

MINISTRY OF HEALTH OF THE RUSSIAN FEDERATION

GENERAL PHARMACOPOEIA MONOGRAPH

**Medicinal products
containing human plasma**

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First Edition

The present General Pharmacopoeia Monograph applies to human blood preparations obtained from healthy donors' plasma that should meet the requirements established by the Pharmacopoeia Monograph "Human plasma for fractionation". Human blood preparations are supplied either liquid or dry.

Human blood preparations include the following:

- human albumin preparations;
- human immunoglobulin preparations;
- blood coagulation factor preparations containing one blood coagulation factor or a combination of such factors.

Human blood preparations are obtained using fractionation, chromatography, and other methods.

Blood preparations contain no antibiotics and no preservatives.

MANUFACTURE

Human blood preparations are manufactured from healthy donors' plasma that should meet the requirements established by the Pharmacopoeia Monograph "Human plasma for fractionation". Blood donors and obtained plasma should be evaluated in accordance with active regulatory legal documents. Each individual portion of plasma has to be controlled for the absence of markers of infections transmitted by blood transfusion. Blood preservatives approved according to the established procedure must be used when manufacturing plasma preparations.

The manufacture of blood preparations should guarantee preservation of the structure and function of blood proteins, ensure the specific and viral safety of the medicinal product, and preclude contamination with foreign agents.

To prevent contamination of released dosage forms with viruses, the manufacturing procedure should include several stages of viral inactivation and / or virus elimination shown to reduce the concentration of model viruses.

TESTS

Human blood preparations administered in parenteral dosage forms should meet the requirements of the General Pharmacopoeia Monograph “Pharmaceutical forms for parenteral administration” with regard to the tests “Sterility,” “Pyrogenicity,” “Bacterial endotoxins,” “pH value,” “and “Particulate matter” (for visible particulate matter) and comply with the requirements established for excipients.

Description. A description should be included of the properties of the respective dosage form of the medicinal product.

Identification. Identity is confirmed by the presence of only human serum proteins. The test is carried out by gel immunoelectrophoresis, as described in the General Pharmacopoeia Monograph “Agarose gel immunoelectrophoresis”, or by gel immunodiffusion, in accordance with the General Pharmacopoeia Monograph “Gel immunodiffusion”. If necessary, it should also be demonstrated by the activity of the specific component and by other methods.

Reconstitution time (for lyophilized medicinal products). The dissolution time of the medicinal product is specified, and a description of the method utilized is included with mention of the solvent used, its volume, and dissolution conditions.

Weight loss on drying or Water content (for lyophilized medicinal products). The requirements established for weight loss on drying or water content are included. The test is carried out in accordance with the General Pharmacopoeia Monograph “Weight loss on drying” or in accordance with the General Pharmacopoeia Monograph “Determination of water”.

Extractable volume (for liquid pharmaceutical forms). The extractable volume should be not less than the nominal value, and it should meet the requirements included in the Pharmacopoeia Monographs. The test is carried out in accordance with the General Pharmacopoeia Monograph “Extractable volume for parenteral pharmaceutical forms”.

Protein content. Normative requirements for protein content should be included. The test is carried out by an appropriate method, in accordance with the General Pharmacopoeia Monograph “Determination of protein”.

Electrophoretic homogeneity (electrophoretic composition). Normative requirements for electrophoretic homogeneity of albumin and immunoglobulin preparations should be included. The test is carried out in accordance with the General Pharmacopoeia Monograph “Homogeneity testing for medicinal products containing human or animal serum by cellulose acetate electrophoresis”.

Specific activity (except for albumin-containing medicinal products). The content of the specific component should be specified. The test is carried out in accordance with the method specified in the Pharmacopoeia Monograph, using appropriate standard samples.

Viral safety

Hepatitis B virus surface antigen (HBsAg). The medicinal product should contain no hepatitis B virus surface antigen. The test is carried out by enzyme immunoassay, using test systems approved for use in Russian health care practice and having a sensitivity not less than 0.1 IU/mL according to the Instructions for Use.

Anti-hepatitis C virus antibodies. The medicinal product should contain no anti-hepatitis C virus antibodies. The test is carried out by enzyme immunoassay, using test systems approved for use in Russian health care practice and having 100 % sensitivity and specificity according to the Instructions for Use.

Anti-human immunodeficiency virus (HIV-1 and HIV-2) antibodies and HIV-1 p24 antigen. The medicinal product should contain no anti-human immunodeficiency virus (HIV-1 and HIV-2) antibodies and no HIV-1 p24 antigen.

The test is carried out by enzyme immunoassay, using test systems approved for use in Russian health care practice and having 100 % sensitivity and specificity according to the Instructions for Use.

Packaging and Labeling. Primary packaging should ensure preservation of the claimed properties of the medicinal product throughout the specified shelf-life and be approved for packaging medicinal products that should be appropriate for the respective method of administration. The package capacity for lyophilized medicinal products should in most cases be sufficient to receive the required solvent volume and permit proper subsequent mixing of the contents.

The primary package label should show the name of the medicinal product, the name or logotype of the manufacturer, the batch number, the date of manufacture, the expiry date, and the dosage strength or concentration (or potency).

The consumer (outer) package label should show the name of the medicinal product, the name and address of the manufacturer, the pharmaceutical form, the batch number, the date of manufacture, the expiry date, the method of administration, the dosage strength or concentration (or potency), the product composition information, the amount of the medicinal product in the package, the storage conditions, the pharmacy dispensing conditions, the Marketing Authorization Number, the bar code, and precautionary information.

If the consumer (outer) package also contains additional components (solvent for a lyophilized medicinal product), the name of the additional composition should be specified, along with the concentration, product composition information, volume, and batch number. If any dosing devices, medical appliances, etc. are supplied alongside, the consumer (outer) package should additionally provide information about their presence.

The secondary (consumer) package of the medicinal product should contain the following inscription: «Contains no antibodies to HIV-1, HIV-2, hepatitis C virus and no hepatitis B virus surface antigen».

Storage. The medicinal product should be stored away from light, in the temperature range of 2 to 8 °C, unless otherwise specified in the Pharmacopoeia Monograph.