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# Experimental Results

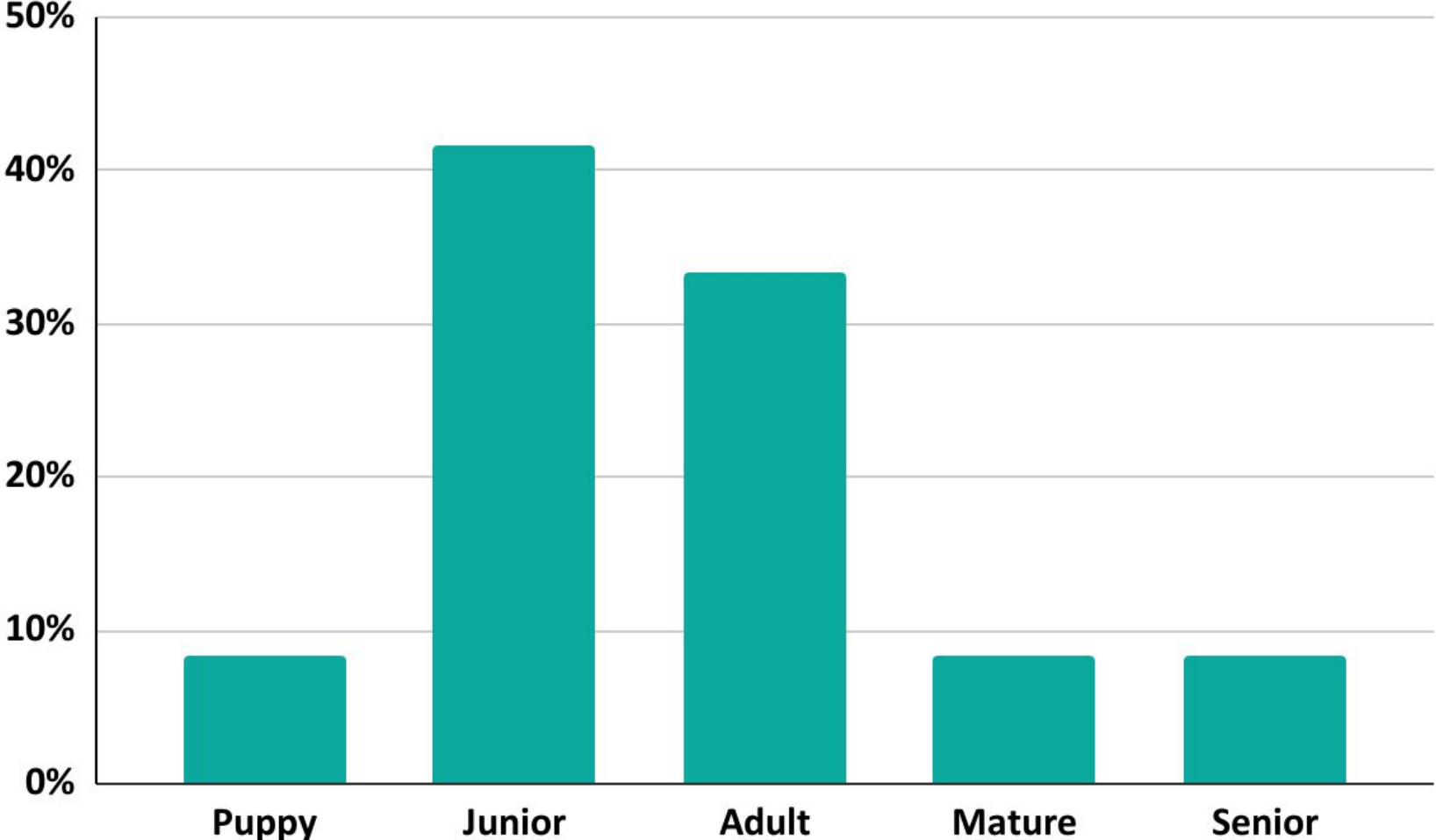
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## Dogs' Selection

**We have selected 24 dogs** for the test and control group, and half of the dogs passed all the stages of the examination:

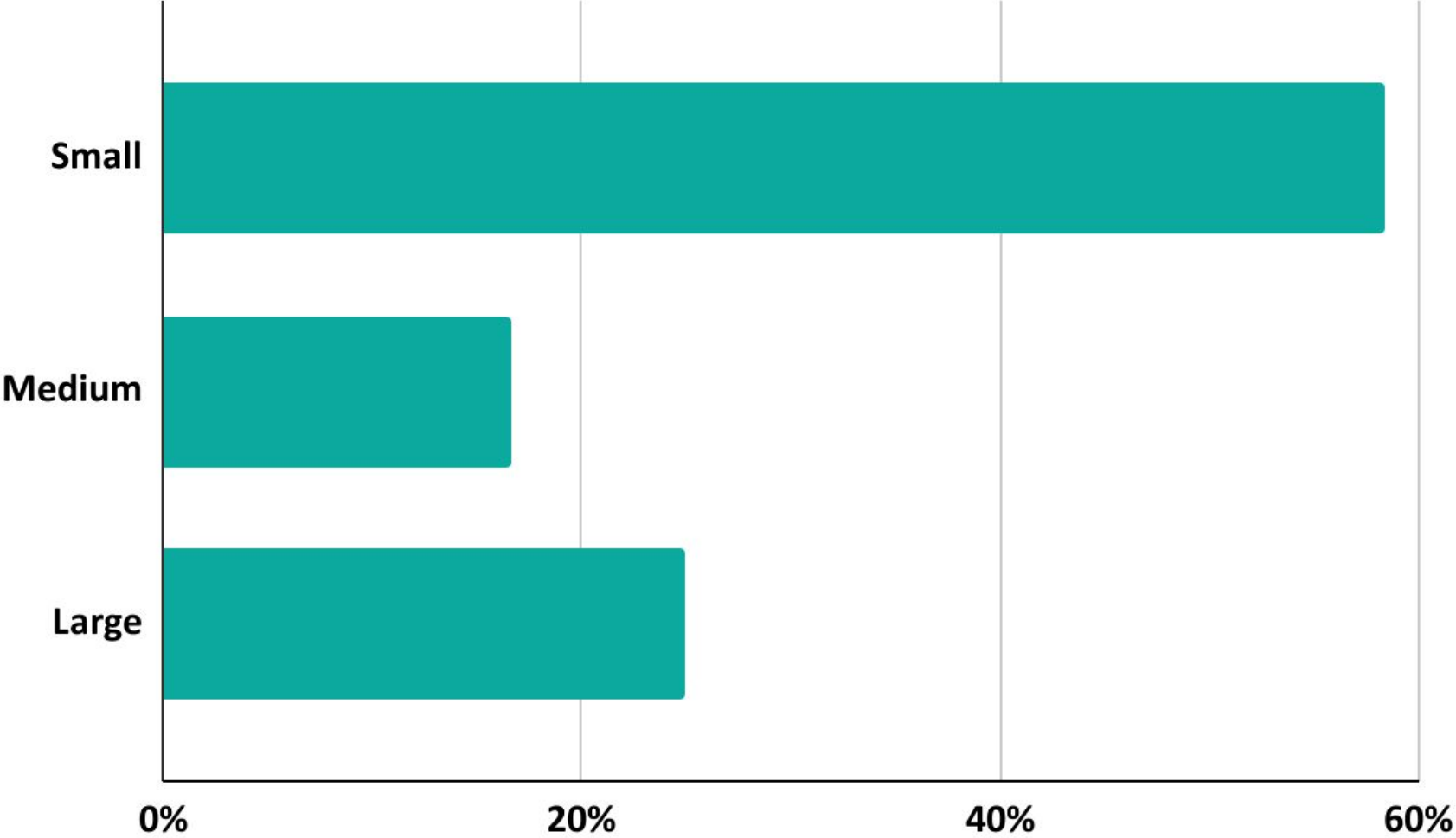
- + 5 males and 7 females,
- + 50% under three years old,
- + 58% were small-sized,
- + all owners have passed the preparation period and have already used our test toothbrushes.

# Dogs' Age



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# Dogs' Size



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## Experiment Design

The randomised controlled study will aim to evaluate the effectiveness of an ionic electric toothbrush in terms of plaque removal and reduction of gingival inflammation. As overall evaluation criteria, we have chosen to measure: **plaque index, gingival index, bleeding on probing,** and the **number / type of oral bacteria.**

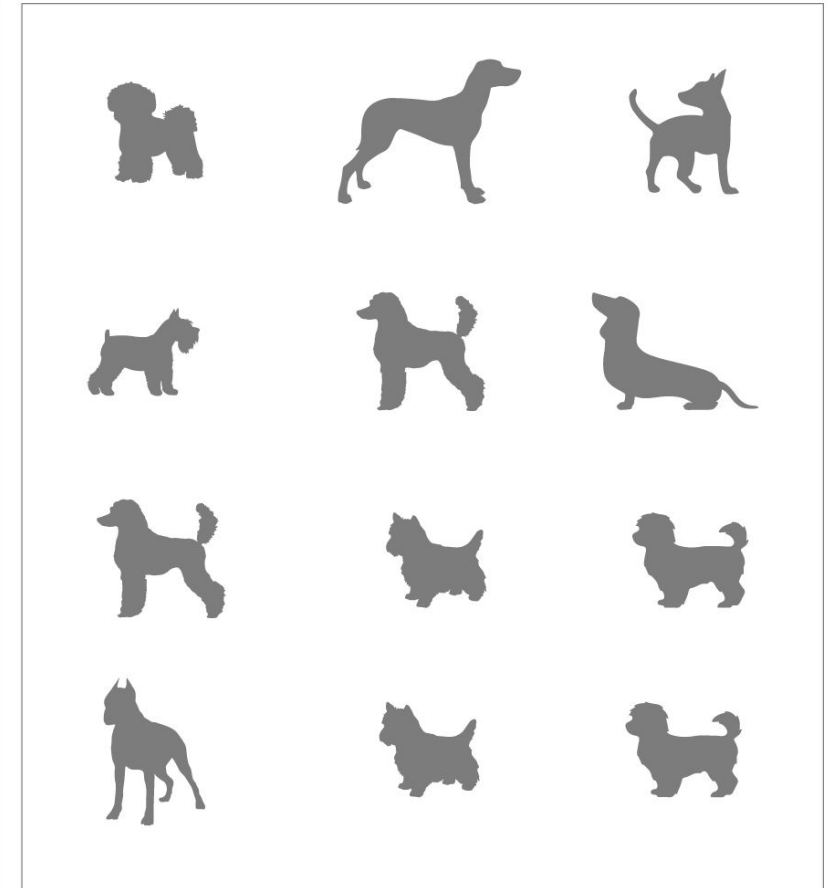
### Test group

Dog owners have received an ionic toothbrush



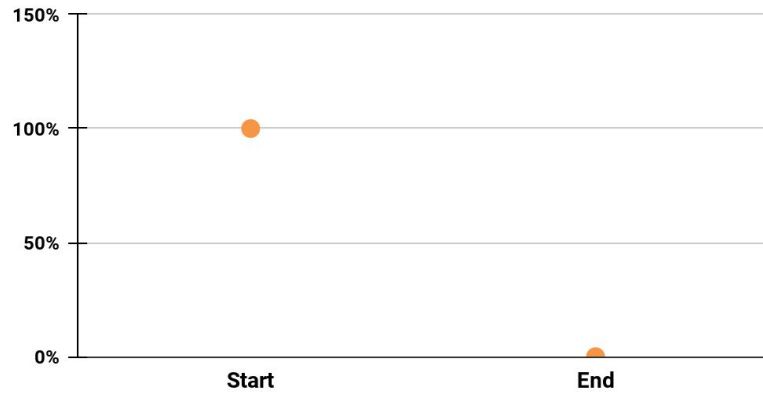
### Control group

Dog owners have received manual toothbrush

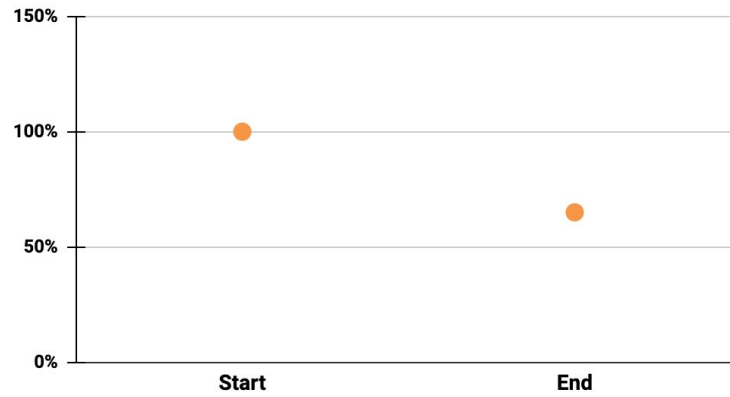


# Test group / change in the number of oral bacteria during the eight weeks

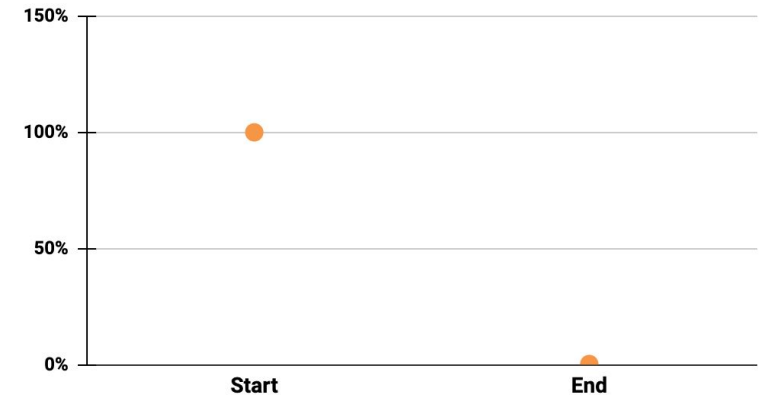
**Koko**



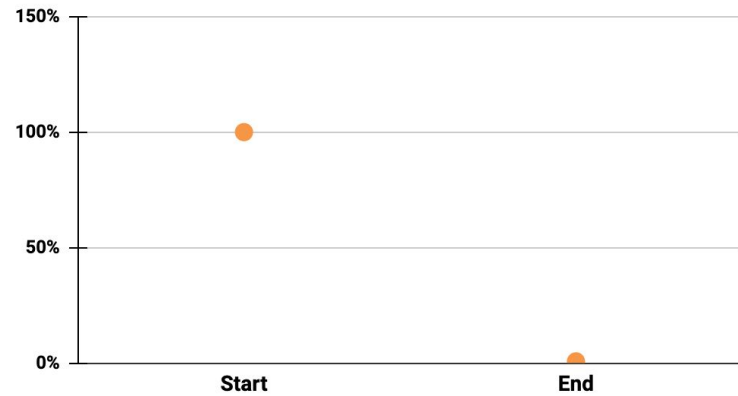
**Luna**



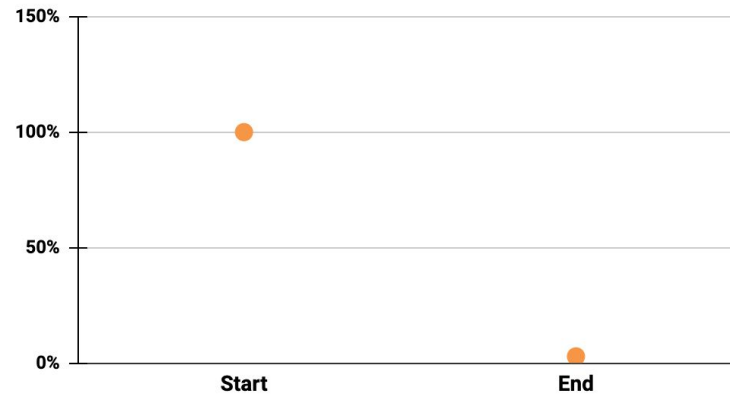
**Stella**



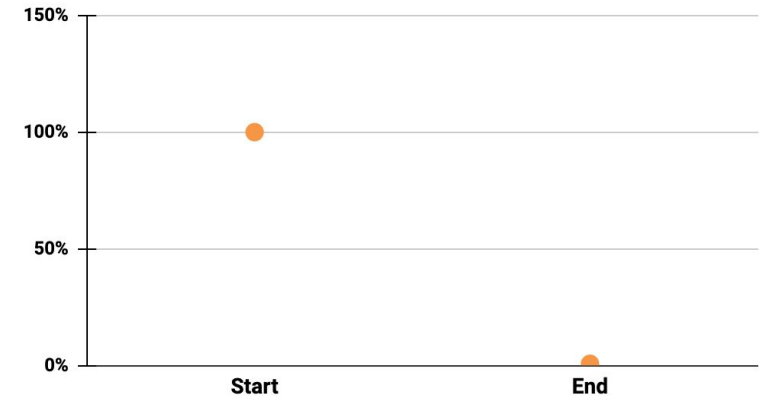
**Lea**



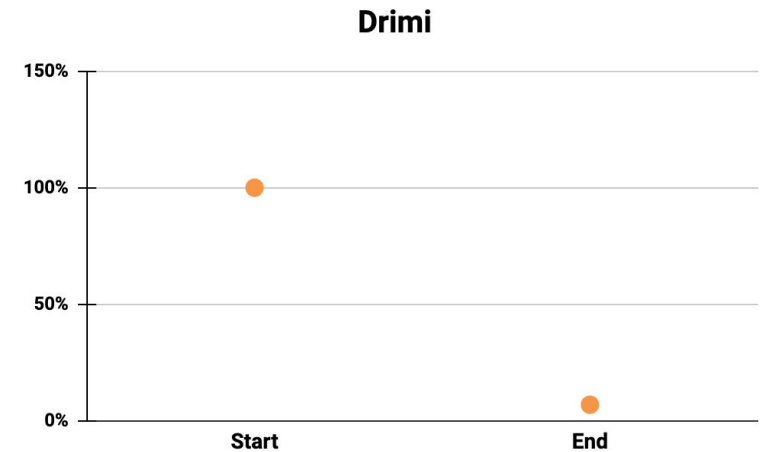
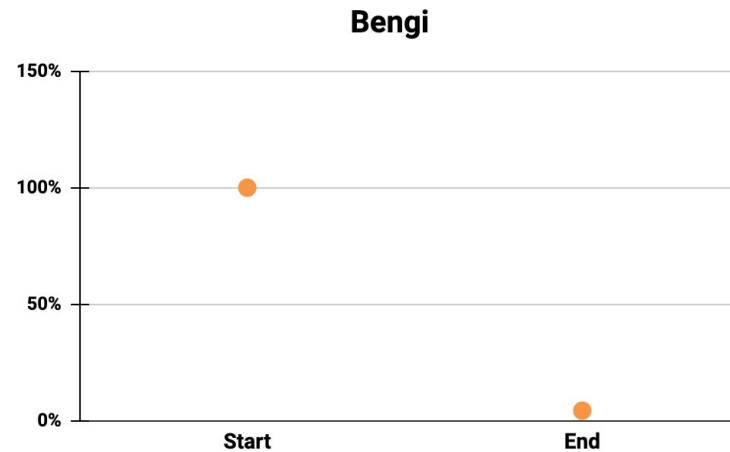
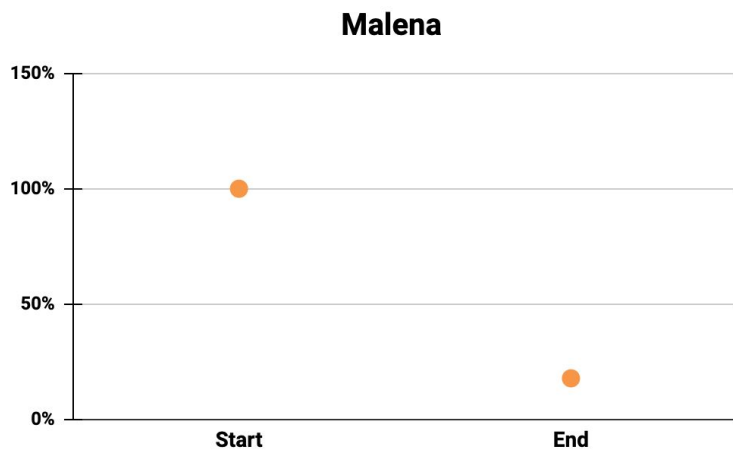
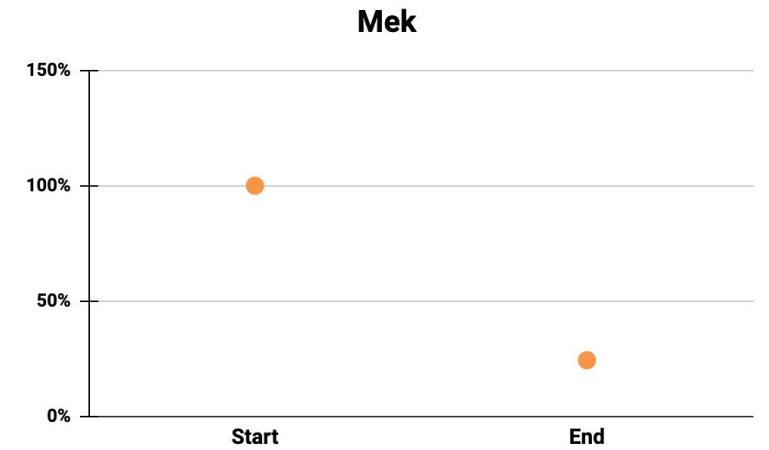
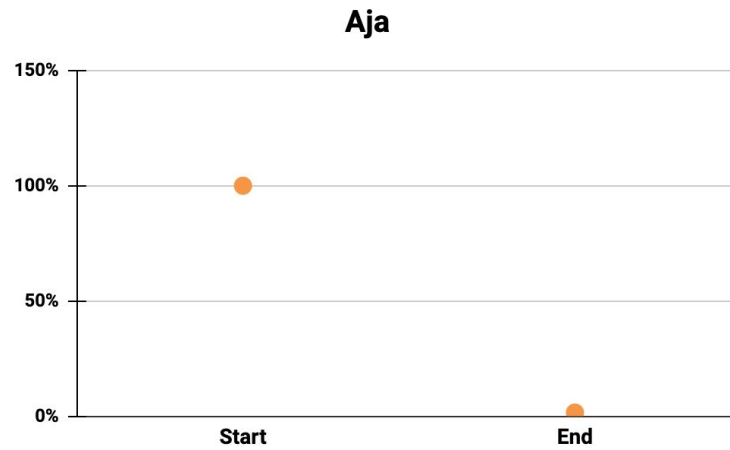
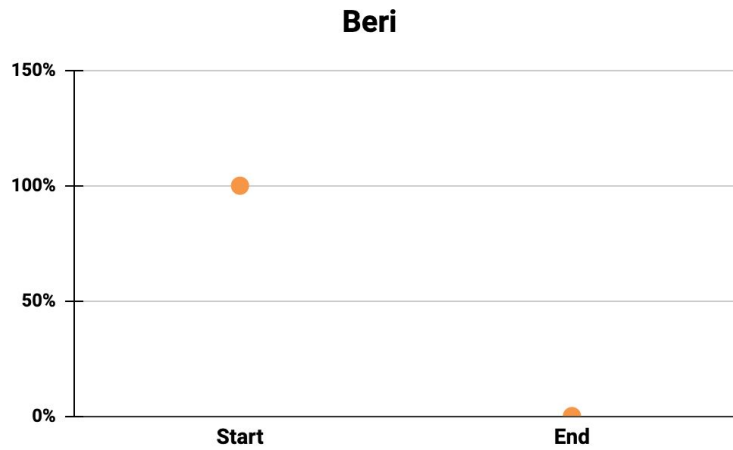
**Dixi**



**Max**



# Control group / change in the number of oral bacteria during the eight weeks





















**Test group / change in gingival index, plaque index, and bleeding on probing**

Dog's Name	Gi	Pi	BOP
Koko	→	↘	→
Luna	→	→	↘
Stella	↘	↘	→
Lea	↘	↘	→
Dixi	↘	→	→
Max	↘	→	→















**Control group / change in gingival index, plaque index, and bleeding on probing**

Dog's Name	Gi	Pi	BOP
Beri			
Aja			
Mek			
Malena			
Bengi			
Drimi			

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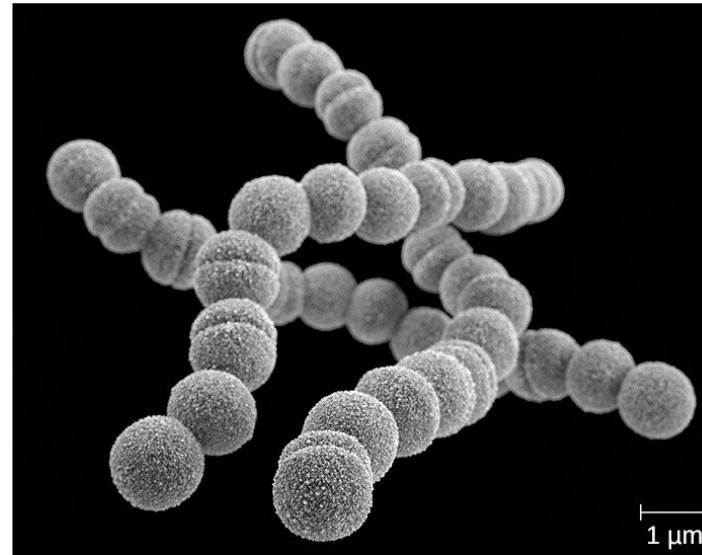
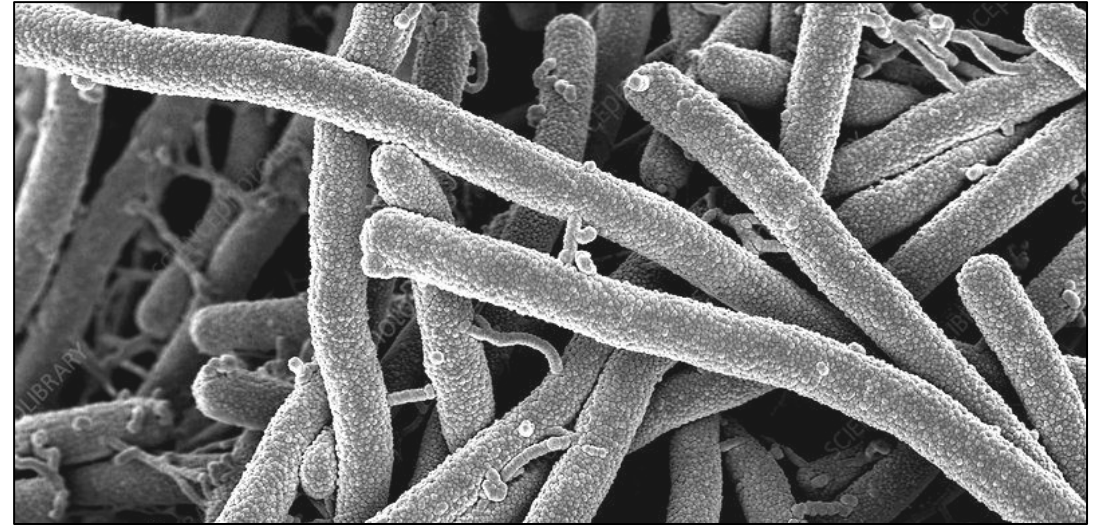
## Test and control group / change in the diversity of bacteria

Dog's Name	# of bacteria species
Koko	
Luna	
Stella	
Lea	
Dixi	
Max	

Dog's Name	# of bacteria species
Beri	
Aja	
Mek	
Malena	
Bengi	
Drimi	

## Removal success rate

#	Bacteria Type	Test	Control
1	<b>Escherichia coli</b>	<b>25%</b>	<b>0%</b>
2	<b>Streptococcus beta haemolyticus</b>	<b>20%</b>	<b>0%</b>
3	Pasteurella	33%	17%
4	Bacillus	100%	100%



Scanning electron  
microscopy (SEM)  
[ [microbeonline.com](http://microbeonline.com) ]

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## Conclusions

**After eight weeks of teeth brushing**, it was shown that:

- + **the number of bacteria dropped an average by 88%** in both the test and control groups,
- + **over 66% of dogs showed improvement in gum condition**, unlike the control group where there was no improvement,
- + it follows that the dominant influence on dogs' dental hygiene is mechanical washing,
- + there is a decrease in the number of bacterial species in both the test and control groups,
- + ***Escherichia coli*, and *Streptococcus beta haemolyticus* species** were successfully **removed in 25% and 20% of cases respectively.**

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## Feedback

----- Forwarded message -----

From: Suzana Mijailovic

Date: Sat, 29 Jan 2022 at 02:25

Hello,

I am sending you the photo that may help you with the study. Last night, during brushing, a part of the plaque fell off the left side of my dog's tooth (I'm sending you a picture of a piece of tartar in the attachment). It peeled off like a cracked wallpaper. Not all the tartar has fallen from that tooth yet, but it is a big and noticeable part.

Regards,  
Suzana

