Inactivation of SARS-CoV-2 using certain Colgate Oral Care products

CA Daep[1], Walter, L[1], P. Kumar[2], R. Hinrichs[3], R. Russo[2], N. Huber[3]
1Oral Care, Colgate-Palmolive, Co., Piscataway, NJ
2Rutgers University Public Health Research Institute, Newark, NJ
3Oral Care, GABA International AG, Therwill, Switzerland

Objective:
This study explores the inactivation of SARS-CoV-2 by certain Colgate toothpaste and mouthwash products.

Methods:
Using a modified ASTM E1052 protocol, either SARS-CoV-2 were exposed to the test products for either 30, 60, or 120 seconds following product label instructions use. After exposure to the product, the treatments were neutralized and any remaining viruses were chromatographically separated from the treatment and collected. Vero CCL-81 cells were challenged with the collected virus to enumerate any remaining infectious viruses post-treatment. Any remaining infectious viral titers were enumerated based on observed cytopathic effect and calculated using Spearman-Karber method.

Results:
Relative to the negative control (mock treated virus), treating a suspension of SARS-CoV-2 virus with the Colgate Total toothpastes containing either stannous or zinc technologies inactivated the virus by > 3-$\log_{10}$ (> 99.9% reduction). Similar results were observed for the two Meridol toothpaste products tested (Paradont Expert and Meridol) which showed inactivation of SARS-CoV-2 by 2- and 3-$\log_{10}$ respectively. Mouthwash products containing chlorhexidine, amine fluoride, and or cetylpyridinium chloride also showed successful inactivation of the SARS-CoV-2 virus with reductions ranging from 1.7 to 3-$\log_{10}$.

Conclusion:
Colgate mouthwash and toothpaste products inactivated SARS-CoV-2, in vitro.

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