Human anti-D immunoglobulin

DEFINITION
Human anti-D immunoglobulin is a liquid or freeze-dried preparation containing immunoglobulins, mainly immunoglobulin G. The preparation is intended for intramuscular administration. It contains specific antibodies against erythrocyte D-antigen and may also contain small quantities of other blood-group antibodies. Human normal immunoglobulin (0338) may be added.

It complies with the monograph on Human normal immunoglobulin (0338), except for the minimum number of donors and the minimum total protein content. For products prepared by a method that eliminates immunoglobulins with specificities other than anti-D, where authorised, the test for antibodies to hepatitis B surface antigen is not required.

PRODUCTION
Human anti-D immunoglobulin is preferably obtained from the plasma of donors with a sufficient titre of previously acquired anti-D antibodies. Where necessary, in order to ensure an adequate supply of human anti-D immunoglobulin, it is obtained from plasma derived from donors immunised with D-positive erythrocytes that are compatible in relevant blood group systems in order to avoid formation of undesirable antibodies.

ERYTHROCYTE DONORS
Erythrocyte donors complies with the requirements for donors prescribed in the monograph Human plasma for fractionation (0853).

IMMUNISATION
Immunisation of the plasma donor is carried out under proper medical supervision. Recommendations concerning donor immunisation, including testing of erythrocyte donors, have been formulated by the World Health Organisation (Requirements for the collection, processing and quality control of blood, blood components and plasma derivatives, WHO Technical Report Series, No. 840, 1994 or subsequent revision).

POOLED PLASMA
To limit the potential B19 virus burden in plasma pools used for the manufacture of anti-D immunoglobulin, the plasma pool is tested for B19 virus using validated nucleic acid amplification techniques (2.6.21).

B19 virus DNA: maximum 10^4 IU/ml.

A positive control with 10^4 IU of B19 virus DNA per millilitre and, to test for inhibitors, an internal control prepared by addition of a suitable marker to a sample of the plasma pool are included in the test. The test is invalid if the positive control is non-reactive or if the result obtained with the internal control indicates the presence of inhibitors.

B19 virus DNA for NAT testing BRP is suitable for use as a positive control.

If Human normal immunoglobulin (0338) is added to the preparation, the plasma pool from which it is derived complies with the above requirement for B19 virus DNA.

POTENCY
Carry out the assay of human anti-D immunoglobulin (2.7.13, Method A). The estimated potency is not less than 90 per cent of the stated potency. The confidence limits \((P = 0.95)\) are not less than 80 per cent and not more than 120 per cent of the estimated potency.

Method B or C (2.7.13) may be used for potency determination if a satisfactory correlation with the results obtained by Method A has been established for the particular product.

STORAGE
See Human normal immunoglobulin (0338).
addition of a suitable marker to a sample of the plasma pool

and, to test for inhibitors, an internal control prepared by

amplification techniques (for the manufacture of anti-D immunoglobulin, the plasma

To limit the potential B19 virus burden in plasma pools used

POOLED PLASMA

control of blood, blood components and plasma derivatives

( donor immunisation, including testing of erythrocyte donors,

proper medical supervision. Recommendations concerning

Immunisation of the plasma donor is carried out under

chapter

for Fc function is carried out instead of that described in

other than anti-D: where authorised, the test for antibodies

method that eliminates immunoglobulins with specificities

for prekallikrein activator. For products prepared by a

total protein content, the limit for osmolality and the limit

except for the minimum number of donors, the minimum

donors prescribed in the monograph

Erythrocyte donors comply with the requirements for

blood group systems in order to avoid formation of

undesirable antibodies.

Human anti-D immunoglobulin is preferably obtained from

the plasma of donors with a sufficient titre of previously

acquired anti-D antibodies. Where necessary, in order to

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blood group systems in order to avoid formation of

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ERYTHROCYTE DONORS

Erythrocyte donors comply with the requirements for
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IMMUNISATION

Immunisation of the plasma donor is carried out under

proper medical supervision. Recommendations concerning
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have been formulated by the World Health Organisation

(Requirements for the collection, processing and quality
control of blood, blood components and plasma derivatives,
WHO Technical Report Series, No. 840, 1994 or subsequent
revision).

POOLED PLASMA

To limit the potential B19 virus burden in plasma pools used

for the manufacture of anti-D immunoglobulin, the plasma

pool is tested for B19 virus using validated nucleic acid

amplification techniques (2.6.27).

B19 virus DNA: maximum 10^4 IU/ml.

A positive control with 10^4 IU of B19 virus DNA per millilitre

and, to test for inhibitors, an internal control prepared by

addition of a suitable marker to a sample of the plasma pool

are included in the test. The test is invalid if the positive

control is non-reactive or if the result obtained with the

internal control indicates the presence of inhibitors.

B19 virus DNA for NAT testing BRP is suitable for use as a

positive control.

If Human normal immunoglobulin for intravenous

administration (0918) is added to the preparation, the

plasma pool from which it is derived complies with the above

requirement for B19 virus DNA.

POTENCY

Carry out the assay of human anti-D immunoglobulin

(2.7.13, Method A). The estimated potency is not less than

90 per cent of the estimated potency. The confidence limits

(P = 0.95) are not less than 80 per cent and not more than

120 per cent of the estimated potency.

Method B or C (2.7.13) may be used for potency
determination if a satisfactory correlation with the results

obtained by Method A has been established for the particular

product.

STORAGE

See Human normal immunoglobulin for intravenous

administration (0918).

LABELLING

See Human normal immunoglobulin for intravenous

administration (0918).

The label states the number of International Units per

container.

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HUMAN ANTITHROMBIN III CONCENTRATE

Antithrombinum III humanum densatum

DEFINITION

Human antithrombin III concentrate is a preparation of a glycoprotein fraction obtained from human plasma that inactivates thrombin in the presence of an excess of heparin. It is obtained from plasma that complies with the requirements of the monograph on Human plasma for fractionation (0853).

When reconstituted in the volume of solvent stated on the

label, the potency is not less than 25 IU of antithrombin III per millilitre.

PRODUCTION

The method of preparation includes a step or steps that have

been shown to remove or to inactivate known agents of

infection; if substances are used for inactivation of viruses
during production, the subsequent purification procedure

must be validated to demonstrate that the concentration of

these substances is reduced to a suitable level and any

residues are such as not to compromise the safety of the

preparation for patients.

The antithrombin III is purified and concentrated and a

suitable stabiliser may be added. The specific activity is

not less than 3 IU of antithrombin III per milligram of

total protein, excluding albumin. The antithrombin III

concentrate is passed through a bacteria-retentive filter, distributed aseptically into its final, sterile containers and immediately frozen. It is then freeze-dried and the containers are closed under vacuum or in an atmosphere of inert

gas. No antimicrobial preservative is added at any stage of

production.