

# **Tools and equipment in the pharmacy, their application for the preparation of medicines**

Institute of Pharmaceutical Technology and Biopharmacy  
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# Tools and equipment of the pharmacies in Hungary

- 1. Aseptic work area / membrane filters
- 2. Bunsen-burner
- 3. mortars in two different sizes
- 4. Erlenmeyer-flask (50, 100, 200, 500 ml)
- 5. Erlenmeyer-flask with grounded stopper (100, 200, 500 ml-es)
- 6. Exsiccator with silica gel
- 7. beakers (50, 100, 200, 500, 1000 ml)
- 8. scales/balances (hand, equal arm,..)
- 9. moulds (1, 2, 3 g) for suppositories
- 10. Infralamp
- 11. chemical spoons (metal and keratin)
- 12. scraping cards for ointments
- 13. moulds (1, 2, 3 g) for pessaries
- 14. CitDivid
- 15. Bougie-equipment
- 16. 'Menzura'
- 17. 'Patendula'
- 18. Pill cutter
- 19. Porfirisator
- 20. dividing card for powders
- 21. crusher / hand mill
- 22. Spatula
- 23. sieves
- 24. tube closer
- 25. glass rod
- 26. glass funnel
- 27. pot
- 28. Hot Air Cabinet (autoclave)
- 29. Burette (12,00 ml with 0,05 ml scale range)
- 30. pliers and nuts (for burettes)
- 31. thermometers (0,1 °C scale range)
- 32. pot, heating dishes
- 33. test tubes
- 34. hand glass (5 x)
- 35. Co-glass
- 36. distillation cup
- 37. measuring cylinder (10, 25, 100 ml)
- 38. Pipette, bulb, double marked (1,00 ml and 10,00 ml)
- 39. scaled pipette (1,00 ml and 10,00 ml)
- 40. alcoholmeter with cylinder
- 41. glass holder
- 42. glass pearls
- 43. Packaging materials, signatures and capsules
- 44. stamps
- 45. glass pitcher with glasses
- 46. refrigerator

# Measurement



# Tools and devices of the pharmacies in Hungary

## Verified balances

Typical data:

- measuring range
- sensitivity /division/





### **Equal-arm balance**

Capacity: 1000 g

Accuracy: 0.1 g

Less than 1.0 g should not be measured

### **Handscale**

Accuracy: 0.1 g

Less than 0.05 g should not be measured



### **Decimal balance**

Capacity: 50.0 g

Accuracy: 0.01 g

Less than 0.05 g should not be measured



# Tools and devices of the pharmacies in Hungary

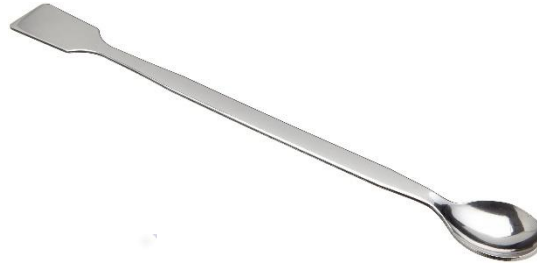
- place on a vibration-free surface (no covers)
- horizontal position (libella-spirit level)
- always use a dish or a card





# Tools and devices of the pharmacies in Hungary

Chemical spoons  
(metal/plastic)



Spatulas



Infralamp





# Tools and devices of the pharmacies in Hungary

## Patendula & pestle

In different sizes



Unguator 2100 (GAKO Konietzko GmbH,  
Bamberg, Germany)

# Tools and devices of the pharmacies in Hungary

- Mortars
- with pestle (glazed and non-glazed)

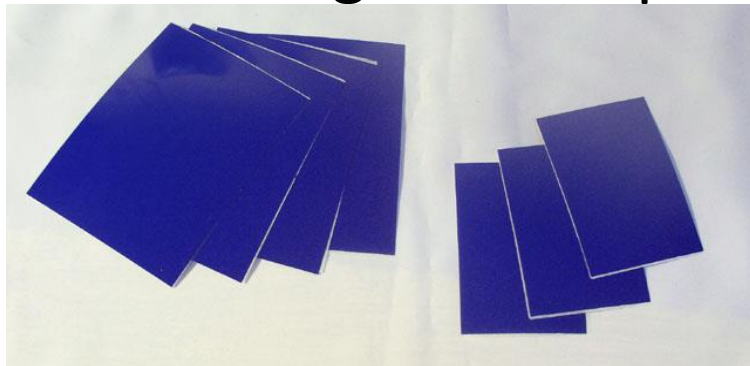


# Tools and devices of the pharmacies in Hungary

Beaker  
Glass rod



Dividing card for powders

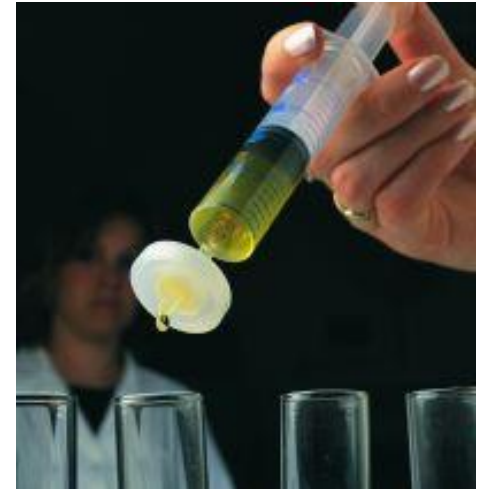


Menzura



# Tools and devices of the pharmacies in Hungary

- Aseptic work area (manipulator or lamina(i)r box)
- Membrane filters with a syringe applicator



# Tools and devices of the pharmacies in Hungary

Hot air cabinet

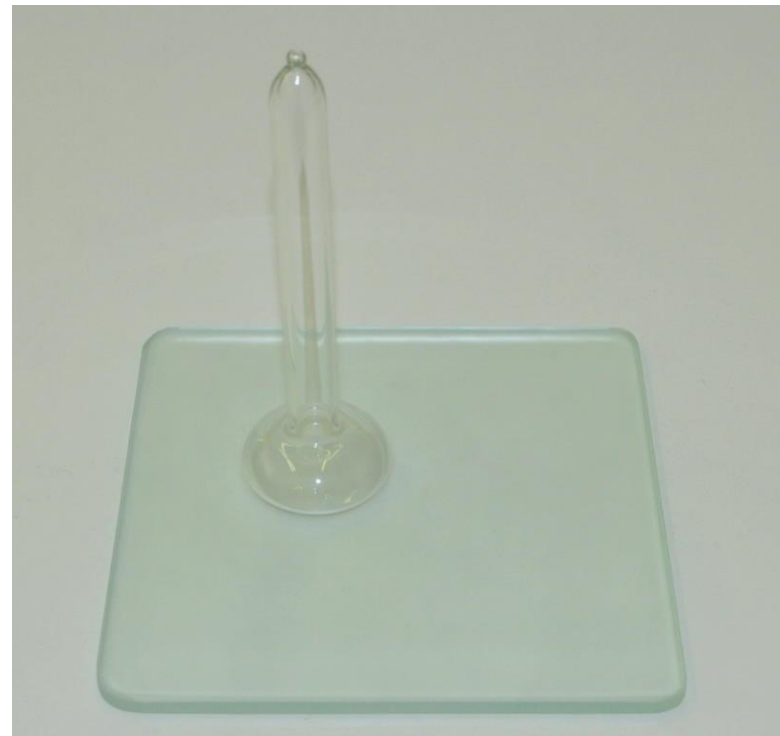


autoclave, certoclave  
(120°C, 2 atm)

# Tools and devices of the pharmacies in Hungary

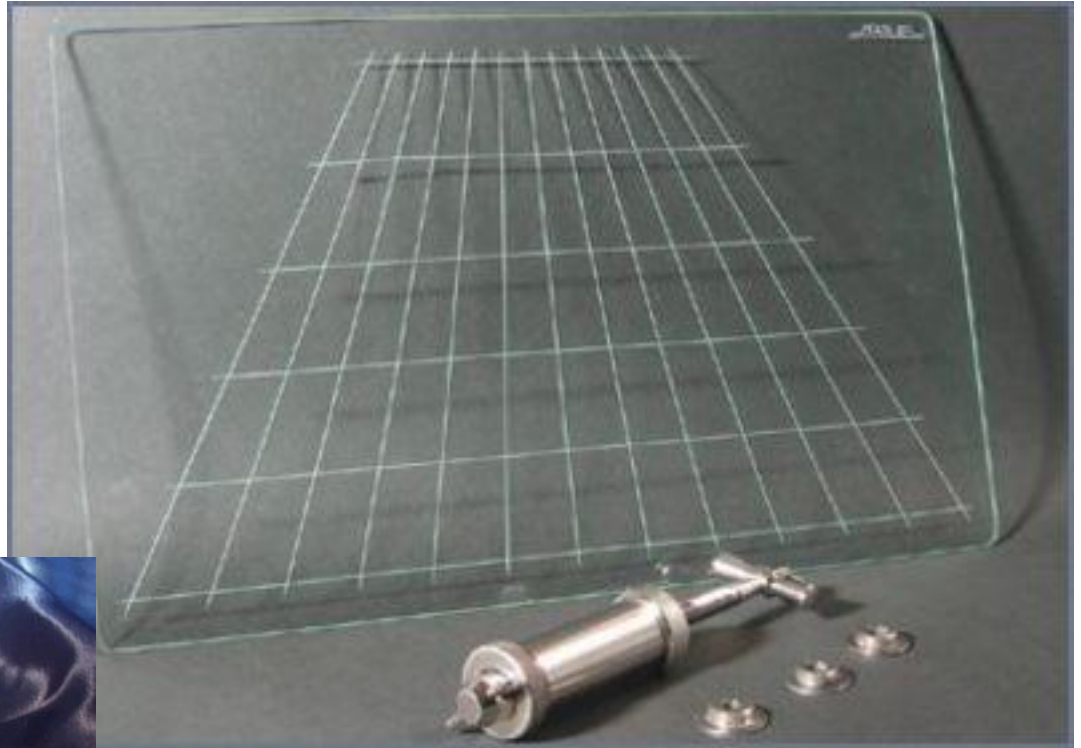
Porfirizator

for suspension-based eye ointments



# Tools and devices of the pharmacies in Hungary

CitDivid  
for division of supp.



Bougie suppository press

# Tools and devices of the pharmacies in Hungary

## Moulds for suppositories

1g, 2g, 3g





# Tools and devices of the pharmacies in Hungary

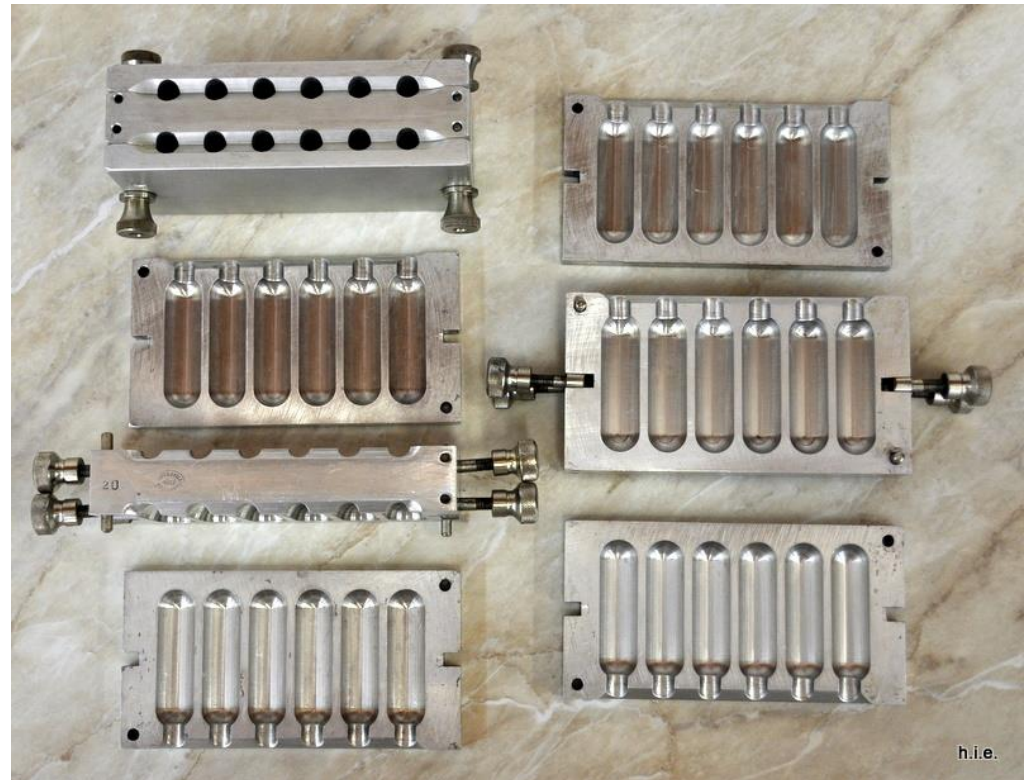
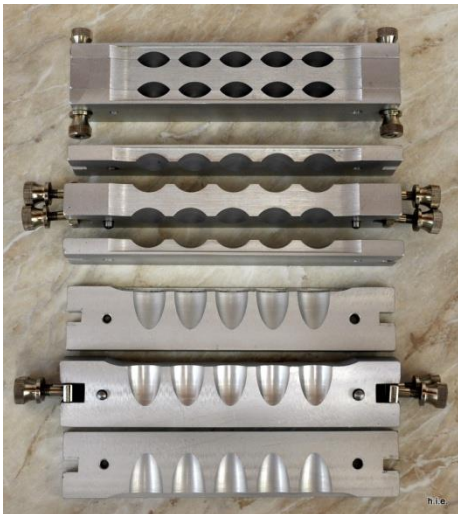
Moulds for pessaries

ball for vaginal use /globulus



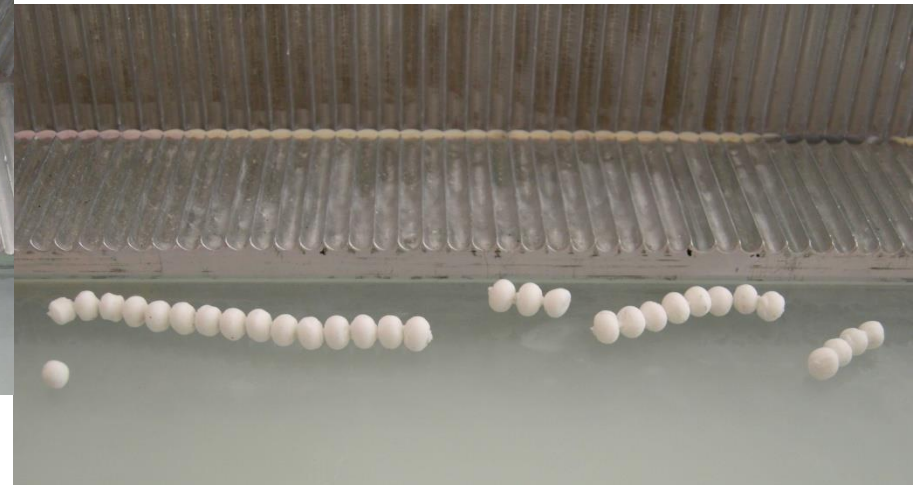
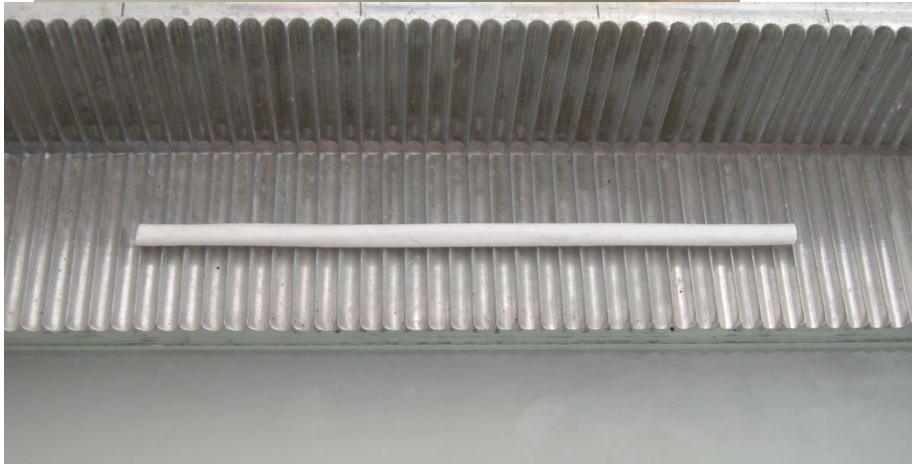
cylinder for vaginal use /  
globulus longiphormis

Ovulum (pessary)



# Tools and devices of the pharmacies in Hungary

Pill cutter

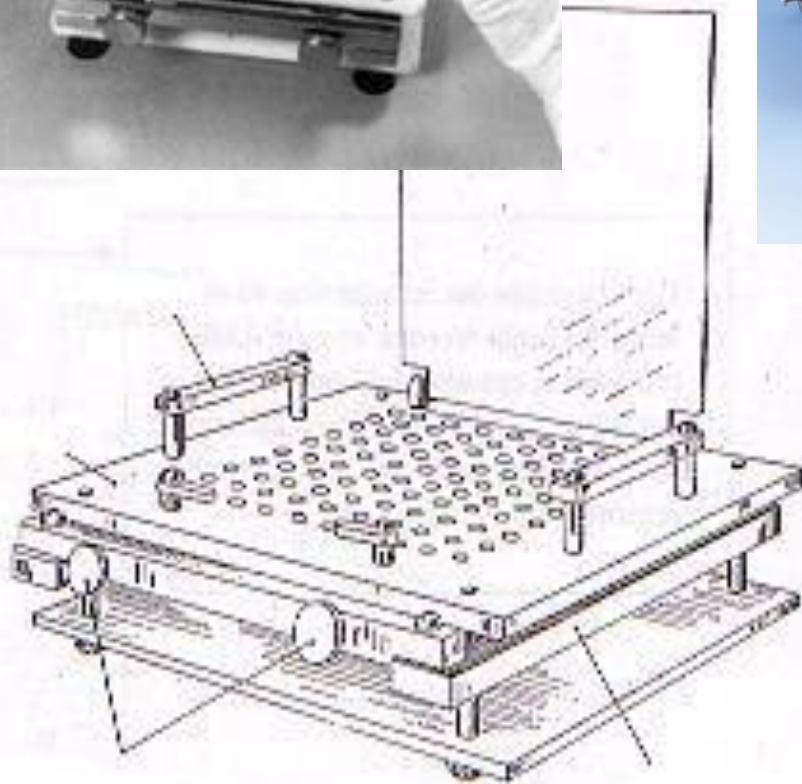


# Tools and devices of the pharmacies in Hungary

## Set of sieves

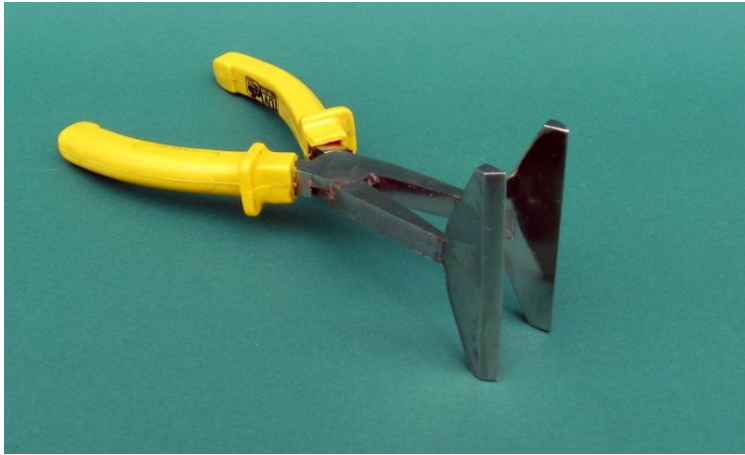


# Filling of capsules, blister packaging



# *Tool and equipment list for community pharmacies*

## Tube closer



Thermometer (scale with 0,1 °C units), checking of temperature of rooms

Magnifier glass (5 x)

Two sizes of glass funnel with stand

Enameled cooking pot with spoon

## *Tool and equipment list for community pharmacies*

Desiccator (Exsiccator) with porcelain insert and with silica gel



## *Tool and equipment list for community pharmacies*

Wrapping materials, capsules

Pharmacy stamp

Glass jug with cups

Fridge

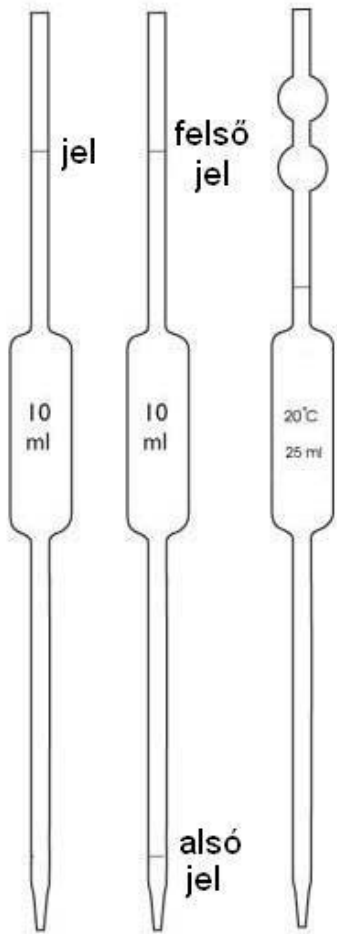
- Bunsen-burner or burner with equal burner performance



## *Tool and equipment list for community pharmacies*

Pipette, bulb with two sign (1,00 ml, 10,00 ml)

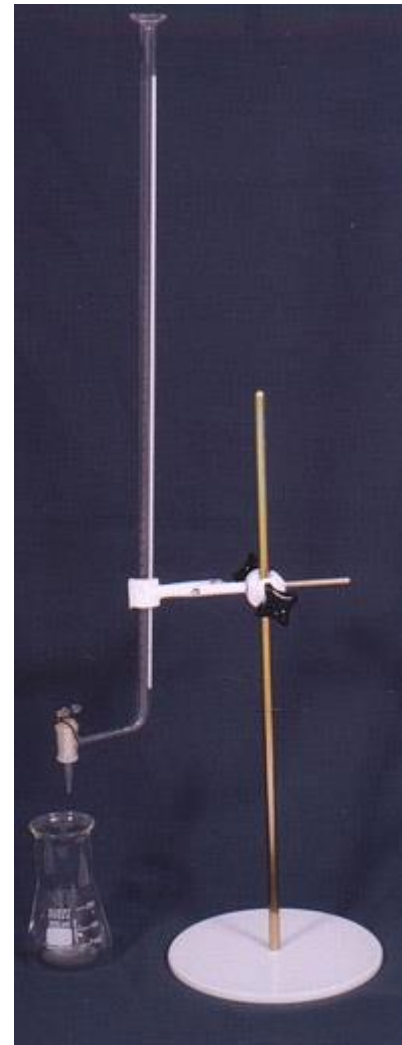
Pipette, divided scale (1,00 ml, 10,00 ml)



Bulb pipette



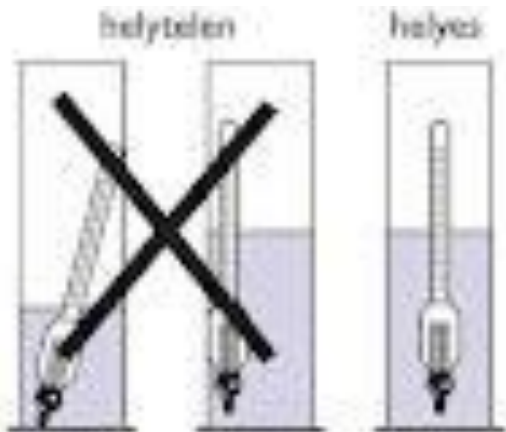
Divided pipette





# *Tool and equipment list for community pharmacies*

Alcoholmeter with suitable volumetric cylinder



## *Tool and equipment list for community pharmacies*

### *Furniture suitable for storage and dispensing:*

- *Closable metal cabinet with heavy wall for storing **narcotics and psychotropic materials***
- *Suitable pot and cabinet or room for **flammable materials***
- *Cabinet for **acidic/basic, and corrosive material***
- *Fridge*





***Thank you for your  
attention***