**Case number 2**

**The pharmacy received a prescription for the manufacture of a medicinal product according to the prescription:**

Recipe: Zinci oxydi

 Bismuthi subnitratis ana 2.0

 Sol. Zinci sulfatis 0.5% - 100.0

 Misce.Da.

 Signa. Lotion for foot

1. Tell requirements for the dosage form and indicators of its quality. Factors ensuring the stability of the suspensions. Methods of manufacturingSuspensions in pharmacy condition.
2. Manufacturing technology of a medicinal product in a pharmacy.
3. Calculation of the total mass of the medicinal product, the amount of medicinal substances.
4. Packaging and labeling for the dispensing of the dosage form.
5. Passport of written control.

**Case number 3**

**The pharmacy received a prescription for the manufacture of a medicinal product according to the prescription:**

Recipe: Infusi rhizomatis cum radicibus Valerianae 200.0

 Kalii bromidi

 Natrii bromidi ana 4.0

 Tincturae Leonuri 5.0

 Misce. Da. Signa. By 1 tablespoon 2 times a day orally

1. Tell the requirements for these dosage form and indicators of its quality. Describe the theoretical positions of extraction process. List of the factors affecting on the completeness of the extraction process of biologically active substances.
2. Manufacturing technology of a medicinal product in a pharmacy.
3. Calculation of the total volume of a medicinal product, the amount of medicinal substances.
4. Packaging and labeling for the dispensing of the dosage form.
5. Passport of written control.

**Case number 7**

**The galenic workshop of the pharmaceutical factory produces tincture of Herba Hyperici of the following composition:**

Herba Hyperici 200,0

Spiritus aethylicus 40% to obtain 1 liter of tincture

Describe:

1. Tinctures as a dosage form, give their classification and technological scheme of production.
2. Technology of tinctures, methods of extraction, device and principle of operation of devices.
3. Methodsfortincture’s purifying.
4. Standardization of tinctures, packing, packaging and labeling of tinctures.
5. Pharmaceutical factors influencing on the therapeutic effect in the industrial production of dosage forms.

**Case number 13**

**The pharmacy received a prescription for the manufacture of a medicinal product according to the prescription:**

Recipe: Solutionis Acidi borici 2% - 100.0

 Resorcini 1.0

 Novocaini 0.5

 Misce. Da. Signa. For wiping the face.

1. Tell basic requirements for these dosage form and indicators of its quality.Factors accelerating the dissolution process (grinding, heating, mixing, complex formation). Filter materials.
2. Pharmaceutical manufacturing technology of a medicinal product in the pharmacy.
3. Calculation of the total volume of the medicinal product, the amount of medicinal substances.
4. Packaging and labeling for the release of the dosage form.
5. Passport of written control.

**Case number 14**

**The pharmacy received a prescription for the manufacture of a medicinal product according to the prescription:**

Recipe: Solutionis Collargoli 0.2% - 500.0

 Misce. Da. Signa. For instillation into the bladder.

1. Tell basic requirements for these dosage form and indicators of its quality. Describe the stages of production of colloidal solutions and the criteria for assessing their quality.
2. Pharmaceutical manufacturing technology of a medicinal product in the pharmacy.
3. Calculation of the total volume of the medicinal product, the amount of medicinal substances.
4. Packaging and labeling of the dosage form.
5. Passport of written control.

**Case number 18**

**The pharmacy received a prescription for the manufacture of a medicinal product according to the prescription:**

Recipe: Solutionis Acidi hydrochlorici 1% - 150.0

 Pepsini 2.0

 Misce. Da. Signa. By 1 tablespoon 3 times a day with meals.

1. Tell basic requirements for these dosage form and indicators of its quality. Describe basic requirements for manufacture process of liquid dosage forms. Justify the dilution of solutions of pharmacopoeial liquids: hydrochloric acid. Featuresofthemanufactureofpepsinsolutions.
2. Pharmaceutical manufacturing technologyof a medicinal product in the pharmacy.
3. Calculation of the total volume of the medicinal product, the amount of medicinal substances, control doses.
4. Packaging and labeling of the dosage form.
5. Passportofwrittencontrol.

**Case number 21**

**The galenic workshop of the pharmaceutical factory produces a liquid extract of the following composition:**

Fructus Crataegi 1000.0

Spirithus aethylicus 70% to obtain 1 liter of liquid extract.

Describe:

1. Methods for obtaining liquid extracts.
2. Give the technological scheme of production.
3. Ways to intensify the extraction process.
4. Indicators that determine the quality of the liquid extract, application.
5. Pharmaceutical factors in the industrial production influencing the therapeutic effect of herbal preparations.

**Case number 28**

**The pharmacy received a prescription for the manufacture of a medicinal product according to the prescription:**

Recipe: Infusi Folia Mentae 200.0

 Natrii bromidi 5.0

Tincturae Valerianae 20.0

 Misce. Da. Signa. By 1 tablespoon 2 times a day orally after meals

Describe:

1. Basic requirements for the dosage form and indicators of its quality. Obtaining aqueous extracts from medicinal plant materials. Describe the theoretical positions of extraction process. List of the factors affecting on the completeness of the extraction process of biologically active substances.
2. Pharmaceutical manufacturing technology of a medicinal product in a pharmacy.
3. Calculation of the total volume of the medicinal product, the amount of medicinal substances and purified water.
4. Packaging and labeling of the dosage form. Evaluation of the quality of the medicinal product.
5. Passportofwrittencontrol.

**ДОПОЛНИТЕЛЬНЫЕ**

**Situational task № 9**

**The pharmacy received a prescription for the manufacture of the drug according to the prescription:**

Recipe: Solutionis Natrii bromidi 2% - 100.0

 Euphyllini 0.5

 Elixiris pectoralis 8.0

 Syrupi Simplicis 10.0

 Misce. Da. Signa. By 1 tablespoon 3 times a day orally

1.Tell requirements for these dosage form and indicators of its quality. Indicate factors accelerating the dissolution process. Introduction of herbal remedies into mixtures.

2.Technology for the manufacture of medicines in a pharmacy.

3.Calculation of the total volume of the medicinal product, the amount of medicinal substances. Make calculations for the production of these dosage form.

4.Packaging and labeling of the dosage form.

5.Passport of written control.

**Situational task № 17**

**The pharmacy received a prescription for the manufacture of the drug according to the prescription:**

Recipe: Infusi herbae Thermopsidis 200,0

 Codeini phosphatis 0,2

 Natrii salicylatis 4,0

 Elixiris pectoralis 8,0

 Syrupi Simplicis 20,0

 Misce. Da. Signa. By 1 tablespoon 3 times a day orally

1. Tell requirements for these dosage form and indicators of its quality. Preparation of mixtures using concentrated extracts.
2. Technology for the manufacture of medicines in a pharmacy.
3. Calculation of the total volume of the medicinal product, the amount of medicinal substances, checking the doses of medicinal substances. Make calculations for the production of these dosage form.
4. Packaging and labeling of the dosage form.
5. Passport of written control.

**Situational task № 52**

**The pharmacy received a prescription for the manufacture of the drug according to the prescription:**

Recipe: Infusi rhizomatis cum radicibus Valerianae ex 10,0 -

 Infusi Folia Mentae ex 4,0 - 200.0

 Coffeini natrii benzoatis 0,4

 Natrii bromidi 3,0

 Magnesii sulfatis 0,8

 Misce. Da. Signa. By 1 tablespoon 2 times a day orally

1. Tell the requirements for these dosage form and indicators of its quality. Describe the theoretical positions of extraction process. List of the factors affecting on the completeness of the extraction process of biologically active substances. Obtaining aqueous extracts from medicinal plant materials and concentrate extracts.
2. Manufacturing technology of a medicinal product in a pharmacy.
3. Calculation of the total volume of a medicinal product, the amount of medicinal substances and purified water. Make calculations for preparation of these dosage form.
4. Packaging and labeling of the dosage form.
5. Passport of written control.