

## Reference preparations established by the Expert Committee on Biological standardization, 2010

### Biological substances: International standards and reference reagents

A list of International Standards and Reference Reagents for biological substances was issued in WHO Technical Report Series, No. 897, 2000 (Annex 4) and an updated version is available on the Internet at <http://www.who.int/biologicals>. Copies of the list may be obtained from appointed sales agents for WHO publications or from: Marketing and Dissemination, World Health Organization, 1211 Geneva 27, Switzerland.

At its meeting in October 2010, the Expert Committee made the following changes to the previous list.

These substances are held and distributed by the International Laboratory for Biological Standards, National Institute for Biological Standards and Control, Potters Bar, Herts., EN6 3QG, England.

### ADDITIONS

Preparation	Activity	Status
<b>Vaccines and related substances</b>		
Antibody to Influenza A/California/7/2009 (H1N1) virus	1300 IU/ampoule	First International Standard
Tetanus vaccine	490 IU/ampoule	Fourth International Standard
BCG vaccine of Russian strain	3.39 million cfu per ampoule; 7.5ng ATP per ampoule	Reference Reagent

<b>Antibiotics</b>		
Vancomycin	109700 IU per vial	Second International Standard
<b>Blood products and related substances</b>		
Preparations of 4 bacteria strains (Staphylococcus epidermidis, Klebsiella pneumoniae, Streptococcus pyogenes, Escherichia coli)	No assigned values	Transfusion-Relevant Bacterial Strain Repository
Antithrombin Plasma	Antithrombin function 0.95 IU/ampoule; antithrombin antigen 0.96 IU/ampoule	Third International Standard
Factors II, VII, IX, X Plasma	Factor II: 0.89 IU/ampoule; Factor VII: 0.99 IU/ampoule; Factor IX: 0.86 IU/ampoule; Factor X: 0.89 IU/ampoule	Fourth International Standard
Von Willibrand Factor, Concentrate	VWF:Ag 10.7 IU/ampoule ; VWF:RCo 9.2 IU/ampoule; VWF:CB 10.3 IU/ampoule	Second International Standard
C1 Inhibitor, Plasma	0.89 IU per ampoule	First International Standard
C1 Inhibitor, concentrate	9.6 IU per ampoule	First International Standard
<b>Cytokines, growth factors and endocrinological substances, and related substances</b>		
Thyroid-stimulating antibody	113mIU/ampoule	Second International Standard
Follicle-stimulating hormone, human, recombinant, for bioassay	126 IU/ampoule	Second International Standard
Sex hormone binding globulin	180IU/ampoule	Second International Standard

Granulocyte Colony Stimulating Factor	95,000 IU/ampoule	Second International Standard
<b>Diagnostic reagents</b>		
RHD/SRY plasma DNA	No assigned value	Reference Reagent
Human cytomegalovirus for NAT assays	5,000,000 IU/ml	First International Standard