



24 JANUARY 2011

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North Industrial Area
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Report No. 18046

Susceptibility of *Helicobacter pylori* bacteria to "Gastomel" product of Zuf Globus.

Experimental procedures

1. Product to be examined: A. Gastomel 1 and B. Gastomel 2, lot 170, supplied by "Zuf Globus Ltd" on 10-11-10
2. Bacterial strains examined:
Helicobacter pylori ATCC 43504
Lactobacillus plantarum ATCC 14917 (used as control)
3. Methods: Cylinder plat method according: AOAC 1984. Drugs in feed, pp 814-816.
2. NCCL (7th supplements for M100-S17)
4. *L. plantarum* was used as negative control bacteria representing probiotic useful bacteria found in the gastro-intestinal tract of human.
5. Bacterial inoculum of 10^6 - 10^7 CFU inoculated on top of solidified agar medium in 90 mm Petri dish.
6. Culture conditions: Media used: TSBA +5% Sheep blood (Hy labs, Israel) for *H. pylori* and MRS Agar for *L. plantarum*. Incubation at 37°C in microaerophilic jar.
7. The product samples were added (0.3 ml) into metal cylinder loaded onto inoculated agar medium.
8. As a control, the inhibition zones of defined antibiotics on paper disc (7 mm) added on top of inoculated agar medium were also determined for each of the bacteria, in same the conditions.
9. The experiment was performed twice, with 4 replicas for each treatment.
10. As a control, bacteria were grown in similar conditions without honey or antibiotic.
11. Inhibition zone is represented as radius (mm)

Results

- A. All (with or without out "Gastomel" or antibiotics) demonstrated normal growth of both strains on the specific media and in the specific conditions.
- B. Nearby the product cylinder, the color of the medium changed, and inhibition zones of 11 and 12.3 mm diameter was obtained for Gastomel 1 and 2 respectively.
- C. Gastomel 2 had slightly higher inhibition activity against *H. pylori*.
- D. The inhibition of *L. plantarum* was not significant in the experimental conditions.
- E. The effect of 6 different standard antibiotics, serving as references, on the growth of both strains was obtained.



Table 1

Inhibition zone in radius (mm) for each bacterial strain and each antibiotic or "Gastomel" product (Gastomel 1 and Gastomel 2, lot 170).

Antibiotics/ concentration per disc	<i>Helicobacter pylori</i>	<i>Lactobacillus Plantarum</i>
Gastomel 1 (lot 158)	11	3.5
Gastomel 2 (lot 170)	12.3	4.7
Ampicillin 10Mcg	20	20
Nalidixic 30Mcg	0	1.3
Oxytetracycline 30Mcg	25	10
Chloramphenicol 30Mcg	14.7	10
Chloramphenicol 5Mcg	6.6	5
Streptomycine 10Mcg	10	1

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