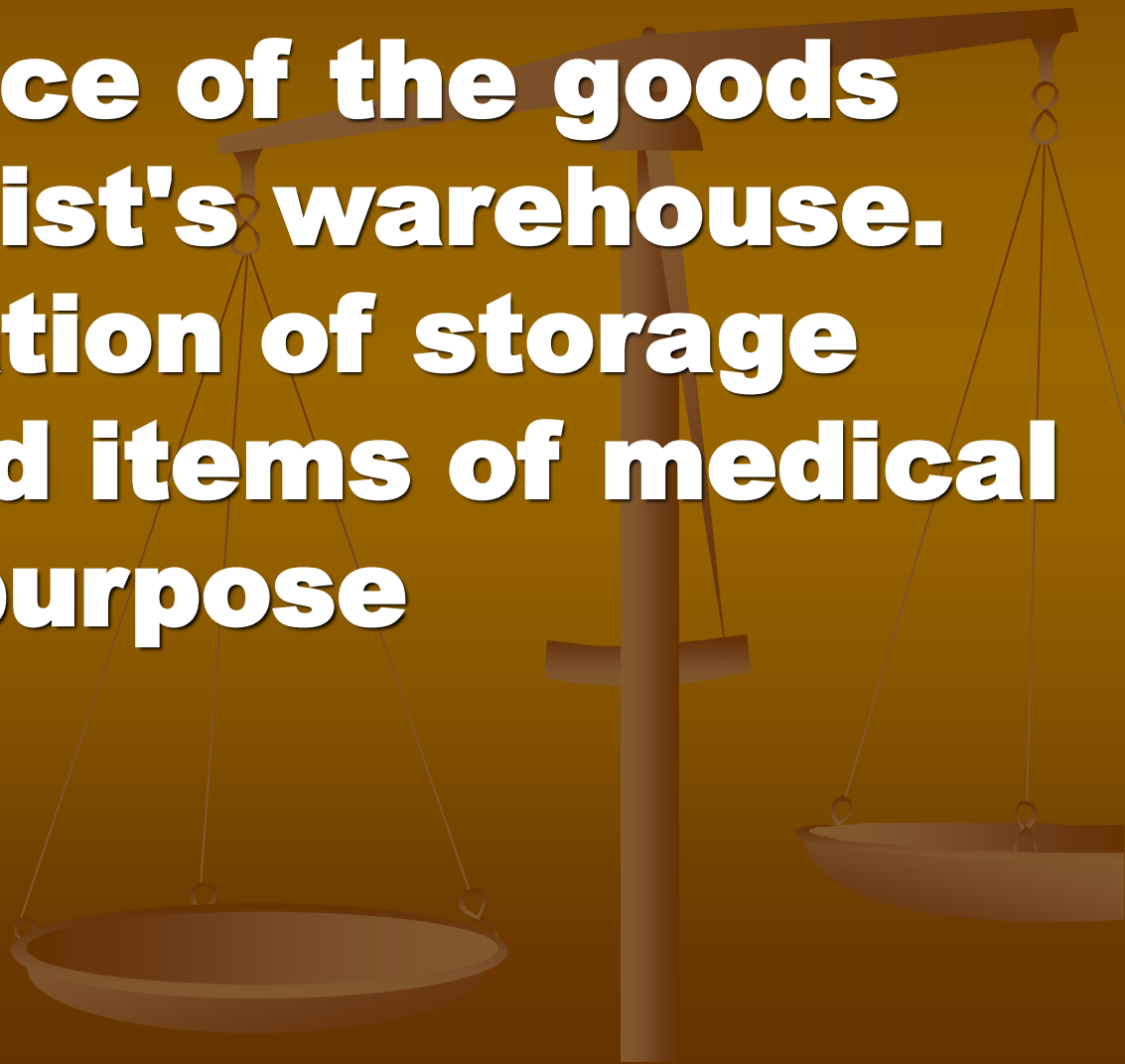
Acceptance of the goods on a chemist's warehouse. Organization of storage for drugs and items of medical purpose



Plan of the lecture

1. Stages of the goods acceptance in chemist's warehouse
2. Flowchart of the goods acceptance in chemist's warehouse
3. The major factors influencing quality of the goods
4. Methods to protect consumer properties of the goods
5. Requirements to premises for storage of drugs
6. Requirements to premises for storage of items for medical use
7. General requirements for storage of drugs and items for medical use

Acceptance of goods is the most important and responsible element of pharmacist's work in warehouse as its speed and accuracy strongly influence effectivity of the whole warehouse business and how quickly arrived goods become accessible to customers.

Stages of the goods acceptance on chemist's warehouse

Stage 1.
Preparation of warehouse for acceptance of the goods

1.1.
To obtain all necessary information about expected supplies support from supply department in time

1.2.
To specify amount of employees participating in unloading and acceptance of production, to specify range of the warehouse mechanics, needed for unloading of transport vehicle.

1.3.
To specify proper storage areas for placing of arrived production

Stage 2. Formation of acceptance commission

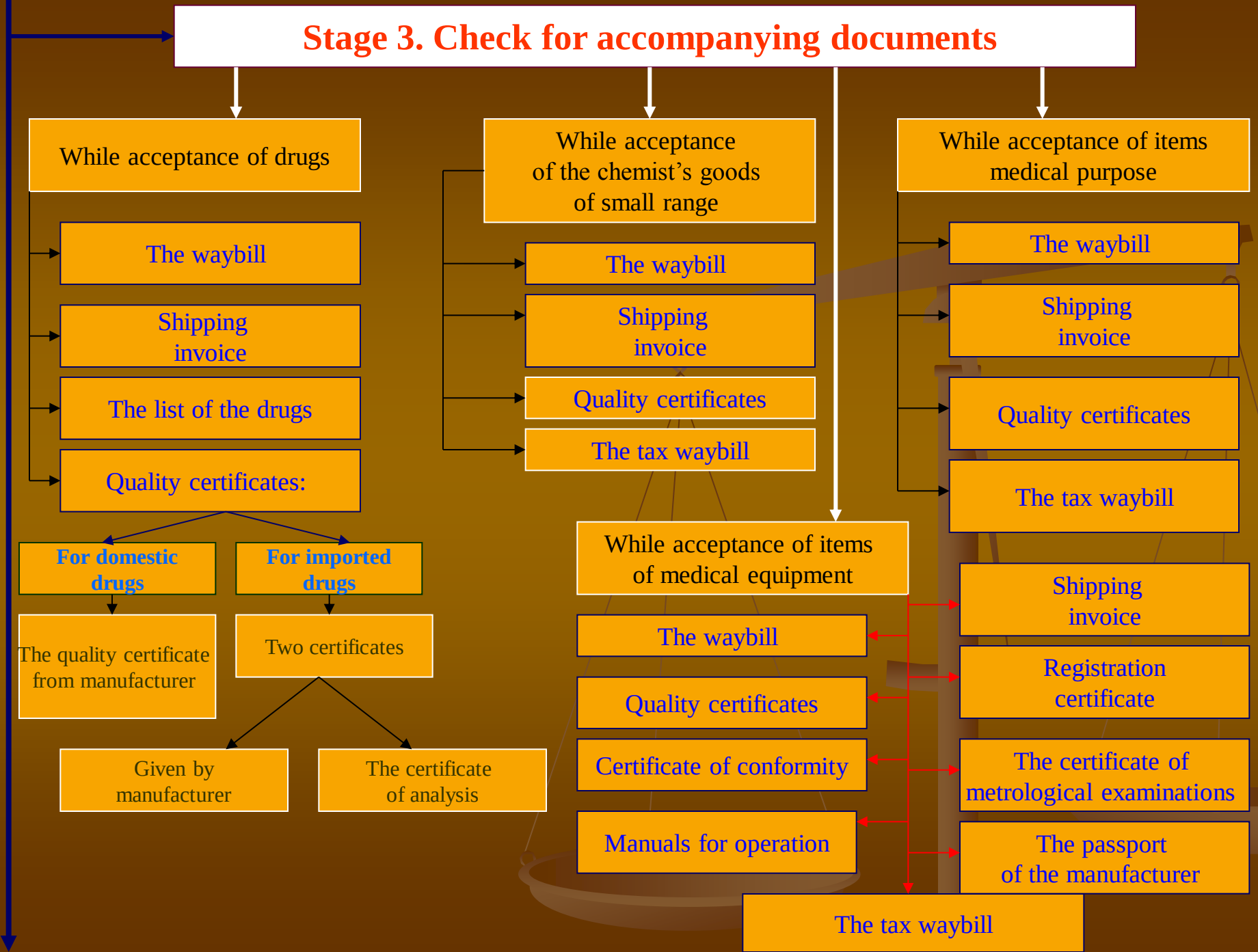
Staff of the commission

- The head of a chemist's warehouse
- The manager of functional acceptance department
- The manager of functional certification department (authorized person in quality)
- The expert in analysis of claims (in case of claims)
- Inventory responsible person(s) of storage departments (storekeepers)

Tasks of the commission

- To check up conditions for proper and duly acceptance of the goods, providing their safety
- To reveal outdate, counterfeit, spoiled goods and to define their further fate (return to the supply contractor, transfer for expert exainations, etc.)
- To specify quality of the goods (visual inspection)
- To register acceptance of the goods by their quantity and quality in special documents
- To provide exact quantities of the arrived goods

Stage 3. Check for accompanying documents



Stage 4. Inspection of outage condition status of vehicles and identification seals, unloading

To check up on vehicles or cargo transporters presence of:

- Identification seals of the sender or departure point
- Serviceability of identification seals, prints on them
- Condition status of a vehicle
- Integrity of transport package

Stage 5. Acceptance of the goods

Procedure of the goods acceptance consist of three stages

1st stage:
Unloading of automobile vehicle and acceptance by total freight pieces

2nd stage:
Acceptance of the goods by names and quantity

3d stage:
Acceptance of the goods by **quality** (visual inspection)
(acceptance by quality is carried out simultaneously with the second stage)

Acceptance of the goods by quality (visual inspection)

1. Check of group, secondary, initial packages for:

- Integrity
- Absence of visible damages
- Quality of packing materials
- Presence of instructions for medical application
- Size of package and cargo transporters
- Absence of foreign sounds at manual turning of packages

2. Check of sealing for:

- Tightness
- Integrity of the first opening control

3. Check of appearance of drugs without opening packages

- Color
- Shape
- Aggregative state
- Special precautions
- Conditions of storage
- Conformity of **reg. numbers, batch numbers, and expiry dates** on package to those in the instruction and quality certificate of the manufacturer

4. Check of markings on initial and secondary packages

- Language of marking and instructions should be understandable for a consumer
- **Presence of registration numbers**
- **Conformity of drug names on package to the quality certificate of manufacturer**
- **Drugs for parenteral applications: transparency, colour, absence of visible impurities**

5. Check of appearance of drugs after random opening of packages

- **Appearance**
- **Tablets: smooth surface, uniform coverings presence of facet, break-line**
- **Soft dosage forms: absence of pungent smell, stratifications; uniformity**
- Suspensions: deposit should easily disperse, forming homogeneous system
- Tinctures: transparency, presence of slight deposit is allowed

Stage 6. Documentary registration of the goods acceptance

Depending on a situation

Everything is OK

Reception certificate and Register list for arrived goods are filled

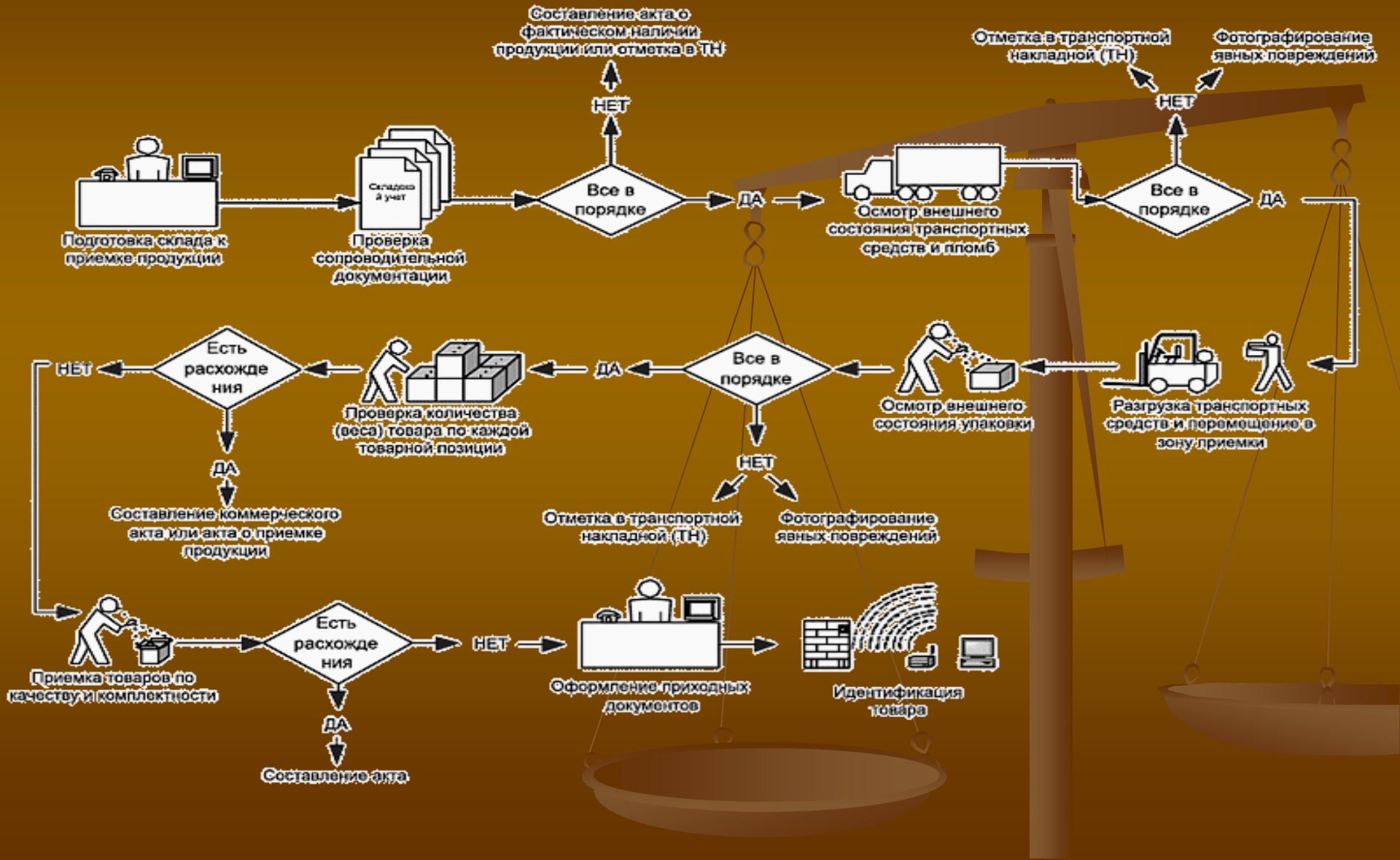
There are certain claims

Certificate of unloading and Certificate of the goods acceptance by quantity and quality (or Freight claim – in case of railway transporting)

Stage 7. Placing of the goods in property and their identification

The accepted goods are identified and included into electronic database of the enterprise, and also transferred into storage departments according to commodity groups

Scheme of the goods acceptance



Organization for storage of drugs and items of medical purpose

Life cycle of any production includes 5 stages:

- Studying of needs
- Research and designing;
- Manufacture;
- Turnover and sales;
- Consumption and operation (use).

The factors influencing quality of the goods:

Providing quality:

Studying of needs for the goods

Development of the "know-how"

Establishment of raw and technological base

Use of high-quality raw, equipment, containers, packing materials

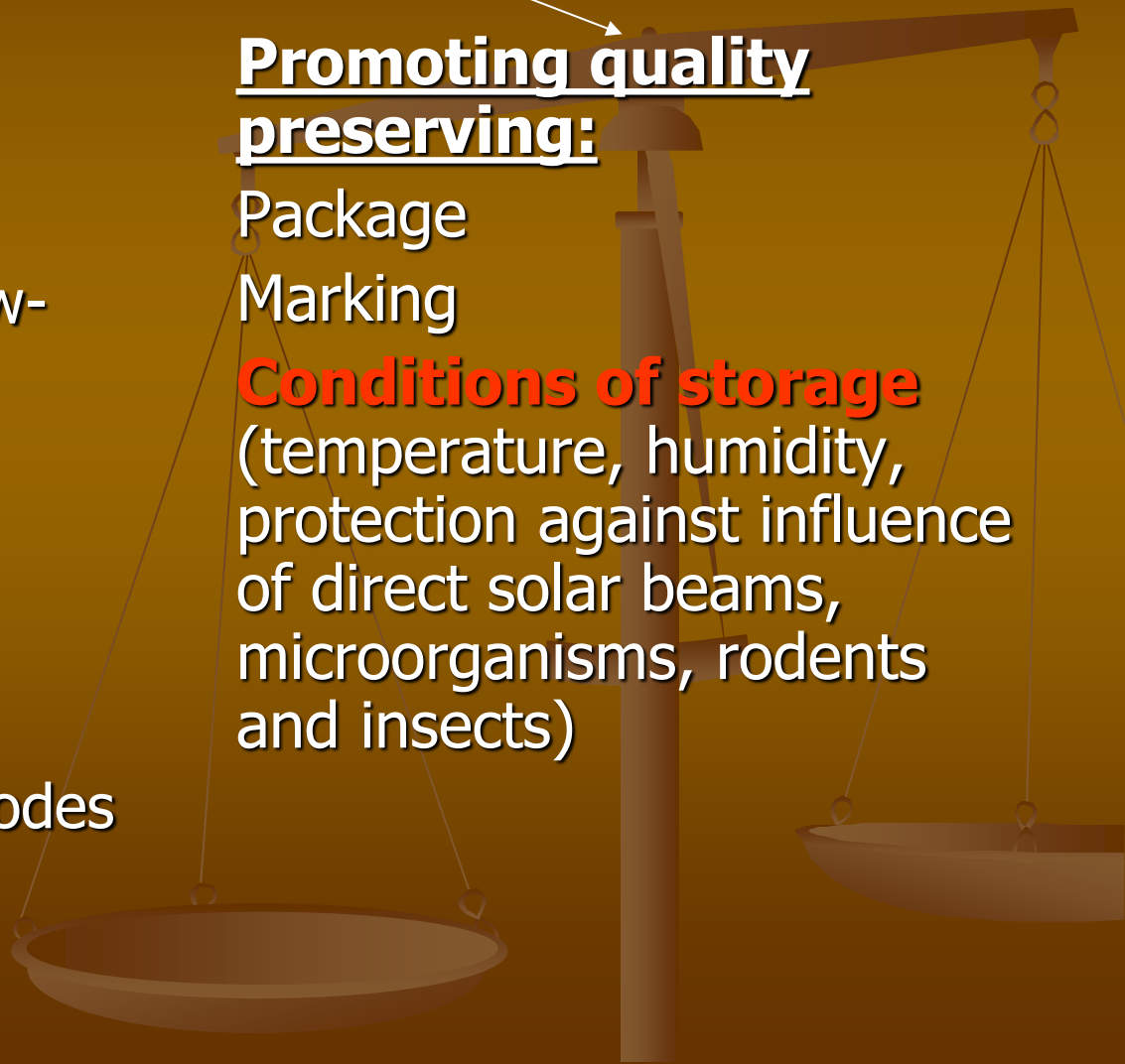
Maintaining of sanitary modes of manufacturing

Promoting quality preserving:

Package

Marking

Conditions of storage (temperature, humidity, protection against influence of direct solar beams, microorganisms, rodents and insects)



Major factors causing changes in properties of the goods at transportation, storage and use, are possible to divide by nature of their influence into 3 groups:

Physico-chemical

- temperature
- light
- oxygen air
- etc.

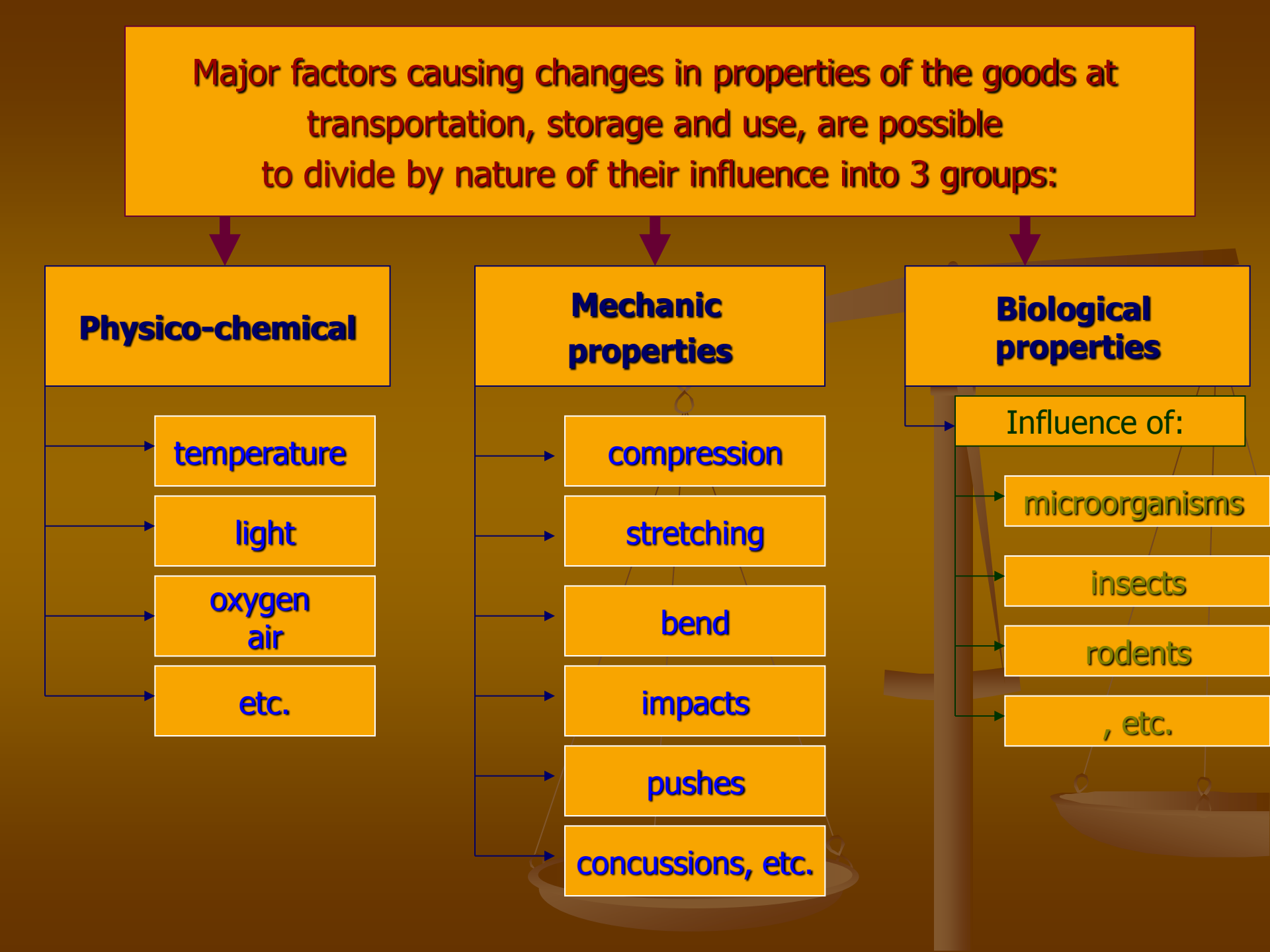
Mechanic properties

- compression
- stretching
- bend
- impacts
- pushes
- concussions, etc.

Biological properties

Influence of:

- microorganisms
- insects
- rodents
- , etc.



Factors influencing quality of drugs and medicinal goods, methods of their protection

FACTORS

- Physical
- Mechanic
- Biological

METHODS OF PROTECTION

Physical

- Use of package protecting from penetrations of moisture, gases, light
- Maintaining optimum storage temperatures
- Rational preservation of items
- Rational sterilization of items

Mechanic

- Use of package of high mechanic durability
- Proper stacking of the goods at transportation
- Rational application of closures

Biological

- Aseptic conditions of manufacture
- **Rational methods of sterilization**
- Maintaining optimum conditions of storage
- Regular handling of premises with disinfectants and disinsectants

Influence of environment factors

can be avoided only by proper organization of storage for pharmaceutical and medical goods in chemist's and medical organizations.

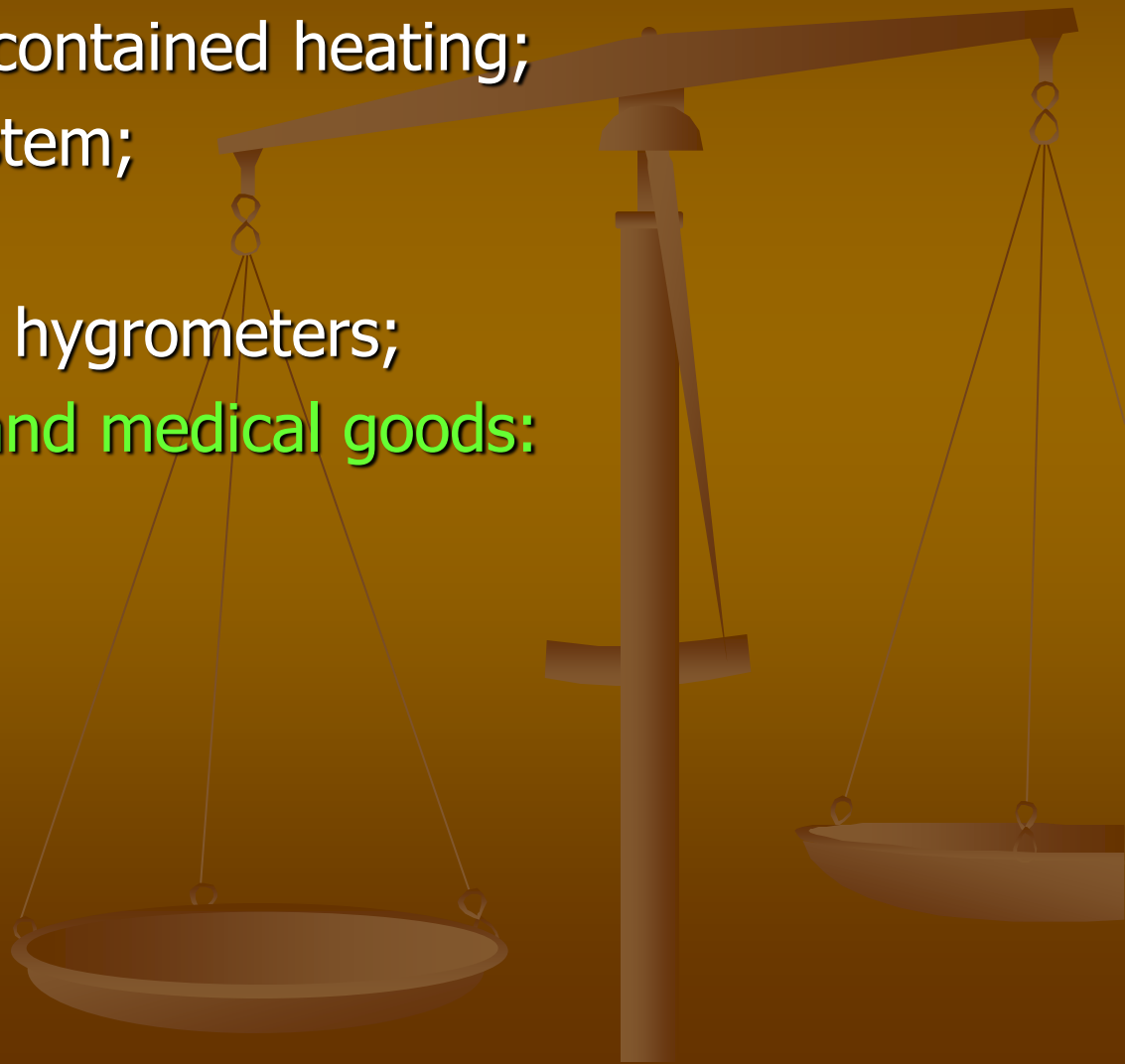
To organize storage of drugs and items of medical use it’s necessary to be guided by RDs for certain goods and orders of National Ministry of Health (e.g. order № 44 of Ukrainian MoH from 16.03.1993 about organization of drug and medical goods storage.

Premises for storage ЛС and ИМН should be maintained (equipped) with:

- Combined extract and input ventilation;
- Centralized or self-contained heating;
- Fireproof signal system;
- Illumination;
- Thermometers and hygrometers;

For placing of drugs and medical goods:

- Racks
- Shelfs
- Cases
- Pallets
- Refrigerators
- Boxes, etc.



Temperature modes of storage

- Deep freeze - lower than -15 °C
- In refrigerator - from +2 up to +8 °C
- In cool place - from 8 up to 15 °C
- At room temperature - from 15 to 25 °C

Norms of relative air humidity

- In dry place - is not higher than 45 %
- Under normal conditions - not higher than 65 %

Within storage premises it is recommended to place drugs separately:

By toxicological groups: narcotic, psychotropic, precursors, strong, over the counter drugs;

By pharmacological groups;

By aggregate state;

By way of administration;

By physico-chemical properties and influence of various factors of environment;

By shelf-lives;

By various dosage forms

It is not recommended to closely allocate drugs with conformable names, oral drugs strongly differing in their maximum dozes, and also to arrange drugs in alphabetic order

Each item is fixed in the shelves card which specifies:

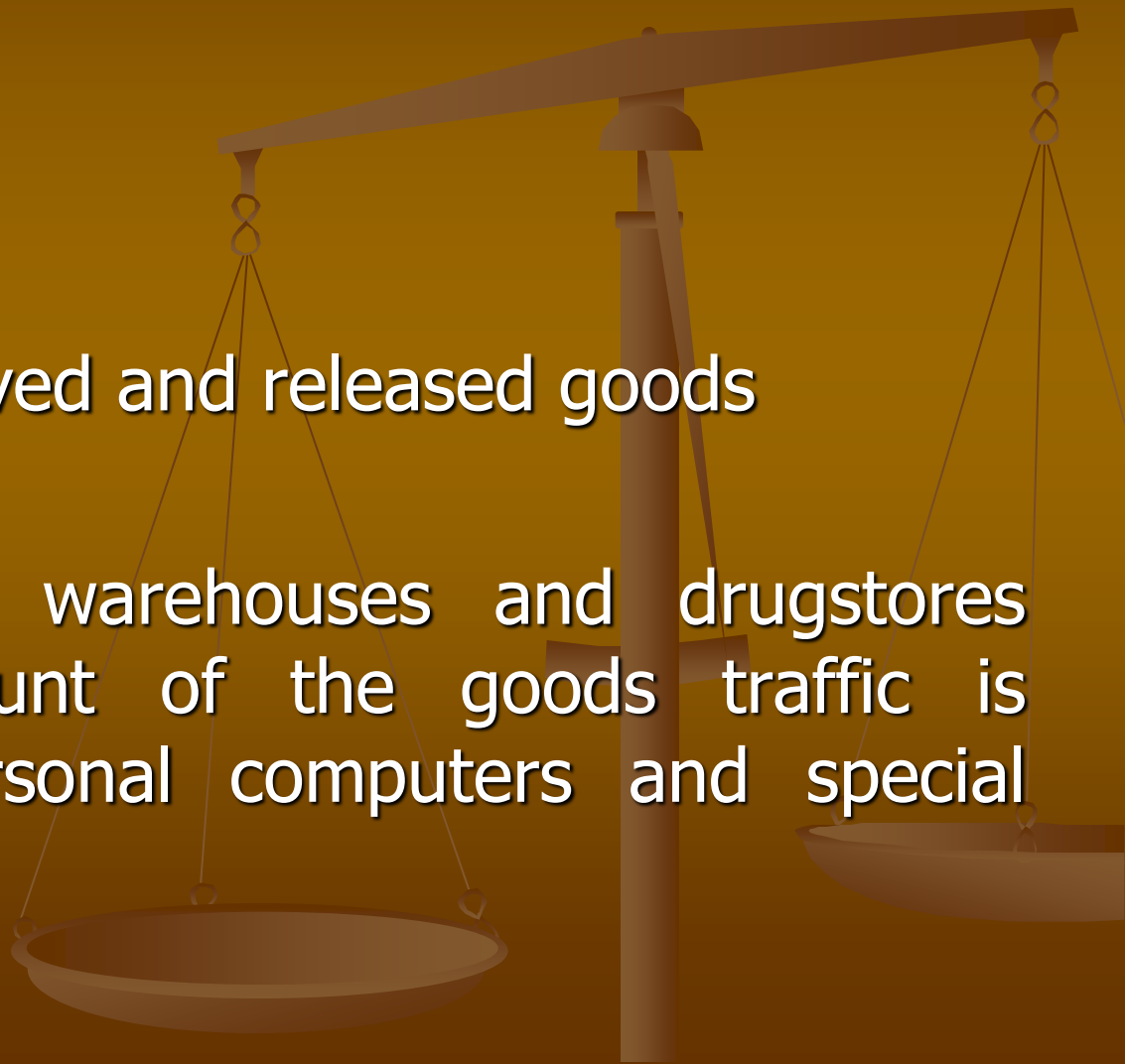
Name of the goods

Batch N

Shelf-life

Quantity of the arrived and released goods

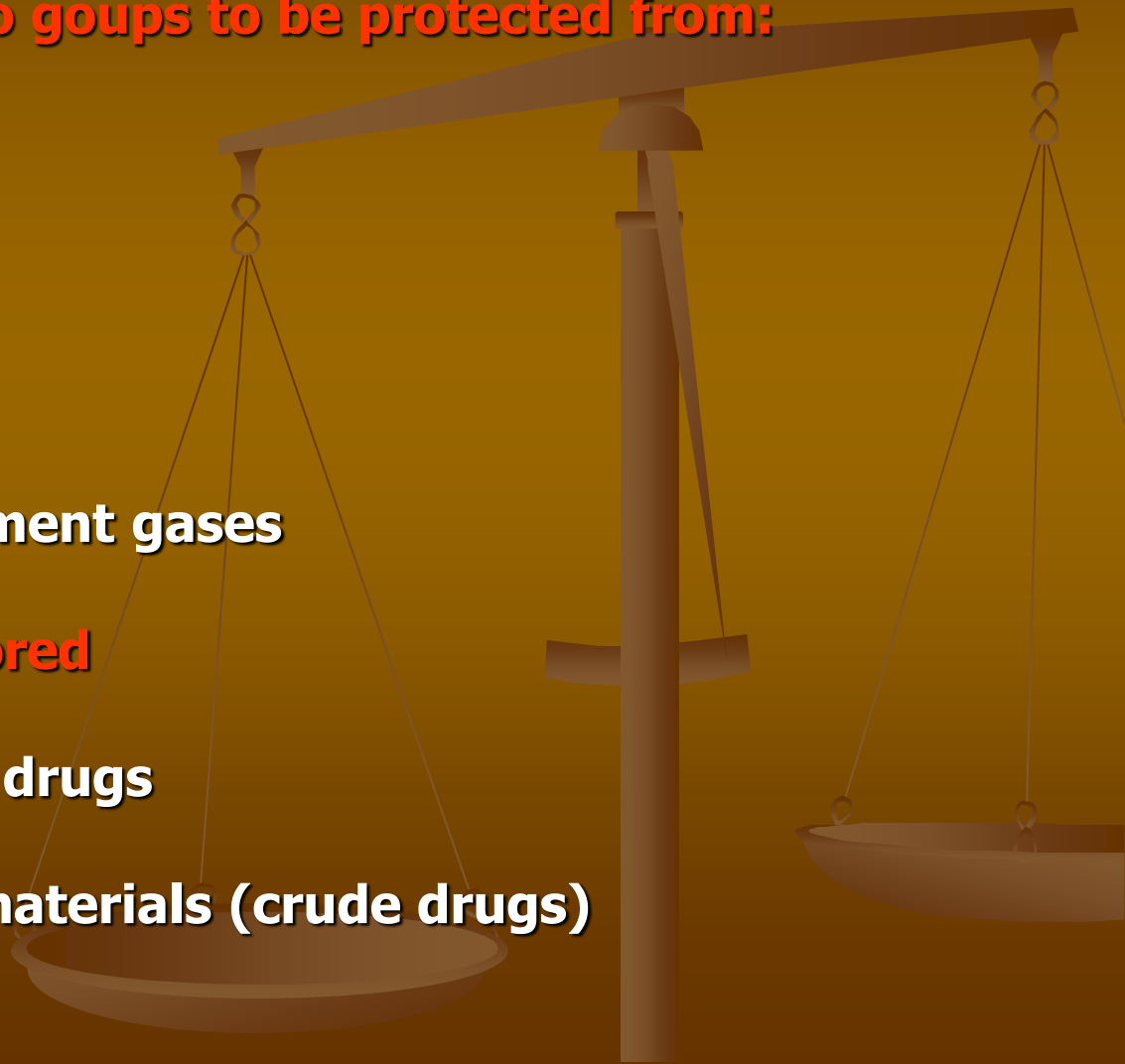
Now in chemist's warehouses and drugstores automated account of the goods traffic is provided by personal computers and special software.



Medical goods and drugs should be stored separately by groups:

- Dressing materials and ready dressings;
- Rubber items;
- Items of plastic;
- Items for sanitary hygiene and nursing ones;
- Medicinal plant raw;
- Containers, closures and packing materials;
- Oxygen and plaster;
- Washing and perfumery - cosmetic agents;
- Disinfectants and disinsectants;
- Chemical reactants;
- Chemist's and laboratory furniture;
- Equipment and medical technique.

According to Order of Ukrainian MoH № 44 from 16.03.1993 "Organization of storage in chemist's organizations of various groups of drugs and medical goods" all medical products depending on physical and physico-chemical properties, influences of various environment factors are divided into goups to be protected from:



- **light**
- **moisture**
- **evaporating**
- **high temperature**
- **low temperature**
- **influences of environment gases**

Separately should be stored

- **odorous and painting drugs**
- **disinfectants**
- **medicinal plant raw materials (crude drugs)**
- **medicinal leeches**

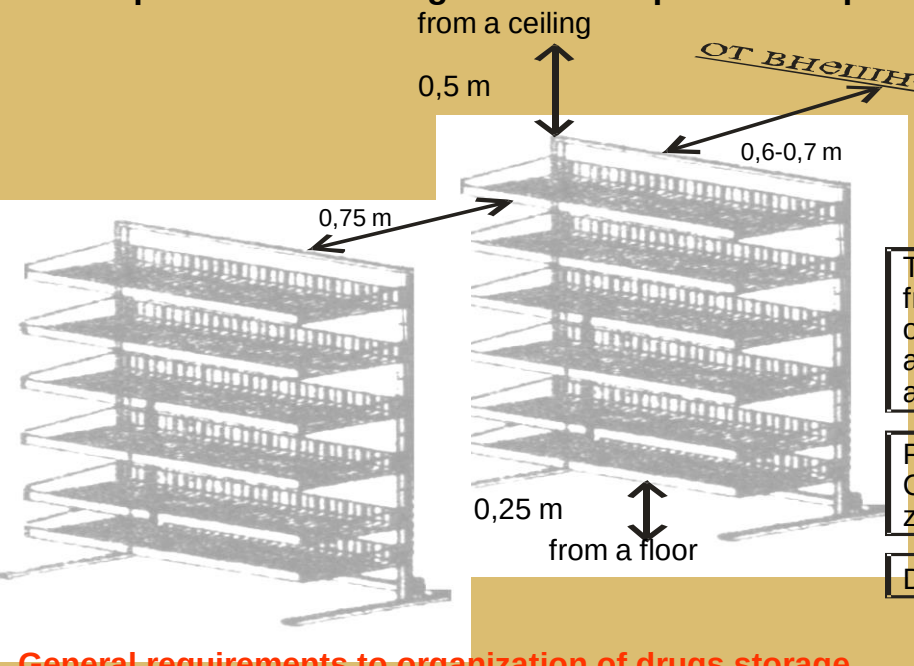
Organization of drug storage

Drugs are stacked and placed in original packing to show marking outside

On racks, shelfs, cases the shelves-cards specifying name of a drug, batch N, shelf-life, quantity are attached

Tablets and dragee	Store separately from other drugs
Infusion solutions	Store separately at t from 0 up to +40 ° C
Extracts	Store in glass containers at t +12 ° + 15°C
Ointments, liniments	Store at t + 10 ° C
Pressurized drugs	Store at t from - 3 up to + 35 °; far from fire
Injection drugs and eye drops	Store in the cool place protected from light; in a separate case

Requirements to arragement and operation of premises for storage



Maintenance of fixed temperatures and humidity of air (once a day checked) also fixed in record card

Thermometers and hygrometers are situated from heating devices on internal walls of premises at height of 1,5-1,7 m from a floor and not less than 3 m from doors;

Premises are equipped with Combined extract and input ventilationnd in climatic zones - conditioners;

Damp cleaning – at least once a day

General requirements to organization of drugs storage

Drugs should be allocated in such a way to fullfil warehouse areas and to provide opportunities for use of mechanical vehicles

It is not recommended to place drugs conformable under the name

according to pharmacological groups

Drugs “IN BULK“ according to aggregative state (liquid, loose, gaseous)

Considering characters of various dosage forms

Drugs are to place on racks, in cases, and if necessary - on pallets

Drugs are placed separately in strict conformity with toxicological groups:

depending on a way of application

according to physical and chemical properties of drugs and influences of various factors of an environment

in view of expiry dates

Provide visual inspection of drugs at least once a mon