

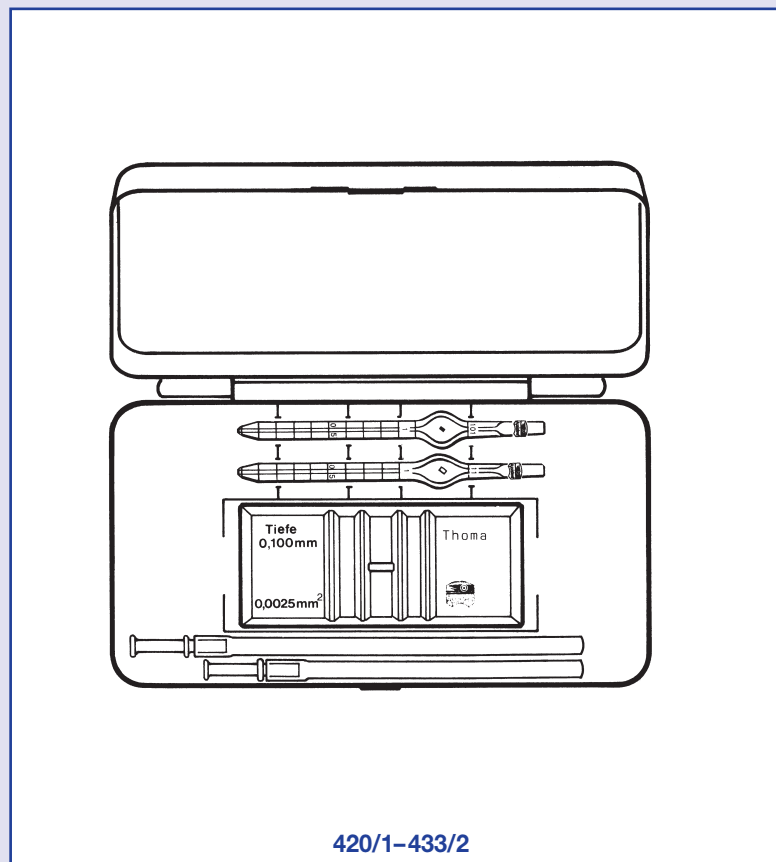
“Assistent”-Hemocytometers and Counting Chambers

- 420/...** “Assistent”-Hemocytometers precision type, up to complete in case, consisting of:
- 433/...** 1 erythrocyte pipette, 1 leucocyte pipette, mouthpieces with rubber tubing counting chamber, 2 optically plane cover glasses and directions for use
- 440/...** **Counting chambers only**, with 2 optically plane cover glasses, Tolerance $\pm 2\%$ for 0,1 mm
- 453/...** depth of chamber in transparent plastic box

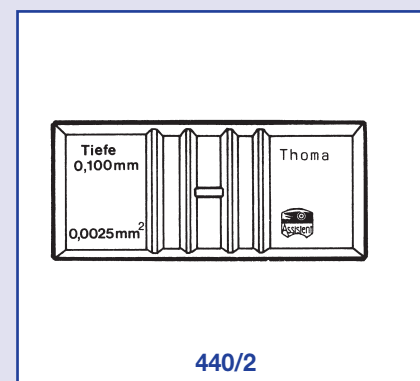
Standard type for export, outside EC			CE
.../1	single ruling without clamps		.../71
.../2	double ruling without clamps		.../72
.../3	single ruling with clamps		.../73
.../12	bright-line double ruling without clamps		.../712
Hema- cytometer complete Standard type **	Counting- chambers CE	Counting- chambers Standard type	System and Depth
420/1	440/71	440/1	Thoma
420/2	440/72	440/2	0,100 mm
420/3	440/73	440/3	
–	440/712	440/12	
427/1	447/71		Thoma new
427/2	447/72	447/2	0,100 mm
–	447/73		
421/1	441/71	441/1	Neubauer
421/2	441/72	441/2	0,100 mm
421/3	441/73	441/3	
421/12	441/712	441/12	
422/2	442/72	442/2	Neubauer improved.
422/12	442/712	442/12	0,100 mm
423/1	443/71	443/1	Bürker
423/2	443/72	443/2	0,100 mm
423/3	443/73	443/3	
–	443/712	–	
424/2	444/72	444/2	Tuerk 0,100 mm
425/2	445/72	445/2	Bürker/Tuerk
425/3	445/73	445/3	0,100 mm
426/1	446/71	446/1	Nageotte*)
	446/72	446/2	0,50 mm
429/1	449/71	449/1	Fuchs/Rosenthal*)
429/2	449/72	449/2	0,200 mm
429/3	449/73	449/3	
429/12	449/712	449/12	
	450/72	450/2	Jessen*) 0,400 mm
–	452/72	452/2	Schilling-Kreuznetz 0,100 mm
433/1	453/71	453/1	Malassez
433/2	453/72	453/2	0,200 mm
		454	McMaster

*) without erythrocyte pipette
 **) Hemacytometer CE available

Other depths and systems are available as well.
 Descriptions of the several rulings are at following pages



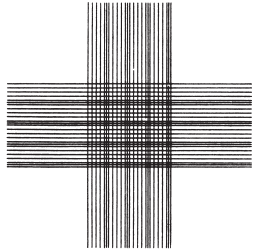
420/1–433/2



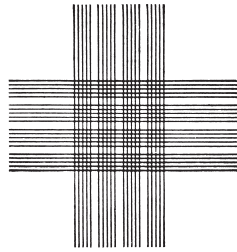
440/2

All “Assistent” counting chambers are made in one piece of special optical glass

Pipetting by mouth is prohibited according to existing regulations. We reject any kind of product liability in case of using mouthpiece with rubber tubing. We recommend our pipetting aids “micro-classic” no. 558 and Micro-Pipex No. 558/1



420/... 440/...



427/... 447/...

“Assistent” Hemacytometers and Counting Chambers

420/... and Thoma

440/... Area of central square: 1 mm²

Subdivision: 400 squares of 0,05 x 0,05 mm (0,0025 mm²). Each 1st, 6th, 11th and 16th square is marked by marginal lines, resulting in 16 square groups of 0,2 x 0,2 mm each and an area of 0,04 mm².

Counting erythrocytes: count 5 square groups (i. e. 80 mini-squares of a total area of 0,2 mm²). Multiply the result by 5000 (at a dilution of 1 : 100) or by 10000 (at a dilution of 1 : 200), in order to reach the number of erythrocytes in 1 mm³ of blood.

Counting leucocytes: charge the total square (i. e. 1 mm²) 5 times and count. Multiply the counting result by 20 (dilution 1 : 10) or by 40 (dilution 1 : 20) to reach the number of leucocytes in 1 mm³ of blood.

Depth of chamber 0,1 mm

Other depths (e. g. 0,05 mm) are available on request (special manufacture)

427/... and Thoma neu

447/... Total area of ruling: 1,21 mm²

Subdivision of central square: 16 square groups (like the Thoma ruling), but without marginal squares where erythrocytes frequently agglomerate in the triple lines.

Counting erythrocytes: as with Thoma ruling
Counting leucocytes: likewise. But 4 rows of squares (top, bottom, right and left) should be omitted in order to obtain an area of 1 mm².

Depth of chamber 0,1 mm

421/... and Neubauer

441/... Total area of ruling: 9,0 mm²

Consisting of 9 large squares of 1 mm² each.

The central square shows the Thoma ruling. The other 8 squares are subdivided into 16 equal squares.

Counting erythrocytes: corresponds exactly to Thoma method

Counting leucocytes: in 5 large squares of 1 mm² each.

Evaluation just as indicated for Thoma ruling.

Depth of chamber 0,1 mm

422/... and Neubauer improved

442/... Total area of ruling: 9,0 mm²

Consisting of 9 large squares of 1 mm² each – corresponding to Neubauer ruling. The central square of 1 mm² contains – owing to the closer intermediate lines –

25 squares of 16 mini-squares 0,05 x 0,05 mm each.

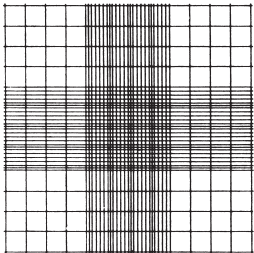
Counting erythrocytes and leucocytes: as indicated above

Depth of chamber 0,1 mm

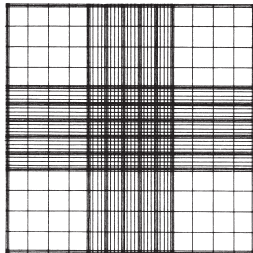
bright-line

The rulings of bright-line counting chambers are the same as those of standard counting chambers. The rulings are engraved into a dark, extremely thin, semi-transparent layer (metallized rhodium coating) which is precisely fused to the polished chamber surface. The engraved lines stand out brightly from the dark area. The corpuscles thereon appear three-dimensional due to the transparency. Thereby evaluation is facilitated considerably and counting accuracy is increased as well.

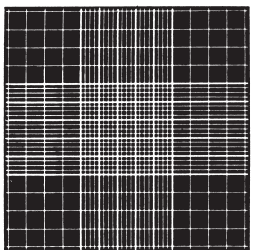
Handle bright-line counting chambers very carefully in order to avoid damaging of coating, otherwise it will disintegrate slowly. Be especially aware of damage caused by broken cover glasses or by rubbing during cleaning.



421/... 441/...



422/... 442/...



422/... 442/... „Bright-Line“

“Assistent” Hemacytometers and Counting Chambers

423/... and Buerker

443/...

Total area of ruling: 9,3 mm²

Subdivision:

169 squares (0,05 x 0,05 mm) of 0,0025 mm² each – for counting erythrocytes.

144 squares (0,2 x 0,2 mm) of 0,04 mm² each – for counting leucocytes.

Depth of chamber 0,1 mm

424/... and Tuerk

444/...

Total area of ruling: 9,0 mm²

The central square corresponds to Neubauer ruling. The other square groups show double or triple lines.

Counting erythrocytes and leucocytes: Correspond exactly to the method for Neubauer ruling.

Depth of chamber 0,1 mm

425/... and Bürker-Tuerk

445/...

Corresponds to Tuerk ruling.

426/... and Nageotte

446/...

Total area of ruling: 100 mm²

Subdivision: 40 rectangles of 10 x 0,25 mm each

The centre of ruling is marked by double lines.

This type is used for counting cells in lumbar fluid (e. g.).

Depth of chamber 0,5 mm

(Depths of 1,0 or 0,25 mm are available on request)

429/... and Fuchs-Rosenthal

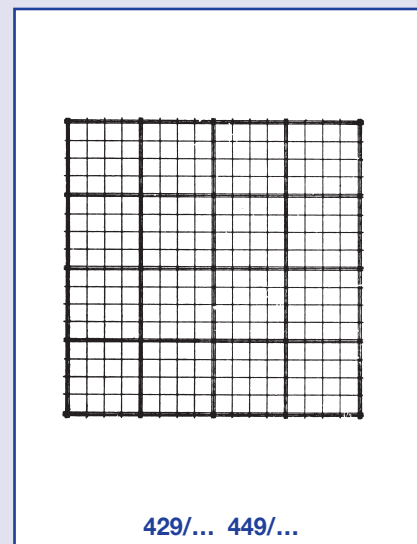
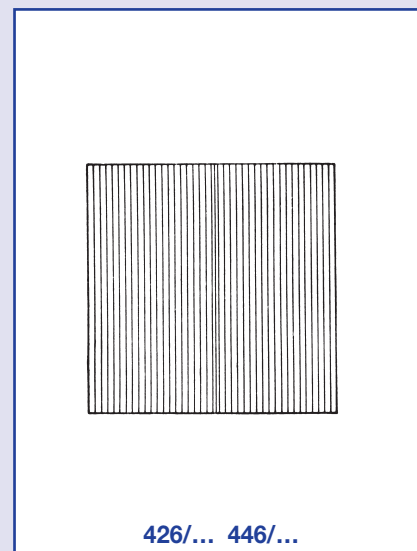
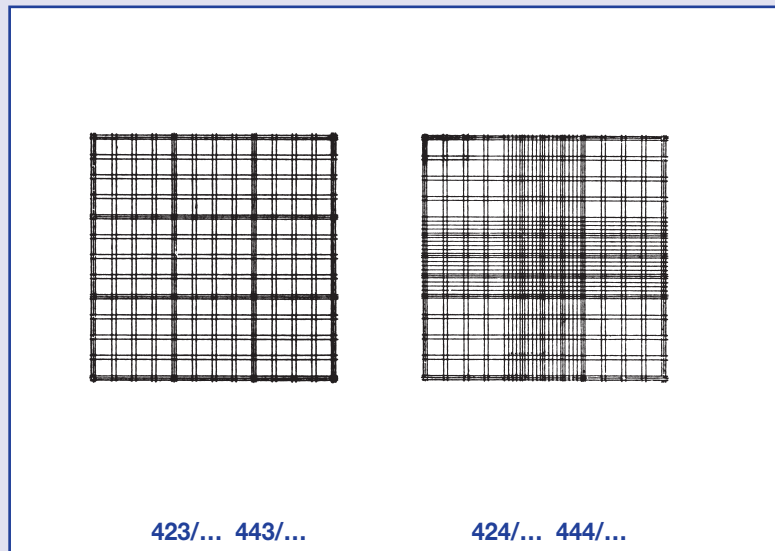
449/...

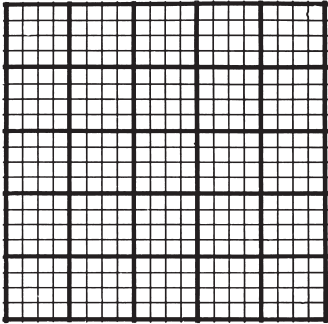
Total area of ruling: 16 mm²

Subdivision: 16 square groups of 1 mm² each, consisting of 16 mini-squares (0,25 x 0,25 mm) each.

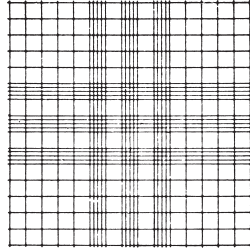
This ruling is used for counting cells in cerebro-spinal fluid (e. g.)

Depth of chamber 0,2 mm





450/...



452/...

“Assistent” Hemacytometers and and Counting Chambers

450/... **Jessen**

Total area of ruling: 25 mm², volume: 10 mm³

Subdivision: 25 square groups of 1 mm² each, consisting of 16 small squares (0,25 x 0,25 mm) each.

This ruling is used for counting cells in cerebro-spinal fluid (e. g.).

Depth of chamber 0,4 mm

452/... **Schilling “cross ruling”**

Total area of ruling: 9,0 mm²

The central square contains 9 square groups of mini-squares of 0,0025 mm² each – for counting erythrocytes.

The corner squares are subdivided into 25 small squares of 0,04 mm² each – for counting leucocytes.

Depth of chamber 0,1 mm

433/... and **Malassez**

453/...

Total area of ruling: 5,0 mm² (2,0 x 2,5 mm)

Shows 100 rectangular fields (0,20 x 0,25 mm) which are subdivided as following

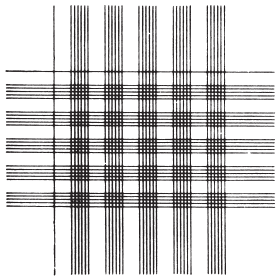
25 fields: into 20 squares (0,05 x 0,05 mm) of 0,0025 mm² each

25 fields: into 5 srectangles (0,20 x 0,05 mm) of 0,01 mm² each

25 fields: into 4 srectangles (0,25 x 0,05 mm) of 0,0125 mm² each

25 fields: (0,20 x 0,25 mm) of 0,05 mm² each are without sub-division

Depth of chamber 0,2 mm



433/... 453/...

454 **Counting chamber acc. to McMaster**

with 2 counting areas, cover glass with 2 counting grids glued onto 3 supports



454