

# Efficacy of mouth-rinses in reducing SARS CoV-2 viral load in the saliva of COVID-19 positive patients in Indonesia

<b>Submission date</b> 12/04/2021	<b>Recruitment status</b> No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 30/04/2021	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
<b>Last Edited</b> 04/05/2021	<b>Condition category</b> Infections and Infestations	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

The purpose of this study is to evaluate the efficacy of commonly used commercial mouth-rinses (Betadine Gargle and Mouthwash, Oxyfresh Pro Formula mouthwash, Pepsodent Active Defense mouthwash) to reduce SARS CoV-2 viral level in the saliva of COVID-19 positive patients. This study will provide evidence on the use of mouth rinses in reducing the viral load in the saliva of the COVID-19 patients and thereby help in reducing transmission of COVID-19.

### Who can participate?

Subjects with laboratory-confirmed diagnosis of COVID-19 can participate in the study.

### What does the study involve?

Subjects are randomised to receive either Betadine Gargle and Mouthwash, Oxyfresh Pro Formula mouthwash, Pepsodent Active Defense mouthwash or water (control group). They are asked to provide saliva samples by spitting method. Then, subjects are asked to rinse their mouth with mouth-rinse or water. The saliva sample is collected again at 5 min, 3 h and 6 h post-application of mouth-rinse.

### What are the possible benefits and risks of participating?

There is no known benefit to the subject from participation in this study. However, their participation may add to the medical knowledge about the efficacy of mouthwashes against SARS-CoV 2, as well as the use of mouthwashes to reduce the spread of COVID-19 through saliva. There is no potential risk to participants from saliva collection methods as it is a non-invasive method.

### Where is the study run from?

The study is run from YARSI Hospital (Internal Medicine Department Clinic) (Indonesia)

### When is the study starting and how long is it expected to run for?

March 2021 to October 2021

Who is funding the study?  
Faculty of Dentistry Trisakti University (Indonesia)

Who is the main contact?  
Dr. drg. Armelia Sari Widyarman, [armeliasari@trisakti.ac.id](mailto:armeliasari@trisakti.ac.id)

## Contact information

**Type(s)**  
Scientific

**Contact name**  
Dr Armelia Sari Widyarman

**ORCID ID**  
<https://orcid.org/0000-0003-1435-2392>

**Contact details**  
Faculty of Dentistry  
Trisakti University  
Jl. Kyai Tapa No.1  
RT.5 / RW.9  
Tomang  
Grogol Petamburan  
West Jakarta City  
Special Capital Region of Jakarta  
Jakarta  
Indonesia  
11440  
+62 (0)811929379  
[armeliasari@trisakti.ac.id](mailto:armeliasari@trisakti.ac.id)

## Additional identifiers

**EudraCT/CTIS number**  
Nil known

**IRAS number**

**ClinicalTrials.gov number**  
Nil known

**Secondary identifying numbers**  
2021

## Study information

**Scientific Title**  
Efficacy of commercial mouth-rinses on SARS-CoV-2 viral load in saliva: a randomized control trial in Indonesia

## **Study objectives**

PVP-I, CPC, and NaClO<sub>2</sub>-based mouth rinses are effective against reducing SARS-CoV-2 viral load in the saliva compared to a control water rinse and the effect will last for 6 hours.

### **Objectives:**

1. To comparatively evaluate the viral load of SARS-CoV-2 in saliva pre- and post-5-minute application of PVP-I, CPC and NaClO<sub>2</sub>-based mouth-rinses in COVID-19 positive patients.
2. To assess the duration of efficacy of PVP-I, CPC and NaClO<sub>2</sub>-based mouth-rinses in reducing SARS-CoV-2 load in COVID-19 positive patients by the collection of saliva at 3 h and 6 h post-application of mouth-rinses.

## **Ethics approval required**

Old ethics approval format

## **Ethics approval(s)**

Approved 25/03/2021, Institutional Review Board of Faculty of Dentistry, Trisakti University (Jl. Kyai Tapa No.1, RT.5 / RW.9, Tomang, Grogol Petamburan, West Jakarta City, Special Capital Region of Jakarta 11440, Jakarta, Indonesia; +628161908945; komisietikfkg@trisakti.ac.id), ref: 001/Dosen/KEPK/FKG/03/2021

## **Study design**

Single-center single blind interventional randomized clinical trial

## **Primary study design**

Interventional

## **Secondary study design**

Randomised controlled trial

## **Study setting(s)**

Hospital

## **Study type(s)**

Prevention

## **Participant information sheet**

See additional files

## **Health condition(s) or problem(s) studied**

Reducing the transmission of SARS CoV-2 virus in saliva of COVID-19 patients in Indonesia.

## **Interventions**

The enrolled patients are randomized using Robust Randomization App (RRApp) using a block randomization technique and are allocated to four groups accordingly— PI, NaClO<sub>2</sub>, CPC and water control group.

Prior to saliva collection, patients are asked to refrain from eating, drinking, or performing oral hygiene procedures for at least 30 min. Three milliliters of saliva is collected by the passive drool technique from all the enrolled COVID-19 patients at four time points.

Firstly, a baseline saliva sample is collected prior to the intervention of the mouth-rinse. Immediately after this, patients are requested to rinse their mouth with the allocated mouth-rinse for 30 seconds.

Commercial mouth-rinses are prepared at the dilution and dosage recommended by respective manufacturers. In brief, in the PI group 5 ml of PI mouthwash (commercially available as Betadine Gargle and Mouthwash 1%) diluted with 5 ml of water (0.5%) is used whereas in NaClO<sub>2</sub> group, 15 ml of undiluted NaClO<sub>2</sub> mouthwash (commercially available as Oxyfresh Pro Formula) is used. In the CPC group and water control groups, 20 ml of CPC (commercially available as Pepsodent Active Defense mouthwash) and 15 ml sterile water is used, respectively. Three milliliters of saliva is collected again from all subjects five minutes after the use of mouth-rinse. In order to evaluate the duration of the efficacy of mouth-rinses, salivary samples are collected at the 3 h and 6 h post-rinsing.

### **Intervention Type**

Supplement

### **Primary outcome measure**

Salivary CT values of SARS CoV-2 is measured using reverse-transcription polymerase chain reaction (RT-PCR) at baseline, 5 min, 3 hours and 6 hours

### **Secondary outcome measures**

There are no secondary outcome measures

### **Overall study start date**

25/03/2021

### **Completion date**

20/10/2021

## **Eligibility**

### **Key inclusion criteria**

Laboratory-confirmed COVID-19 positive patients

### **Participant type(s)**

Patient

### **Age group**

Adult

### **Sex**

Both

### **Target number of participants**

68

### **Key exclusion criteria**

1. History of allergy to PI, NaClO<sub>2</sub>, CPC and its relevant excipients
2. All forms of thyroid disease or current radioactive iodine treatment

- 3. Lithium therapy
- 4. Known pregnancy
- 5. Renal failure

**Date of first enrolment**

10/05/2021

**Date of final enrolment**

10/06/2021

## **Locations**

**Countries of recruitment**

Indonesia

**Study participating centre****Internal Medicine Department Clinic YARSI Hospital**

Jl. Letjend Suprpto No.Kav 13

RT.10/RW.5

Cempaka Putih Timur

Cempaka Putih District

Central Jakarta City

Special Capital Region of Jakarta

Jakarta

Indonesia

10510

## **Sponsor information**

**Organisation**

Trisakti University

**Sponsor details**

Faculty of Dentistry

Jl. Kyai Tapa No.1

RT.5 / RW.9

Tomang

Grogol Petamburan

West Jakarta City

Special Capital Region of Jakarta

Jakarta

Indonesia

11440

+62 (0)21-5672731

komisietikfkg@trisakti.ac.id

**Sponsor type**

University/education

**Website**

<http://trisakti.ac.id/fkg>

**ROR**

<https://ror.org/019fnr381>

## **Funder(s)**

**Funder type**

University/education

**Funder Name**

Universitas Trisakti

**Alternative Name(s)**

Trisakti University

**Funding Body Type**

Private sector organisation

**Funding Body Subtype**

Universities (academic only)

**Location**

Indonesia

## **Results and Publications**

**Publication and dissemination plan**

Planned publication in a high-impact peer-reviewed journal.

**Intention to publish date**

31/05/2022

**Individual participant data (IPD) sharing plan**

The datasets generated during and/or analysed during the current study are not expected to be made available due to confidentiality.

**IPD sharing plan summary**

Not expected to be made available

**Study outputs**

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Participant information sheet</a>			04/05/2021	No	Yes