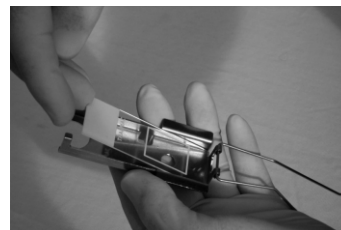


Step 12

## 8.4 PREPARATION AND USE OF ECOfunnels

### Step 1

Open the Cellclip and insert microslide with labelled side away from the bracket.



Step 1

### Step 2

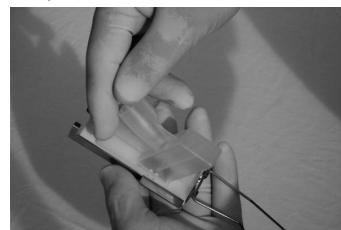
Insert ECOfunnel seal onto the microscope slide.



Step 2

### Step 3

Insert ECOfunnel.



Step 3

### Step 4

Fix the assembly by pulling the brackets together and hook them into the holder.



Step 4

### Step 5

Insert the assembly into the rotor.

The ECOfunnel chamber should face into the centre of the rotor.



Step 5

### Step 6

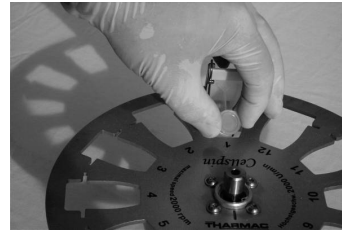
Mix sample gently and check the turbidity of the sample. Depending on the turbidity pipette approx. 1 – 2 ml into the ECOfunnel chamber.



Step 6

### Step 7

Close the ECOfunnel lid.



Step 7

### Step 8

Close the centrifuge lid

Set centrifugation time and centrifugation speed.

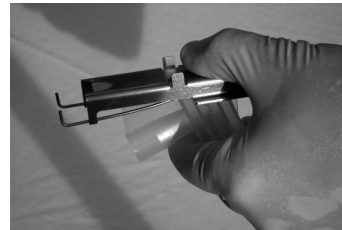
A centrifugation at 1200 rpm for 5 minutes is recommended.

Press start.

### Step 9

Open the centrifuge lid after centrifugation.

Take the ECOfunnel assemblies upside down out of the rotor to avoid flow of excessive sample onto the microslide.

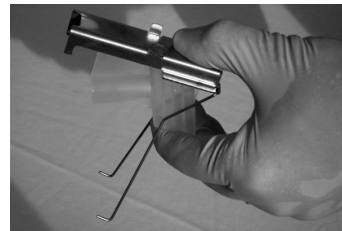


Step 8

### Step 10

Press ECOfunnel onto the assembly and open Cellclip by pulling the bracket out of the holder.

Keep assembly upside down to avoid flow of excessive sample onto the microslide.

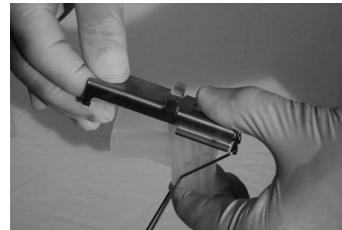


Step 9

### Step 11

Hold microscope slide and ECOfunnel seal with one hand, the ECOfunnel with the other.

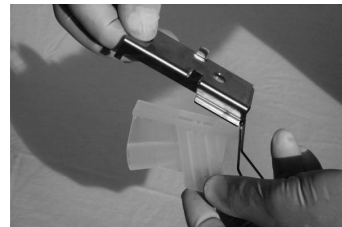
Keep assembly upside down to avoid flow of excessive sample onto the microslide.



Step 10

### Step 12

Remove ECOfunnel and dispose (disposable) or put it into a disinfecting solution (reusable).



Step 11

### Step 13

Remove microscope slide and seal together from the Cellclip.

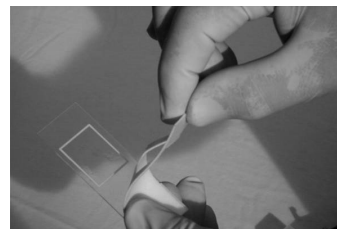


Step 12

### Step 14

Carefully remove ECOfunnel seal from the microscope slide.

Stain microscope slide.



Step 13

## 8.5 CLEANING AND DESINFECTION OF REUSABLE ITEMS

Reusable Cytologyfunnels and ECOfunnels as well as Cellclips should be decontaminated and cleaned after usage. The use of standard surface disinfectants is recommended.

After disinfection Cytologyfunnels, ECOfunnels and Cellclips should be cleaned in water and dried.



Do not use bottle brushes or aggressive chemicals. Failure to comply may result in severe damage to the items.

Cytologyfunnels and ECOfunnels are considered for repeated use. Upon long-term use, the inner surface of the chamber will roughen. After two years an exchange of reusable Cytologyfunnels and ECOfunnels is therefore recommended.

## 8.6 DISPOSAL OF FILTERCARDS

Filtercards are intended for single use only.

All materials are considered contaminated with patient specimens or controls. After use dispose filter cards in accordance with applicable regulations.

## 8.7 DISPLAY OF THE RELATIVE CENTRIFUGAL FORCE

The relative centrifugal force (RCF) can be displayed during the centrifugation run. If the relative centrifugal force (RCF) is used, the centrifuging radius must be entered.

Keep  pressed during the centrifugation run.

The relative centrifugal force (RCF) appears in the speed indicator (RCF = displayed value x 100).

Release  again. The speed is displayed.

### RELATIVE CENTRIFUGAL FORCE

The relative centrifugal force (RCF) is given as a multiple of the acceleration of gravity (g). It is a unit-free value and serves to compare the separation and sedimentation performance. These values are calculated using the formula below:

$$\text{RCF} = \left( \frac{\text{RPM}}{1000} \right)^2 \times r \times 1,118 \quad \Rightarrow \quad \text{RPM} = \sqrt{\frac{\text{RCF}}{r \times 1,118}} \times 1000$$

RCF = relative centrifugal force; RPM = rotational speed (revolutions per minute); r = centrifugal radius in mm. The relative centrifugal force (RCF) stands in relation to the revolutions per minute and the centrifugal radius.

## 8.8 ROTOR IDENTIFICATION

After every start of a centrifugation run the rotor utilized is identified.

After a rotor change, the drive switches off and the rotor code (rot xx) is displayed.

Press . The last used centrifuge data will be displayed.

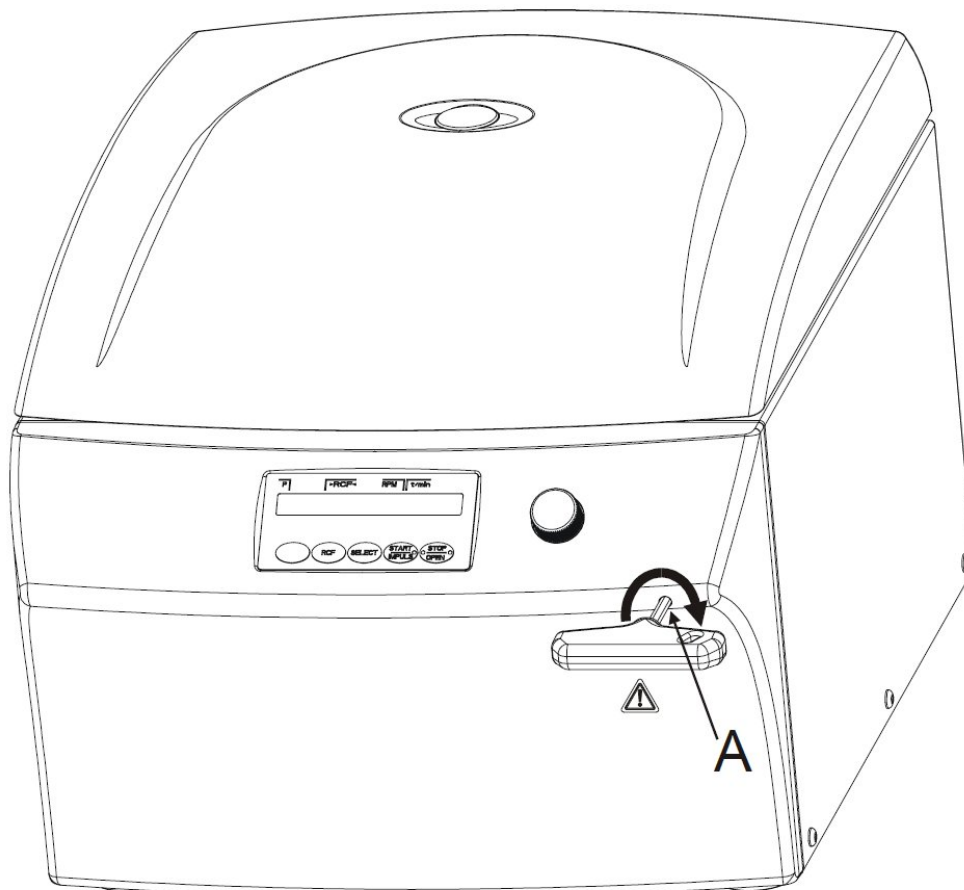
A further operation of the centrifuge is only possible after a single opening of the lid. If, following a rotor change, the maximum speed of the rotor is less than the set speed, the speed is limited to the maximum speed of the rotor.

## 8.9 EMERGENCY RELEASE

The lid cannot be opened during power failure. An emergency release has to be executed by hand.

For emergency release disconnect the centrifuge from the mains. Open the lid only during rotor standstill.

1. Switch off the mains switch (switch position "0").
2. Look through the window in the lid to be sure that the rotor has come to a standstill.
3. Insert the hexagon wrench key horizontally into the hole (see picture below). Rotate the key half a round in clockwise direction until the lid can be opened. Rotate the key half a round in clockwise direction until the lid can be opened.
4. Open the lid. If the LED in the "Open/Stop"-button flashes after the centrifuge is switched on again, press the "Open/Stop"-button so that the motor-driven lid lock goes into its basic position.



## 9. APPLICATION NOTES

### 9.1 APPLICATIONS

Any cell suspensions may be processed with the CS Centrifuge cytocentrifuge.

Cerebrospinal fluids  
Pleural fluids  
Pericardial fluids  
Peritoneal fluids  
Synovial fluids  
Urine  
Bronchial alveolar lavage washes  
Oral cavity washes  
Gastric washes  
Exudates and transudates  
Fine needle aspirates and other aspirates  
Sputum

### 9.2 APPLICATION NOTES

#### Sample Volume

Cytologyfunnels are designed to give optimum results with sample volumes of 0.1 to 0.5 ml.

Double Cytologyfunnels are designed to give optimum results with sample volumes of 0.1 to 0.5 ml per chamber.

ECOfunnels are designed to give optimum results with up to 4 ml of sample.

#### Cell count

To guarantee optimum results, the cell count should be as indicated below:

<b>Cytologyfunnel</b>	100.000 or $10^5$ cells per chamber
<b>Double Cytologyfunnel</b>	100.000 or $10^5$ cells per chamber
<b>ECOfunnel</b>	1000.000 or $10^6$ cells per chamber

Samples with higher cell counts should be diluted to the appropriate cell concentration.



## Centrifugation speed, time and acceleration

The majority of users utilize a centrifugation speed of 500 to 1.500 rpm for 10 minutes. This is sufficient for most samples. The higher the protein load of the sample, the higher the centrifugation speed and the longer the centrifugation time should be selected.

Crucial for optimum results is the complete absorption of the liquid by the filtercards and stable fixation of the cells to the surface of the glass microslides.

If the centrifugation time is selected too short, remaining sample fluid will wash off the cells from the surface of the microslide. Too long centrifugation times will result in drying of the cell and potential damage to the cell structures. This can lead to wrong diagnostic results!

## Examples

Sample type	Centrifugation time [minutes]	Centrifugation speed [RPM; min <sup>-1</sup> ]	Acceleration / Deceleration
Kidney puncture specimen	10	1000	Low / Level 7
Lavages	10	1000	Low / Level 7
Liquor	7	1000	Low / Level 8
Mammary gland puncture specimen	10	1000	Medium / Level 8
Pleura	1	800	Medium / Level 8
Thyroid gland puncture specimen	10	1000	High / Level 7
Iliac crest fluid	5	500	High / Level 9
Tumour liquid	5	500	High / Level 9
CD4 <sup>+</sup> or CD8 <sup>+</sup> lymphocytes	5	500	High / Level 9
Urine	10	1000	High / Level 9

## Suggested break level for standard work: Level 9.

Do not fix the slides in 95 % alcohol before complete drying of the microscope slides. Failure to comply results in washing off the cells from the glass surface.

### CS Centrifuge conversion table

<b>Speed</b> [RPM; min <sup>-1</sup> ]	<b>Force</b> [g; m/s <sup>2</sup> ]
500	28
600	40
700	55
800	72
900	91
1000	112
1100	135
1200	161
1300	189
1400	219
1500	252
1600	286
1700	323
1800	362
1900	404
2000	447

## 10. CLEANING AND MAINTENANCE

### 10.1 CLEANING

The recommended frequency of cleaning of the cytocentrifuge depends on how frequently the instrument is used.

Clean the centrifuge housing and the centrifuging chamber regularly, using soap or a mild detergent and a damp cloth if required. For one thing, this services purposes of hygiene, and it also prevents corrosion through adhering impurities.

In the event of condensation water formation, dry the centrifugal chamber by wiping out with an absorbent cloth.

If infectious materials penetrates into the centrifugal chamber this is to be disinfected immediately.

Lightly rub the rubber seal of the centrifuge chamber with talcum powder or a rubber care product after each cleaning.



Wear protective clothing and disposable gloves according to Good Laboratory Practices.

Please take note of the safety aspects of the instrument.

Do not use acetone or xylene for cleaning the unit. Only use alcoholic media.

Never spray or use cleaning medium directly onto the touch panels.

## 10.2 RECOMMENDED MAINTENANCE AND SERVICE SCHEDULE



Pull the mains plug before cleaning.

Before any other cleaning or decontamination process other than that recommended by the manufacturer is applied, the user has to check with the manufacturer that the planned process does not damage the device.

### Centrifuge

Clean the centrifuge housing and the centrifuging chamber regularly, using soap or a mild detergent and a damp cloth if required. For one thing, this services purposes of hygiene, and it also prevents corrosion through adhering impurities.

In the event of condensation water formation, dry the centrifugal chamber by wiping out with an absorbent cloth.

If infectious materials penetrate into the centrifugal chamber this is to be disinfected immediately.

Lightly rub the rubber seal of the centrifuge chamber with talcum powder or a rubber care product after each cleaning.

### Rotors and Attachments

In order to prevent corrosion and material changes, rotors and accessories must be cleaned regularly with soap or a mild detergent and a damp cloth. Cleaning is recommended at least once a week, even better after every usage.

If the rotor or accessory parts are contaminated by pathogenic material, a suitable cleaning has to be executed.

The rotors and accessory parts must be dried immediately after cleaning.

Angle rotors, container and hanger made of aluminum are to be lightly greased after drying using acid-free grease, e.g. Vaseline.

The sealing ring is to be replaced immediately upon indication of crack formation, embrittlement or abrasive wear. In order to prevent the packing ring from twisting when opening and closing the cover, the packing ring must be lightly rubbed with talcum powder or a rubber care product.

In order to prevent corrosion as a result of moisture between the rotor and the motor shaft, the rotor should be disassembled and cleaned at least once a month, and the motor shaft should be lightly greased.

The rotors and accessory parts are to be checked on a monthly basis for corrosion damage.

Rotors and attachments may no longer be utilized upon indication of wear and tear or corrosion.

Check the firm seating of the rotor on a weekly basis.

### **Rotors and accessories with limited term of use**

The use of specific rotors, suspensions and accessories is time limited.

They are marked with an expiry date, e.g. "einsetzbar bis Ende: / usable until end of: IV. Quartal 2011" (applicable until the end of: IVth quarter 2011).

The rotors, suspensions and accessories may not be used for longer periods for safety reasons once the marked expiry date has been reached.

## 11. SERVICE

Internal components should only be serviced by technicians authorized by SLEE medical GmbH.

If technical service or spare parts are necessary, please contact your local SLEE medical GmbH distributor. Please have the following information available:

- Complete contact details
- Type of instrument and serial number
- Place of instrument and name of user
- Purpose of service call
- Delivery date of the unit

If it is necessary to return the instrument, it must be cleaned and disinfected before delivery. It must be returned in its original packing.

If the instrument or parts thereof are sent back in a dirty or non-disinfected condition, SLEE medical GmbH reserves the right to return the parts to the debit of the customer.

## 12. OPTIONAL ACCESSORIES

### **Cytologyfunnel reusable**

#39910000 (12 pcs.)

### **Cytologyfunnel disposable**

#39910004 (100 pcs.)

#39910005 (500 pcs.)

### **Filtercards for Cytologyfunnel reusable**

#39910001 Standard (200 pcs.)

#39910006 Thin, for samples less 0.4 ml (200 pcs.)

### **Cellslides Single circle uncoated**

#39910002 (100 pcs.)

### **Cellslides Single circle coated**

#39910003 (100 pcs.)

### **Double Cytologyfunnel reusable**

#39910010 (12 pcs.)

### **Double Cytologyfunnel disposable, offset**

#39910014 (100 pcs.)

#39910015 (500 pcs.)

### **Filtercards for Double Cytologyfunnel reusable**

### **Cellslides Double circle uncoated**

#39910012 (100 pcs.)

### **Cellslides Double circle coated**

#39910013 (100 pcs.)

### **Cellslides Double circle, offset**

For Double Cytologyfunnel disposable only!

#39910016 (100 pcs.)

### **ECOfunnel reusable**

#39910020 (12 pcs.)

### **ECOfunnel disposable, offset**

#39910023 (100 pcs.)

#39910024 (500 pcs.)

### **ECOseal for ECOfunnel**

#39910021 (100 pcs.)

### **ECOslides coated**

#39910022 (100 pcs.)

### **Cellclip for Cellcliprotor**

#39910031 (1 pc.)

### **13. WARRANTY**

SLEE medical GmbH guarantees that the product delivered has been subjected to a comprehensive quality control procedure, and that the product is faultless and complies with all technical specifications and/or agreed characteristics warranted.

SLEE medical GmbH guarantees that the instrument is manufactured under an ISO 9001:2015 and ISO 13485:2016 quality management system.

Unauthorized modification or repair by third party persons will void the warranty.

Only original SLEE medical GmbH spare parts must be used.

Guarantee claims can be put forward only if the instrument is used according to this manual and for the purpose described.

Mistakes and errors which occur because of improper use cannot be accepted.

### **14. DISPOSAL**

The instrument or parts of the instrument must be disposed of according to existing local applicable regulations.



**Notes**

## Notes

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