

## **Afssaps market surveillance 2005-2006 of screening and assay reagents for total antibodies directed against the hepatitis A virus (HAV)**

Hepatitis A virus (HAV) infection is often asymptomatic or causes only minor symptoms in young subjects. In contrast, infected adults frequently present features of acute hepatitis, which, more often than in children, can become fulminant and possibly fatal. Anti-HAV antibodies, acquired after natural exposure to the virus, are protective and usually persist for life. The post-vaccination protective antibody level persists for at least 20 years after the second injection. Screening or assay of total antibodies (IgG and IgM) directed against HAV is therefore indicated to determine the patient's immune status.

In the context of its market surveillance task, Afssaps has conducted a market surveillance of screening and assay devices for total antibodies directed against HAV. This control was launched following several reagent vigilance descriptions of false-positive results, and the death of a subject who developed fulminant hepatitis A while staying in an endemic zone of the virus, although anti-HAV serology had been previously found to be positive and this subject was therefore not vaccinated.

The objective of this market surveillance was to evaluate the sensitivity and clinical specificity of the reagents and the accuracy at the immunization limit of 20 IU/L (described in the literature and generally adopted by manufacturers) using a panel of 247 native samples (199 negative, 48 positive) and dilutions of the international standard 97/646.

At the time of the survey, 11 reagents were present on the French market; they were evaluated according to a protocol prepared and validated by a group of experts and previously sent to manufacturers.

Sensitivity and specificity: 9 of the 11 reagents gave results in line with the performances indicated in the package leaflets.

Five of the six reagents allowing quantitative assay of total antibodies gave satisfactory results in terms of accuracy.

Letters summarizing these results were sent to manufacturers in June 2006. Answers to these letters and information exchanges took place until January 2007. One manufacturer conducted a complementary study that confirmed the results obtained during this control. Another manufacturer informed us about withdrawal of his reagent from the market. Finally, one manufacturer is going to conduct a complementary study concerning calibration of his reagent with respect to the international standard.

Afssaps is currently monitoring with several manufacturers.

Afssaps and the group of experts would like to make the following statement concerning the positive cut-off value of reagents:

**Cut-off value:** the positive cut-off value should be indicated in the instruction for use of the reagent, including for qualitative kits.

It should correspond to that described in the scientific literature and generally adopted by manufacturers for this parameter, i.e. 20 IU/L.