

S1 Appendix. Comparison between hemagglutination inhibition and microneutralization assays.

Horse serum samples that were positive by hemagglutination inhibition (HI) to the avian influenza viruses under study (AIV/881, AIV/963, AIV/2076, AIV/2106, and AIV/2271) were further tested in microneutralization (MN) assays following standard protocols available in the *Manual for the laboratory diagnosis and virological surveillance of influenza* (WHO Global Influenza Surveillance Network, 2011). As some serum samples were cytotoxic, a lower number of sera was tested in MN assays for all viruses except AIV/963. The table below shows that HI and MN results shared $\geq 83.3\%$ consistency. On average, 91.7% of serum samples positive to AIVs by HI were also positive in MN assays.

Virus	HI^a	MN^b	Agreement (%)
AIV/881	33(38)	32	97
AIV/963	74(74)	69	93.2
AIV/2076	34(36)	31	91.2
AIV/2106	34(36)	32	94.1
AIV/2271	36(44)	30	83.3

^a Number of positive serum samples tested using the HI assay. Between brackets is shown the total number of HI positive samples.

^b Number of positive serum samples tested using the MN assay.