

LIST OF PRACTICAL SKILLS FOR INDUSTRIAL TECHNOLOGIES OF DRUGS MODULE 1

1. Prepare a powder for children. Calculate the product yield η , consumption coefficient and loss percentage. Compose the material balance for the dosage form.
2. Determine the concentration of ethanol if indications of a glass alcoholmeter are 96 and 75 at 20°C.
3. Determine the indications of a metal alcoholmeter and the ethanol concentration if the alcoholmeter loaded with the weight 90 dips into the solution to division 4.4 at the temperature of 10°C.
4. Determine the concentration of ethanol by density if the weight of a picnometer with ethanol is 18.6375 g; the weight of a picnometer with water is 20.1805 g, and the weight of an empty picnometer is 9.3415 g.
5. Technologies of the ethanol content determination in water-alcoholic solution with the help of a picnometer and densimeter, metal and glass alcoholmeter.
6. Make the working formula and prepare 100 ml of the tinctures listed below: Valerian, Calendula tinctures. Calculate the material balance for absolute alcohol and active substances. Evaluate quality of the tincture prepared according to the reference documents. Pack and label the final product.
7. Make the working formula and prepare 100 ml of the extracts listed below: Liquid nettle Extract and Dry Licorice Extract. Calculate the material balance for active substances. Evaluate the quality of the extracts prepared according to the reference documents. Pack and label the final product.
8. Wash 10 ampoules using the spray (syringe) method.
9. Determine the thermal resistance of glass ampoules.
10. Determine the chemical stability of ampoule glass.
11. Make the working formula and prepare 10 ampoules of analgin solution, 25 % or 50 %. Calculate the material balance for an active ingredient. Evaluate the quality of a finished product according to reference documentation. Carry out packing and labelling of a finished product.
12. Make the working formula and prepare 10 ampoules of one of the following drugs for injections: 0.25 % or 0.5 % Novocain solution, 10 % or 20 % caffeine-sodium benzoate solution. Make the working formula and prepare 10 ampoules of the following drugs for injections: 40% hexamethylenetetramine solution and 25% magnesium sulfate. Calculate the material balance for the basic material. Evaluate the quality of the finished product according to the existing reference document. Pack and label the finished product.
13. Make the working formula and prepare 2 vials of the parenteral emulsion and the oily solution. Calculate the mass balance for the active raw material. Evaluate the quality of the finished product according to the existing reference document. Pack and label the finished product.
14. Make the working formula and prepare 5 vials of prolonged ophthalmic drops. Calculate the material balance for the active substances. Evaluate the quality of the finished product according to the existing reference document. Pack and label the finished product.
15. Determine the particles shape, size and the surface character of medicinal powders: sodium chloride, aspirin, vitamin C, streptocide, sulfadimesine.
16. Determine the moisture content and the particle size distribution of powders.
17. Determine loose, tapped, true, relative density and porosity of the specified powders.
18. Determine flowability, compressibility of powders and pushing force for tablets out from matrices.