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## Development of RNA standardized controls for quantitative detection of rotavirus and astrovirus by realtime RT-PCR

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Rotavirus and astrovirus are important human pathogens that cause epidemic acute viral gastroenteritis. These viruses are related to viruses as the causative agents in outbreaks of gastroenteritis. The objectives of in this study, we developed the RNA standardized control for the real-time PCR detection of rotavirus and astrovirus. Real-time PCR assays showing high sensitivity are being currently used for the detection of foodborne viruses. However, the standardized controls indispensable for the confirmation and quantification is absent. We developed the standardized controls for the real-time PCR detection of rotavirus and astrovirus with the supply of the standardized control. To RNA synthesis of standardized positive controls of rotavirus and astrovirus from pBHA plasmid vector, we conducted the T7 promotor tagging PCR and *in vitro* transcription. Detection limit of the real-time PCR controls was estimated by endpoint detection of synthesis RNA and their serial 10-fold dilutions. The detection limit of rotavirus and astrovirus by real-time PCR was confirmed up to 10 copy and 100 copy, respectively. And the values of realtime-PCR R2 analysed a 0.99% in the all realtime-PCR standardized controls. Development of standardized controls for real-time PCR of rotavirus and astrovirus be used to products in order to investigation of foodborne outbreak.

### Biography

Kyu-Heon Kim has completed his PhD from Chung-Buk National University, Republic of Korea. He is currently working as a Scientific Researcher for the Division of Foodborne Disease Prevention and Surveillance, Ministry of Food and Drug Safety. His main research include the study for prevention of infectious diseases and control any public health related issues in Korea.

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