



## Lysol 50% And 70% Ingredients Against Bacteria In Dental Mumm Contains Unit After Dental Care Action

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### ABSTRACT

**Problem Statement :** Dental units have the potential for intermediary cross-infection so that medical staff and patients can be at high risk of exposure to cross-infection. Sputum bowl, instrument table, and dental chair are the surfaces of dental units most often in contact with patients where bacterial contamination occurs with the patient, causing nosocomial infections. This type of phenol disinfecting solution is one good surface disinfectant for inanimate objects. Lysol disinfectant is a material that has the ability to be a good bacteria repellent. This study was to determine the inhibition of 50% and 70% of lysol against dental unit mouth rinses after dental treatment. **Method :** The research design used in this study was descriptive cross sectional study. **Scientific finding :** The results of the data show that the bacterial changes before and after using lysol 50% and 70% lysol have a fairly strong bacterial growth inhibition response, which means that the bacteria is quite resistant to the lysol treatment given. The average value of bacterial inhibition after lysol treatment was 70% greater, that is 8 mm, while lysol was 50%, which was only 6 mm. **Short conclusion :** Then it can be stated that the use of 50% lysol and 70% lysol disinfectants is declared good enough to be used as a disinfection of dental equipment such as cleaning the mouth rinses of dental unit patients.

Keyword : Lysol; Bacteria; Dental unit

### Introduction

Infectious diseases are the main cause of high morbidity and mortality in the world. Nosocomial infection is a type of infection that causes 1.4 million deaths worldwide.<sup>1</sup> Dental units have potential intermediaries in the cross-infection process so that medical personnel and patients can be at high risk of exposure to cross-infection. The dental unit consists of a lamp, operator chair, patient chair, gargle (Sputum bowl), instrument table, saliva ejector (suction), high speed handpiece, air-water syringe.<sup>2</sup> The mouth rinse (sputum bowl), instrument table, and dental chair are the surfaces of the dental unit that are most frequently in contact with patients where

bacterial contamination occurs with the patient, causing nosocomial infections.<sup>3</sup> Died, around the 1860s phenol was first used in the operating room to prevent postoperative infections.<sup>4</sup> Lysol disinfectant is a material that has the ability to be a good bacteria exterminator.<sup>5</sup> Based on the description above, the authors are interested in deepening the research by increasing the concentration, while the title of the research is "Lysol 50% and 70% Inhibitory Power Against Bacteria in Mouthwash After Dental Treatment at the Dental Health Academy Clinic at the Health Center".

## Methods

The research method used is descriptive with cross sectional. This research was conducted in January 2020. The research location is in the AKG Puskesmas clinic and the RSPAD Laboratory. The population used is bacteria in the mouthwash container of the dental unit. Sampling using accidental sampling technique, The data analysis process was carried out by analyzing the tabulated data to determine the diameter of the bacterial inhibitory power between lysol levels of 50% and 70% and then classifying the inhibitory power.

## Results and Discussion

The results of the measurements carried out by the researchers showed that between the treatment of lysol 50% and lysol 70% before and after being incubated in BAP, the bacterial sample of the dental unit mouth rinse contained an inhibition zone with a fairly strong inhibitory response (the bacteria were quite resistant).

### a. 50% Lysol Inhibitory Data Recapitulation

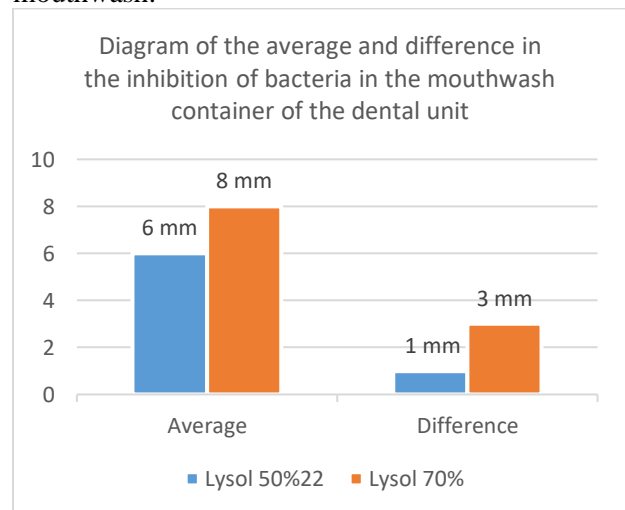
No	Lysol 50%	Diameter		Difference	Growth inhibition response
		Before	After		
1.	Dental 1	5 mm	6 mm	1 mm	Strong enough (Bacteria are quite resistant)
2.	Dental 2	5 mm	6 mm	1 mm	Strong enough (Bacteria are quite resistant)
3.	Dental 3	5 mm	7 mm	2 mm	Strong enough (Bacteria are quite resistant)
4.	Dental 4	5 mm	8 mm	3 mm	Strong enough (Bacteria are quite resistant)
5.	Dental 5	5 mm	6 mm	1 mm	Strong enough (Bacteria are quite resistant)
Average		5 mm	6 mm	1 mm	

### b. Lysol 70% Inhibitory Data Recapitulation

No	Lysol 50%	Diameter		Difference	Growth inhibition response
		Before	After		
1.	Dental 6	5 mm	6 mm	1 mm	Strong enough

2.	Dental 7	5 mm	9 mm	4 mm	(Bacteria are quite resistant) Strong enough (Bacteria are quite resistant)
3.	Dental 8	5 mm	8 mm	3 mm	(Bacteria are quite resistant) Strong enough (Bacteria are quite resistant)
4.	Dental 9	5 mm	9 mm	4 mm	(Bacteria are quite resistant) Strong enough (Bacteria are quite resistant)
5.	Dental 10	5 mm	9 mm	1 mm	(Bacteria are quite resistant) Strong enough (Bacteria are quite resistant)
Average		5 mm	8 mm	3 mm	

This means that the bacteria are quite strong against the given lysol treatment. Thus, it can be stated that the use of lysol 50% and 70% lysol disinfectants are good enough to be used as disinfection of dental equipment, such as cleaning mouthwash containers for dental unit patients. The following is the difference in the value and average inhibition of lysol 50% and lysol 70% against bacteria in the dental unit mouthwash:



Based on the diagram above, it shows that the average value of bacterial inhibition after 70% lysol treatment was 8mm, while 50% lysol was only 6mm. The difference in the value of the 70% lysol treatment is 3mm and the lysol treatment.

50%, which is 1mm. Although the concentration of lysol used in this study was high enough, it was not able to kill all bacteria. The cause of another factor is that the sample is contaminated with air, so that the bacteria in the BAP are not just bacteria attached to the mouthwash container of the dental unit. In addition, in several other dental unit mouth rinses, acid-fast bacteria (BTA) were identified, making them resistant to 50% lysol and 70% lysol disinfectants. Acid Resistant Bacteria (BTA) is in the air. This is reinforced by previous research obtained from Ratih Haribi and Zoki Abadi Harahap (2009), which stated that the disinfection treatment using lysol with concentrations of 10%, 15%, and 20% with a contact time of 5, 10, and 15 minutes could not kill acid-fast bacteria (BTA) coated with wax (wash).<sup>6</sup>

### Conclusion

Bacterial samples of the dental unit mouthwash that were treated with 50% and 70% lysol showed strong inhibition. The bacterial samples in the dental unit mouth rinse after being given 50% lysol treatment got an average value of 6 mm and the difference value was 1 mm. Meanwhile, the 70% lysol treatment got the average inhibition value of 8 mm, and the difference value was 3 mm. Based on the classification of bacterial growth inhibition response to lysol 50% and lysol 70% treatment, the results were quite strong.

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