

RESEARCH UPDATE

CLINICALLY RELEVANT DENTAL RESEARCH

Welcome to *Compendium's* new Research Update section. Each month this section will feature new research published by the journal, as well as a selection of recent and/or seminal papers aggregated from the dental literature. Use the QR codes or links to access the full-text content to read the articles in their entirety and keep up to date on current, clinically relevant research across a range of specialties and practices.

INFECTION CONTROL

Virucidal Properties of Molecular Iodine Oral Rinse Against SARS-CoV-2

Teagle V, Clem DS, Yoon TY. *Compend Contin Educ Dent*. 2021;43(2):e5-e8.

ABSTRACT: *Background:* Saliva is an active carrier of SARS-CoV-2, and antimicrobial mouthrinses can be rendered less effective by saliva. Aerosol-generating procedures are commonplace in dentistry, and pre-procedural mouthrinses and/or irrigation with effective SARS-CoV-2 virucidals should be tested in the presence of saliva. *Methods:* With the use of an in vitro virucidal suspension test, molecular iodine oral rinse was assayed against SARS-CoV-2 with and without saliva after 30- and 60-second exposures to the rinse. Log₁₀ infectivity and consequent virus reductions were calculated at each timepoint. *Results:* Virus load reductions with saliva were 4.75 log₁₀ (>99.99% reduction) after 30 seconds of exposure and ≥5.25 log₁₀ (>99.99% reduction) after 60 seconds. Without saliva, infectivity was reduced by 5.00 log₁₀ (>99.99% reduction) and ≥5.75 log₁₀ (>99.99% reduction) after 30 and 60 seconds, respectively. *Conclusions:* **Molecular iodine oral rinse appears effective in reducing SARS-CoV-2 infectivity in vitro and, to date, appears to be the most effective oral rinse tested both in the presence of and without human saliva.**

TABLE

Virucidal Activity of Commercial Antimicrobials

Primary Active Ingredient	60-Second Log ₁₀ Reduction NO SALIVA PRESENT	60-Second Log ₁₀ Reduction SALIVA PRESENT
0.01 % (100 ppm) molecular iodine†	≥5.25	≥5.75
3.8% "foaming" hydrogen peroxide*	≥3.35	Not tested
0.2% povidone iodine*	3.0	Not tested
0.12% chlorhexidine gluconate*‡	1.0	Not tested
1.5% hydrogen peroxide*‡	<1.0	Not tested

* "Foaming" hydrogen peroxide results from Biochem Laboratory, Round Rock, Texas; tested against coronavirus, not SARS-CoV-2. Povidone iodine, chlorhexidine gluconate, and 1.5% hydrogen peroxide results from Utah State University Institute for Antiviral Research, Logan, Utah.

† ioRinse™ RTU 100ppm Molecular Iodine Oral Rinse provides nearly 2X the virucidal activity of 0.2% povidone iodine, with or without saliva.

‡ Chlorhexidine and 1.5% hydrogen peroxide provide low virucidal activity
(Adapted with permission from Ref. 13, *Clinicians Report*, April 2021, Vol 14[4])



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