

## Sigma 2-7 Cyto



Benchtop centrifuge  
• Unrefrigerated



# The specialist for cytocentrifugation



**Sigma is a leading international manufacturer of laboratory centrifuges for diverse sectors, including biotechnology, pharmaceutical, medical and environment analysis.**

**Laboratories, institutions and companies everywhere in the world have been relying on premium Sigma quality – Made in Germany – for more than 40 years. The company stands for innovative products and development of durable, energy-efficient and especially user-friendly devices.**

Sigma 2-7 Cyto combines the highlights of Sigma 2-7 with state-of-the-art cytocentrifugation technology. Sigma's cytology centrifuge is characterized by the unique features of Sigma 2-7 and the interchangeability between cytology and laboratory centrifuge.

The key features are the closed cytology rotors. They facilitate the simultaneous processing of up to twelve specimens for liquid-based cytology. Easy rotor exchange allows the implementation of either a swing-out rotor for 4 x 100 ml with adapters for a broad range of tubes or 8 x 15 ml swing-out rotor for blood collection and conical culture tubes.

With a maximum speed of 2,000 rpm, Sigma 2-7 Cyto is well-equipped for thin layer cell preparation, cell harvest and other low speed applications.

# Top marks for functionality

## User-friendly, intuitive and reliable

Sigma 2-7 Cyto combines the cytology-specific characteristics with the features of Sigma 2-7. Like Sigma 2-7, the cyto-centrifuge is equipped with a well-organized, clear display at a perfect viewing angle and with large buttons. The intuitive Spin-control Basic control unit makes entry of operating parameters and programs simple. The centrifuge run time can be selected in seconds, and the LED run time indicator is readily visible at a distance.

The motorised lid lock, which closes automatically to eliminate extra effort, is a nice practical touch. The innovative electronics provide extremely high energy efficiency and low sensitivity to main voltage

fluctuations. Together with a powerful motor, this enables outstanding acceleration and braking times. With two sets of acceleration and braking profiles, the Sigma 2-7 Cyto is also suitable for centrifuging the sensitive cytology samples and cells requiring gentle run-up and run-down.

With these features, the Sigma 2-7 Cyto sets standards for easy and flexible operation, convenience and safety. The compact centrifuge saves space in the laboratory, especially by the possibility to combine cytology application and cell harvest in one centrifuge – and is pleasantly quiet.

### Sigma 2-7 Cyto

- Versatile centrifuge for cyto-centrifugation and cell harvest
- Speed range from 400 up to 2,000 rpm
- Closed, aerosoltight and autoclavable rotors
- Rotors compatible with clip systems of RESOSPIN® or Shandon™
- Tool-free cytorotor mounting
- Extendable to laboratory centrifuge
- Maximum capacity [clips]: 12 cytology samples
- Maximum capacity [ml]: 4 x 100 / 8 x 15
- Clear and convenient Spincontrol Basic control unit
- Innovative LED running indicator, readily visible at a distance
- User-configurable audible signal for keypress and end of run
- Ten programs
- Two acceleration and braking curves
- Compact device; fits on every lab bench
- Low height for easy loading and unloading
- Short acceleration and braking times
- Automatic imbalance monitoring
- Low noise level
- Motorised lid lock and automatic lid opening
- Low temperature rise in continuous operation
- Automatic overspeed monitoring
- Durable, easy-care stainless steel chamber
- Window in lid for external speed monitoring
- Produced in compliance with the latest national and international standards (e.g. EN 61010-2-020)





SIGMA 2-7 Cytro

# Rotors and accessories

## Specialist for thin layer cell preparation

The Sigma 2-7 Cyto is available with closed cytology rotors and can be upgraded with swing-out rotors for cell harvest. The cytrotors process up to twelve samples simultaneously and are specialized for either the RESOSPIN® or Shandon™ clip system. The closed cytrotors are autoclavable and have outstanding safety features for user and centrifuge. They protect the user

before, during and after sample preparation and allow loading in a microbiological cabinet. Moreover, they protect the centrifuge and its electronics from accidental fluid spillage.

The available swing-out rotors accept extensive accessories for tubes from 1.5 ml to 100 ml tubes.

### Cytology rotors starting on page 7

#### Cytology rotor 11260

- RESOSPIN® design
- Max. capacity: 12 clips
- Max. speed: 2,000 rpm
- Max. RCF: 470 x g
- Angle: 90°



#### Cytology rotor 11261

- Shandon™ design
- Max. capacity: 12 clips
- Max. speed: 2,000 rpm
- Max. RCF: 470 x g
- Angle: 90°



### Swing-out rotors starting on page 8

#### Swing-out rotor 11037

- Max. capacity: 8 x 15 ml
- Max. speed: 2,000 rpm
- Max. RCF: 595 x g
- Angle: 90°



#### Swing-out rotor 11071

- Max. capacity: 4 x 100 ml
- Max. speed: 2,000 rpm
- Max. RCF: 635 x g
- Angle: 90°



## Cytology rotor 11260

### Closed Cytology rotor 11260 for RESOSPIN® clips

- Max. capacity: 12 clips
- Max. speed: 2,000 rpm
- Max. RCF: 470 x g
- Angle: 90°



## Cytology rotor 11261

### Closed Cytology rotor 11261 for Shandon™ clips

- Max. capacity: 12 clips
- Max. speed: 2,000 rpm
- Max. RCF: 470 x g
- Angle: 90°



## Accessories and consumables

### Cytology clip 13260 RESOSPIN® design



### Cytology clip 13261 Shandon™ design



### Sample chamber 15260 for RESOSPIN® clips

- Disposable
- One hole



### Sample chamber 15260 for Shandon™ clips

- Disposable
- One hole



### Glass slide 15261 for RESOSPIN® clips

- Coated
- One circle



### Glass slide 15261 for Shandon™ clips

- Coated
- One circle



## Swing-out rotor 11037

The regular greasing of the rotor bolts is no longer necessary – this minimises non-productive time and guarantees maximum safety.

### Bucket 13035\*

- Max. capacity: 8 x 15 ml
- Max. speed: 2,000 rpm
- Max. RCF: 595 x g
- Angle: 90°

\* Bucket not autoclavable



### Tube

						
Rated capacity (filling volume) [ml]	10	10	10	10	14	15
Diameter x length [mm]	16.1 x 81.1	16.1 x 81.1	16.1 x 81.1	16 x 100	17 x 100	17 x 110
Tube material	PF	PC	PPCO	Glass	Glass	Glass
Item no.	15000	15010	15039	15015	15024	15115

### Adapter

for bucket 13035



Bore diameter x length [mm]	17.5 x 86
Tubes per bucket / rotor	4 / 8
Centrifuging radius [mm]	133
Item no.	–

### Blood and urine tubes

									
Rated capacity (filling volume) [ml]	1.1–1.4	2.7–5	1.6–6	1.8–7	4–10	8–9	6–10	9–10	10
Diameter x length with lid [mm]	8 x 82	11 x 82–108	13 x 81–106	13 x 81–107	15 x 91–108	16 x 107	16 x 106	16 x 108	15 x 118
Tube material	PP	PP	PP, PET	PET	PP, PET	PET	PET	PP	PP
Item no.	–	–	–	–	–	–	–	–	–

### Adapter

for bucket 13035



Bore diameter x length [mm]	17.5 x 86	17.5 x 76	17.5 x 86
Tubes per bucket / rotor	4 / 8	4 / 8	4 / 8
Centrifuging radius [mm]	133	123	133
Item no.	–	13073*	–

## Swing-out rotor 11071

### Round bucket 13299\*

- Max. capacity: 4 x 100 ml
- Max. speed: 2,000 rpm
- Max. RCF: 635 x g
- Max. tube length in middle of bucket with / without cap: 117 / 126 mm
- Angle: 90°

\* Bucket not autoclavable



The regular greasing of the rotor bolts is no longer necessary – this minimises non-productive time and guarantees maximum safety.

Tube										
Rated capacity (filling volume) [ml]	0,5	1.5	2	5	5	6 (5)	7	10	10	10
Diameter x length [mm]	10.8 x 46.5	10.7 x 42	10.7 x 42	17 x 60	12 x 75	12 x 100	12 x 100	16.1 x 81.1	16.1 x 81.1	16.1 x 81.1
Tube material	PP	PP	PP	PPCO	PS	Glass	Glass	PF	PC	PPCO
Item no.	Paediatrics	15008	15040	–	15060	15007	15027	15000	15010	15039
<b>Adapter</b>										
for round bucket 13299										
Bore diameter x length [mm]		11.1 x 35		17 x 52		13.5 x 52			16.5 x 56	
Tubes per adapter / rotor		4 / 16		3 / 12		5 / 20			4 / 16	
Centrifuging radius [mm]		137		139		139			138	
Item no.		14301*		14309		14302			14303	

Tube										
Rated capacity (filling volume) [ml]	10	10	14	14	15 (13)	15	25	25	25	30 (26)
Diameter x length [mm]	16 x 100	16 x 100	17 x 100	17 x 100	17 x 110	16.5 x 120	25 x 90	24 x 100	24 x 100	25.3 x 98
Tube material	Glass	Glass	PS	PP	Glass	PP	PP	Glass	Glass	PF
Item no.	15015	15024	15020	15023	15022	15115	–	15025	15026	15029
<b>Adapter</b>										
for round bucket 13299										
Bore diameter x length [mm]		16.5 x 56		17.5 x 67.5		17 x 76	25.5 x 56			25.5 x 58
Tubes per adapter / rotor		4 / 16		3 / 12		2 / 8	1 / 4			1 / 4
Centrifuging radius [mm]		138		140		126	138			140
Item no.		14303		14307		14300**	14308			14304

\* If used with paediatric tubes, only partial loading is possible in some cases \*\* Only possible without cap 17299

## Swing-out rotor 11071

The regular greasing of the rotor bolts is no longer necessary – this minimises non-productive time and guarantees maximum safety.

### Round bucket 13299\*

- Max. capacity: 4 x 100 ml
- Max. speed: 2,000 rpm
- Max. RCF: 635 x g
- Max. tube length in middle of bucket with / without cap: 117 / 126 mm
- Angle: 90°

\* Bucket not autoclavable



Tube									
Rated capacity (filling volume) [ml]	30 (26)	30 (28)	30	30	50	50	50	50	50
Diameter x length [mm]	25.3 x 98	25.3 x 98	24 x 105	25 x 107	34 x 100	34 x 100	35 x 100	34 x 100	28 x 115
Tube material	PPCO	PC	Glass	PP	Glass	Glass	Glass	PC	PP
Item no.	15032	15030	15033	–	15045	15050	15056	15049	–

Adapter						
Bore diameter x length [mm]		25.5 x 58	25.5 x 56		35.5 x 58	29.5 x 67
Tubes per adapter / rotor		1 / 4	1 / 4		1 / 4	1 / 4
Centrifuging radius [mm]		140	138		140	139
Item no.		14304	14308		14305	14310*

Tube				
Rated capacity (filling volume) [ml]	100 (75)	100 (90)	100	100
Diameter x length [mm]	44 x 100	44 x 100	44 x 100	45 x 100
Tube material	Glass	Glass	Glass	PC
Item no.	15078	15106	15100	15103

Adapter		
Bore diameter x length [mm]		45.1 x 98.5
Tubes per adapter / rotor		1 / 4
Centrifuging radius [mm]		139
Item no.		16051

\* Only possible without cap 17299

## Swing-out rotor 11071

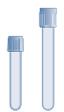
### Round bucket 13299\*

- Max. capacity: 4 x 100 ml
- Max. speed: 2,000 rpm
- Max. RCF: 635 x g
- Max. tube length in middle of bucket with / without cap: 117 / 126 mm
- Angle: 90°

\* Bucket not autoclavable



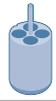
### Blood and urine tubes

								
Rated capacity (filling volume) [ml]	1.1 – 1.4	2.7 – 5	1.6 – 6	1.8 – 7	4 – 8.5	6 – 10	10	9 – 10
Diameter x length with lid [mm]	8 x 82	11 x 82–108	13 x 81–106	13 x 81–107	15 x 91–108	16 x 107	15 x 118	16 x 108
Tube material	PP	PP	PP	PET	PP	PET	PP	PP
Item no.	–	–	–	–	–	–	–	–

### Adapter

for round bucket 13299



				
Bore diameter x length [mm]	13.5 x 52	16.5 x 56	16.5 x 56	17.5 x 67.5
Tubes per adapter / rotor	5 / 20	4 / 16	4 / 16	3 / 12
Centrifuging radius [mm]	139	138	138	140
Item no.	14302*	14303	14303**	14307



\* Tube 13 x 107 mm only possible without cap 17299 \*\* Only possible without cap 17299

# Spincontrol Basic

## Advanced control, intuitive operation

Spincontrol Basic is a programmable and user-friendly control unit with a clearly organised and intuitive user interface that simplifies everyday tasks in the lab. Operating parameters are entered using centrally arranged arrow buttons, and parameter settings can be changed during operation. Another clever feature is the optional adjustable automatic lid opening at the end of the run.

Spincontrol Basic can hold up to ten programs – a unique feature in its class. These user-modifiable programs can store standard routines for retrieval at any time.

That makes the control unit ideal for institutions where specimens with different operating parameters must be centrifuged. Quick access to stored programs facilitates enhanced process reliability and quality of analytical results.

Two pairs of acceleration and braking curves help to optimize separation processes. Short or pulsed runs are also possible by pressing and holding the Start/Stop button.

Display	LCD
Speed/RCF display	+
Timer (s; h:min)	10 – 99:59
Short run, continuous run	+, +
Time increment [s]	1
Speed increment [s]	100
RCF increments [ $\times$ g]	10
Programs	10
Acceleration curves	2 (fast, soft)
Braking curves	2 (fast, soft)
Automatic lid opening at the end of the run, switchable	+, +
Start delay adjustable, switchable	+, +
Audible signal, switchable	+, +
Visual standstill indication	+
Lockable controller	+
Microprocessor control	+



# Product portfolio

Sigma offers a broad product portfolio with more than 25 laboratory centrifuges. They can be combined with an extensive range of fixed-angle and swing-out rotors and a large variety of accessories to obtain the right device configuration for every application.



**Microcentrifuge**  
**Sigma 1-16**

- 36 x 2 ml
- 15,000 rpm
- 20,627 x g

**Floor-standing centrifuge**  
**Sigma 8KS**

- 12 x 1,000 ml
- 5,100 rpm
- 8,578 x g

- 6 x 1,000 ml
- 10,500 rpm
- 20,461 x g



**Benchtop centrifuge**  
**Sigma 2-7**

- 4 x 100 ml
- 4,000 rpm
- 2,540 x g

- 30 x 15 ml
- 4,000 rpm
- 2,486 x g



**Benchtop centrifuge**  
**Sigma 3-30KS**

- 4 x 100 ml
- 5,000 rpm
- 3,969 x g

- 6 x 94 ml
- 30,000 rpm
- 70,121 x g



**Robot centrifuge**  
**Sigma 4-5KRL**

- 100 x 15 ml
- 4,700 rpm
- 4,470 x g

## Legend

- Max. capacity
- Max. speed
- Max. RCF

- Swing-out rotor
- Fixed-angle rotor

# Premium quality

## Made in Germany

The centrifuge Sigma 2-7 Cyto meets the highest technical requirements and laboratory standards. Developed and produced at our facilities in Osterode, Germany, it is a high-performance, durable and energy-efficient quality product and conforms to the latest safety emissions and environmental standards. Sigma guarantees the availability of spare parts and wearing parts for at least 10 years.

Furthermore, you benefit from our extensive services portfolio, including commissioning, maintenance, device calibration and more. Our qualified service technicians are ready to provide professional maintenance and repair as well as loaner devices if necessary. All support services are designed to ensure reliability and optimise system availability.

	Sigma 2-7 Cyto
<b>Max. capacity [ml]</b>	
Cytology rotors 11260 / 11261	12 clips
Swing-out rotor 11071 with buckets 13299 and caps	4 x 100 ml
<b>Max. RCF</b>	635
<b>Maximum speed [rpm]</b>	2,000
<b>Minimum speed [rpm]</b>	400
<b>Noise level at maximum speed (approximate) [dB(A)]</b>	
Cytology rotors 11260 / 11261	38
Swing-out rotor 11071 with buckets 13299 and caps	46
<b>Max. acceleration time [s]</b>	
Cytology rotors 11260 / 11261	12
Swing-out rotor 11071 with buckets 13299 and caps	7
<b>Max. braking time [s]</b>	
Cytology rotors 11260 / 11261	13
Swing-out rotor 11071 with buckets 13299 and caps	9
<b>Power consumption [W]</b>	210
<b>Height x width x depth [mm]</b>	293 x 378 x 535
<b>Height with open lid [mm]</b>	643
<b>Weight without rotor [kg]</b>	23

### Service Sigma

For maintenance and repairs please contact our Service department at:



### Calibration

Documented proof of compliance with essential technical parameters.

Speed or run time	(item no. 17713)
Speed and run time	(item no. 17714)
Speed, run time, temperature	(item no. 17715)

### Device qualification (IQOQ)

This comprehensive device qualification includes installation qualification and metrological checking of all functional parameters with a rotor.

IQOQ documents	(item no. 170000)
IQOQ on site	(upon request)

**Sigma 2-7 Cyto** centrifuge  
100–240 V, 50/60 Hz (item no. 10228)

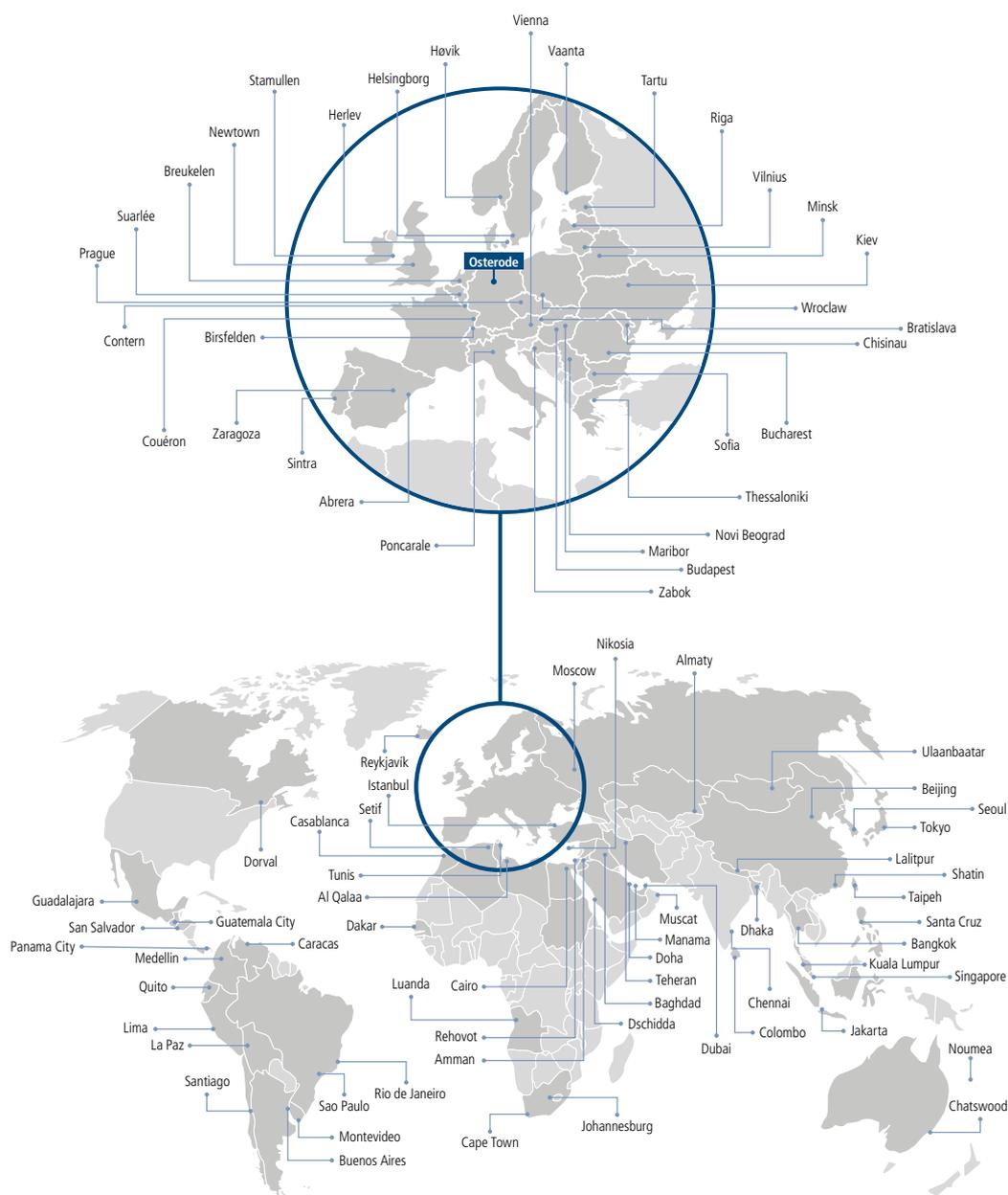
**Sigma 2-7 Cyto RESOSPIN®**  
centrifuge package incl. rotor, 12 clips, 50 funnels and 50 slides, 100–240 V, 50/60 Hz  
(item no. 1022801)

**Sigma 2-7 Cyto Shandon™**  
centrifuge package incl. rotor, 12 clips, 50 funnels and 50 slides, 100–240 V, 50/60 Hz  
(item no. 1022802)

# Global service

## For local product security

Our trained service partners in over 100 countries ensure consistently high quality in accordance with national regulations. Our specialists can also be engaged quickly around the world, either remotely or on site in person.



Selected locations of our representatives.

An overview of all representatives with detailed contact information can be found at [www.sigma-zentrifugen.de/en/sales-partners/](http://www.sigma-zentrifugen.de/en/sales-partners/)



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