

March 31, 2015

DENKI KAGAKU KOGYO KABUSHIKI KAISHA (DENKA)

DENKA SEIKEN Co., Ltd.

Hokkaido University

DENKA SEIKEN and Hokkaido University Develop a Rapid Antigen Detection Test Kit for Ebola Virus

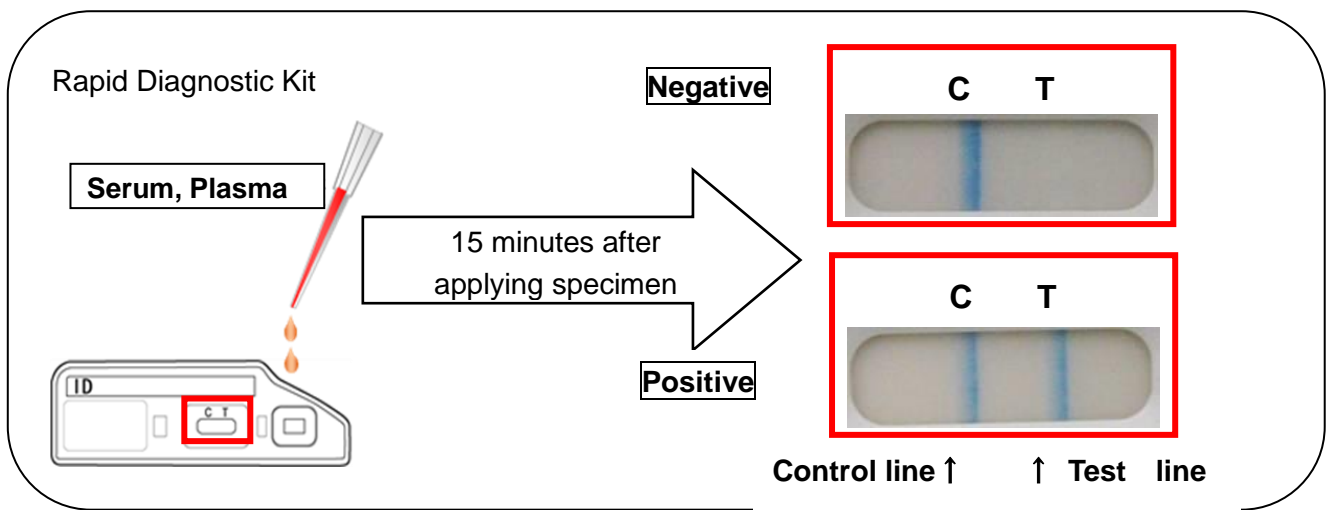
DENKI KAGAKU KOGYO KABUSHIKI KAISHA (headquarters: Chuo-ku, Tokyo; president: Shinsuke Yoshitaka; hereinafter “DENKA”) hereby announces that DENKA SEIKEN Co., Ltd. (headquarters: Chuo-ku, Tokyo; president: Tetsuro Maeda; hereinafter “DENKA SEIKEN”), a major DENKA Group company, has succeeded in developing a prototype of a rapid diagnostic reagent for Ebola virus in collaboration with Hokkaido University (Sapporo, Hokkaido; president: Keizo Yamaguchi).

Based on proprietary technology for producing rapid diagnostic test kits for infectious diseases such as influenza virus, norovirus and RS virus, DENKA SEIKEN has been pursuing joint research with Dr. Ayato Takada, a professor at Hokkaido University’s Division of Global Epidemiology, Research Center for Zoonosis Control.

Employing the QuickNavi™ platform developed by DENKA SEIKEN for its series of rapid infectious disease diagnostic test kits, the new diagnostic kit uses blood serum samples to confirm Ebola virus infection. Laboratory testing with serum from Ebola-infected monkeys has been conducted at BSL-4¹ facilities in the United States designed to handle highly contagious and virulent viruses. The laboratory testing demonstrated the prototype’s ability to confirm Ebola infection in approximately 15 minutes.

Currently, the principal diagnostic methods for Ebola infection are ELISA tests² and RT-PCR³ tests. However, these methods are both time-consuming and require special equipment. Because the prototype employs the immunochromato method,⁴ which requires neither special equipment nor electric devices and is easy-to-handle like other QuickNavi™ products developed by DENKA SEIKEN, it is expected to contribute to medical care in areas with scarce resources. DENKA SEIKEN will pursue the further development and commercialization of a rapid diagnostic test kit for Ebola virus using the immunochromato method.

In tandem with Hokkaido University, DENKA SEIKEN will push forward collaborative research for developing infectious disease kits such as for influenza virus, thereby helping to prevent the spread of and, ultimately, eradicate various infectious diseases that presently threaten society.



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1. Biosafety Level 4: The highest level of safety certification for facilities dedicated to laboratory testing of highly contagious and virulent bacteria, viruses and other microorganisms and disease agents
2. Enzyme-Linked Immunosorbent Assay: An immunological testing method to detect a specific agent using antigen-antibody reaction
3. Reverse Transcription Polymerase Chain Reaction: A method to amplify a target gene through polymerase chain reaction by synthesizing complementary deoxyribonucleic acid (DNA, a medium that contains genetic information), from ribonucleic acid (RNA) with reverse transcriptase
4. Immunochromato method: Short for “immunochromatography method.” Chromatography is a way of separating specific agents from multi-component specimens by migration speed and adsorption of each component to immobilized substances. Immunochromatography is a method that combines chromatography with antigen-antibody reactions and is used in diagnostic testing by means of immunoenzyme methods and coagulation methods (the latter of which use gold colloid, colored latex, etc.).

DENKA SEIKEN boasts a considerable share of Japan’s market for rapid diagnostic test kits for infectious diseases, and is particularly known for its influenza diagnostic kit QuickNavi™-Flu. In light of the rising global threat of infectious disease pandemics, DENKA SEIKEN is committed to proactively developing business operations in Asia, Africa, and other regions. In addition to the Ebola virus diagnostic test kit, R&D efforts are now under way to create diagnostic reagents for dengue fever, HIV and other infectious diseases.

DENKA is implementing the DENKA100 management plan, which sets forth “focus management resources on new growth drivers and develop next-generation products” as a growth strategy. Rapid diagnostic test kits manufactured and marketed by DENKA SEIKEN constitute a key product group that is driving and accelerating the DENKA Group’s growth in the promising healthcare field. Looking ahead, the DENKA Group will promote the selection and concentration of its management resources while addressing market needs to help resolve issues confronting society.