

Supplementary Materials

Inhibition halos in Agar-disc diffusion assay

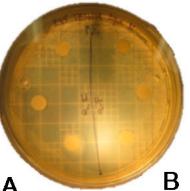
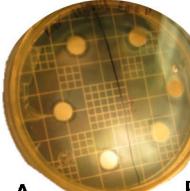
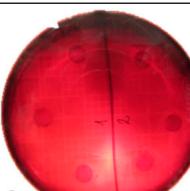
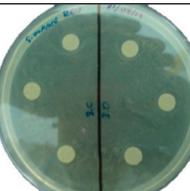
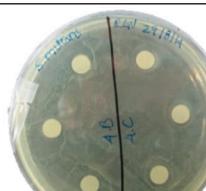
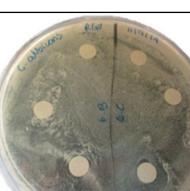
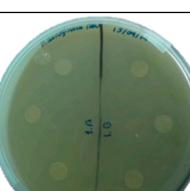
No inhibition halos	Inhibition halos present
<p><i>E. coli</i></p> <p>Chloroform extract, doses 3 $\mu\text{g}/\text{mL}$ (A) and 3.5 $\mu\text{g}/\text{mL}$ (B). This plate shows no inhibition halos</p>  <p>A B</p>	<p><i>E. coli</i></p> <p>Ethyl Acetate extract, doses 2 $\mu\text{g}/\text{mL}$ (A) and 2.5 $\mu\text{g}/\text{mL}$ (B). There are measurable halos</p>  <p>A B</p>
<p><i>L. innocua</i></p> <p>Water dry leaf boiled (A) and non-boiled extracts (B), doses 500 $\mu\text{g}/\text{mL}$. No inhibition was observed</p>  <p>A B</p>	<p><i>L. innocua</i></p> <p>Water dry leaf non-boiled extract, doses 2.5 $\mu\text{g}/\text{mL}$ (A) and 3 $\mu\text{g}/\text{mL}$ (B). Important inhibition can be observed</p>  <p>A B</p>
<p><i>S. mutans</i></p> <p>Chloroform extract, doses 2 $\mu\text{g}/\text{mL}$ (A) and 2.5 $\mu\text{g}/\text{mL}$ (B). No inhibition was observed</p>  <p>A B</p>	<p><i>S. mutans</i></p> <p>Methanol extract, doses 2.5 $\mu\text{g}/\text{mL}$ (A) and 3 $\mu\text{g}/\text{mL}$ (B). Inhibition can be observed</p>  <p>A B</p>
<p><i>C. albicans</i></p> <p>Acetone extract, doses 1.5 $\mu\text{g}/\text{mL}$ (A) and 2 $\mu\text{g}/\text{mL}$ (B). No significant inhibition was observed</p>  <p>A B</p>	<p><i>C. albicans</i></p> <p>Water non-dried leafs non-boiled extract, dose 4 $\mu\text{g}/\text{mL}$ (A) and Methanol extract dose 1 $\mu\text{g}/\text{mL}$ (B)</p>  <p>A B</p>
<p><i>P. aeruginosa</i></p> <p>Water dry leaf boiled extract, doses 1 $\mu\text{g}/\text{mL}$ (A) and 1.5 $\mu\text{g}/\text{mL}$ (B). No inhibition was observed</p>  <p>A B</p>	<p><i>P. aeruginosa</i></p> <p>Water non-dried leaves non-boiled extract, dose 4 $\mu\text{g}/\text{mL}$ (A) and Methanol extract dose 1 $\mu\text{g}/\text{mL}$ (B). No significant inhibition</p>  <p>A B</p>

Figure S1. Extract agar-disc diffusion assay. The extracts were placed on filter paper discs, which diffuse the extract into the medium. When an extract is bioactive, an inhibition halo forms around the disc, preventing microorganism growth.

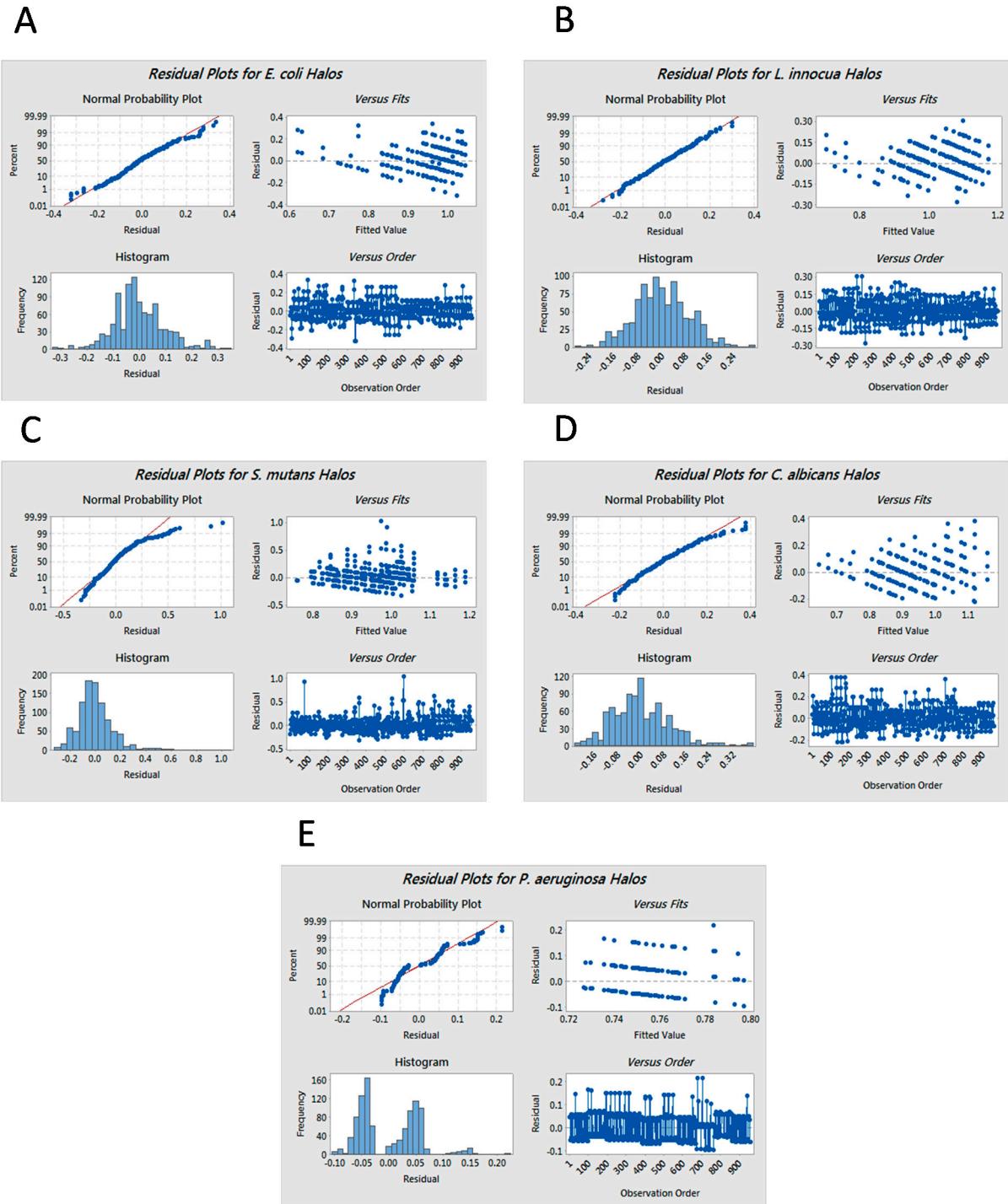


Figure S2. Halo residual plots (A) *E. coli*; (B) *L. innocua*; (C) *S. mutans*; (D) *C. albicans*; and (E) *P. aeruginosa*. These charts provide information on the uniformity of the results, indicating repeatability and leaving little error among samples.

Table S1. Inhibition halos measurements extract-dose interaction.

Dose	<i>E. coli</i>	<i>L. innocua</i>	<i>S. mutans</i>	<i>C. albicans</i>	<i>P. aeruginosa</i>
Extract #1 Water, Dry Leaf, Non-Boiled					
500 µg/mL	0.70	0.94	0.96	0.89	0.75
1 µg/mL	0.94	1.08	* 1.22	* 1.19	0.77
1.5 µg/mL	0.85	1.07	* 1.14	0.93	0.76
2 µg/mL	0.94	* 1.17	* 1.11	1.01	0.78
2.5 µg/mL	0.91	* 1.13	* 1.18	1.04	0.74
3 µg/mL	0.97	* 1.11	1.06	1.03	0.76
3.5 µg/mL	* 1.13	* 1.16	1.09	0.98	0.74
4 µg/mL	* 1.13	* 1.23	1.06	* 1.14	0.70
Extract #2 Water, Non-Dried Leaf, Non-Boiled					
500 µg/mL	0.70	0.98	0.88	0.92	0.78
1 µg/mL	0.97	* 1.15	1.04	* 1.19	0.70
1.5 µg/mL	* 1.18	1.08	* 1.11	* 1.40	0.70
2 µg/mL	1.01	* 1.18	1.01	* 1.18	0.70
2.5 µg/mL	0.99	* 1.21	0.79	0.98	0.77
3 µg/mL	0.90	* 1.11	0.85	0.99	0.77
3.5 µg/mL	0.81	1.03	0.95	1.03	0.73
4 µg/mL	1.08	0.91	0.98	1.06	0.73
Extract #3 Water, Dry Leaf, Boiled					
500 µg/mL	0.70	0.70	0.95	0.75	0.87
1 µg/mL	0.98	0.94	0.97	0.88	0.73
1.5 µg/mL	0.98	1.03	1.05	0.98	0.73
2 µg/mL	1.03	* 1.23	0.89	0.77	0.73
2.5 µg/mL	1.03	* 1.12	0.88	0.83	0.73
3 µg/mL	0.91	1.08	0.88	1.01	0.70
3.5 µg/mL	0.91	1.05	0.98	0.76	0.70
4 µg/mL	0.91	* 1.11	* 1.14	1.03	0.80
Extract #4 Methanol					
500 µg/mL	0.70	0.85	0.87	0.75	0.82
1 µg/mL	0.94	* 1.17	* 1.19	* 1.20	0.81
1.5 µg/mL	0.96	0.98	0.98	0.95	0.73
2 µg/mL	1.02	1.03	0.95	0.94	0.73
2.5 µg/mL	1.02	* 1.16	0.86	1.01	0.73
3 µg/mL	1.09	1.09	0.91	0.92	0.73
3.5 µg/mL	1.02	1.08	0.85	1.04	0.73
4 µg/mL	1.07	1.08	0.90	0.93	0.73
Extract #5 Ethanol					
500 µg/mL	0.70	0.73	0.85	0.73	0.75
1 µg/mL	0.97	* 1.14	0.81	0.98	0.73
1.5 µg/mL	1.07	* 1.17	1.02	0.97	0.73
2 µg/mL	1.00	0.98	0.88	0.93	0.79

Table S1. *Cont.*

Dose	<i>E. coli</i>	<i>L. innocua</i>	<i>S. mutans</i>	<i>C. albicans</i>	<i>P. aeruginosa</i>
Extract #5 Ethanol					
2.5 µg/mL	0.97	1.03	1.03	0.94	0.77
3 µg/mL	1.02	* 1.10	0.98	0.88	0.82
3.5 µg/mL	1.02	1.07	0.93	0.90	0.82
4 µg/mL	* 1.23	* 1.14	0.83	0.88	0.72
Extract #6 Ethyl Acetate					
500 µg/mL	0.70	0.72	0.81	0.73	0.75
1 µg/mL	* 1.15	1.05	0.97	0.83	0.72
1.5 µg/mL	1.02	1.04	0.89	0.75	0.72
2 µg/mL	0.75	* 1.13	0.97	0.75	0.72
2.5 µg/mL	1.02	1.03	0.90	1.03	0.73
3 µg/mL	0.90	1.08	0.83	0.83	0.73
3.5 µg/mL	0.89	0.98	0.95	0.89	0.83
4 µg/mL	0.75	0.89	0.96	0.86	0.83
Extract #7 Acetone					
500 µg/mL	0.74	0.89	0.78	0.72	0.73
1 µg/mL	0.88	0.98	1.01	0.89	0.78
1.5 µg/mL	1.01	0.97	1.00	0.89	0.78
2 µg/mL	0.94	0.95	0.98	0.88	0.74
2.5 µg/mL	1.05	0.90	0.86	1.08	0.77
3 µg/mL	* 1.10	1.00	0.84	0.92	0.76
3.5 µg/mL	0.68	0.93	0.84	0.95	0.77
4 µg/mL	1.02	0.99	* 1.18	0.96	0.78
Extract #8 Petroleum Ether					
500 µg/mL	0.73	0.70	0.81	0.75	0.73
1 µg/mL	0.94	1.01	* 1.29	* 1.15	0.82
1.5 µg/mL	0.93	1.08	1.00	0.99	0.84
2 µg/mL	0.85	1.03	* 1.19	1.05	0.81
2.5 µg/mL	0.94	0.92	0.80	0.95	0.80
3 µg/mL	0.88	0.92	0.80	1.07	0.78
3.5 µg/mL	0.89	0.98	0.94	0.88	0.78
4 µg/mL	0.89	0.96	0.93	0.94	0.78
Extract #9 Chloroform					
500 µg/mL	0.75	0.78	0.70	0.70	0.70
1 µg/mL	0.79	1.00	0.85	0.79	0.74
1.5 µg/mL	0.97	0.98	0.84	0.83	0.73
2 µg/mL	0.83	1.05	0.70	0.74	0.70
2.5 µg/mL	0.89	0.95	0.70	0.78	0.70
3 µg/mL	0.79	0.83	1.03	0.88	0.76
3.5 µg/mL	0.78	0.83	* 1.19	0.88	0.77
4 µg/mL	0.77	0.93	0.97	0.83	0.80

Table S1. *Cont.*

Dose	<i>E. coli</i>	<i>L. innocua</i>	<i>S. mutans</i>	<i>C. albicans</i>	<i>P. aeruginosa</i>
Extract #10 Hexane					
500 µg/mL	0.72	0.83	0.70	0.70	0.70
1 µg/mL	0.84	0.98	0.97	0.81	0.80
1.5 µg/mL	0.84	0.91	1.02	0.83	0.76
2 µg/mL	0.83	0.93	* 1.11	0.84	0.78
2.5 µg/mL	0.84	0.84	0.72	0.88	0.76
3 µg/mL	0.97	0.91	0.70	0.99	0.77
3.5 µg/mL	0.81	0.90	0.88	0.96	0.75
4 µg/mL	0.81	0.86	0.88	0.83	0.75

Numerical data is represented in centimeters (cm) and corresponds to the halo diameter for each disc and extract sample. The diameter of the filter discs measured 0.7 cm, therefore measurements in excess of 7 cm will indicate an effect of the extract and dose on a particular microorganism. Diameters labeled with * correspond to the most significant growth inhibition effects. All standard deviations were found to be <10%, and $p < 0.05$.