TEST KIT FOR THE DETECTION AND GENOTYPING OF HIGHLY PATHOGENIC INFLUENZA VIRUS A H5N1 BY REAL-TIME POLYMERASE CHAIN REACTION

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Results of the annual monitoring of epizooties indicate that highly pathogenic HPAI/H5N1 avian influenza widely circulated in Eurasian region. Over a period of 2010–2013 years more than 165 cases of outbreaks in 14 countries were found out. Ukraine became one of the first countries in Europe where in Autonomous Republic of Crimea in October 2005 outbreak of avian epizootic with HPAI/H5N1 was documented and until February 2008 more than 236,000 poultry were killed. Since then the question of monitoring of infected both migrating birds and poultry in places of cross contact in Ukraine remains of high priority. The test system is developed for identification and genotyping A H5N1 on three genes (M, H5 and N1) HPAI/H5N1 in real-time mode for polymerase chain reaction. Test kit capacity to detect HPAI/h5n1 avian influenza virus and differentiate it from the other viral infection agents of birds and animals were studied by testing of HPAI/H5N1 virus isolated during mass infection outbreak in Crimea in 2005 and cultural specimens of other viral pathogens.

It was established that the «DIA Real Avian Influenza» test kit was capable to detect RNA influenza A virus of high pathogenic H5N1 strains having high sensitivity (100% while RNA of the Crimean HPAI/H5N1 isolate studying) and specificity (100% while RNA viruses of Newcastle birds disease, fowl powershift, syndrome of drop in egg production and horse influenza studying).

**Key words**: highly pathogenic avian influenza A virus H5N1, a diagnostic test system DIA-Real Avian Influenza.

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