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THE ESTIMATION OF EFFECTIVENESS OF VIVATAP FOR PURIFICATION AND DESINFECTION OF TAP WATER

made for MultiPharma Sweden AB, Göteborg
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I. Materials

1. the sachets of VIVATAP made by Health By Nature N-4800 Arendal,
2. the bacterial strains *Escherichia coli, Pseudomonas aeruginosa, Salmonella typhimurium.*

II. Methods

For the estimation of effectiveness of VIVATAP for purification and desinfection of tap water the samples of bacterial cells containing about 10^2 CFUs per 2 liters of sterile destiled water were prepared. One sachet of VIVATAP was put into each sample. The estimation of antibacterial activity of VIVATAP in the samples was determined after 5 minutes i 12 hours of exposure. The number of bacteria was counted by using of membrane filtration method (FM). The membranes were incubated on the specific selective agar media at 37^{o}C for 48 h.

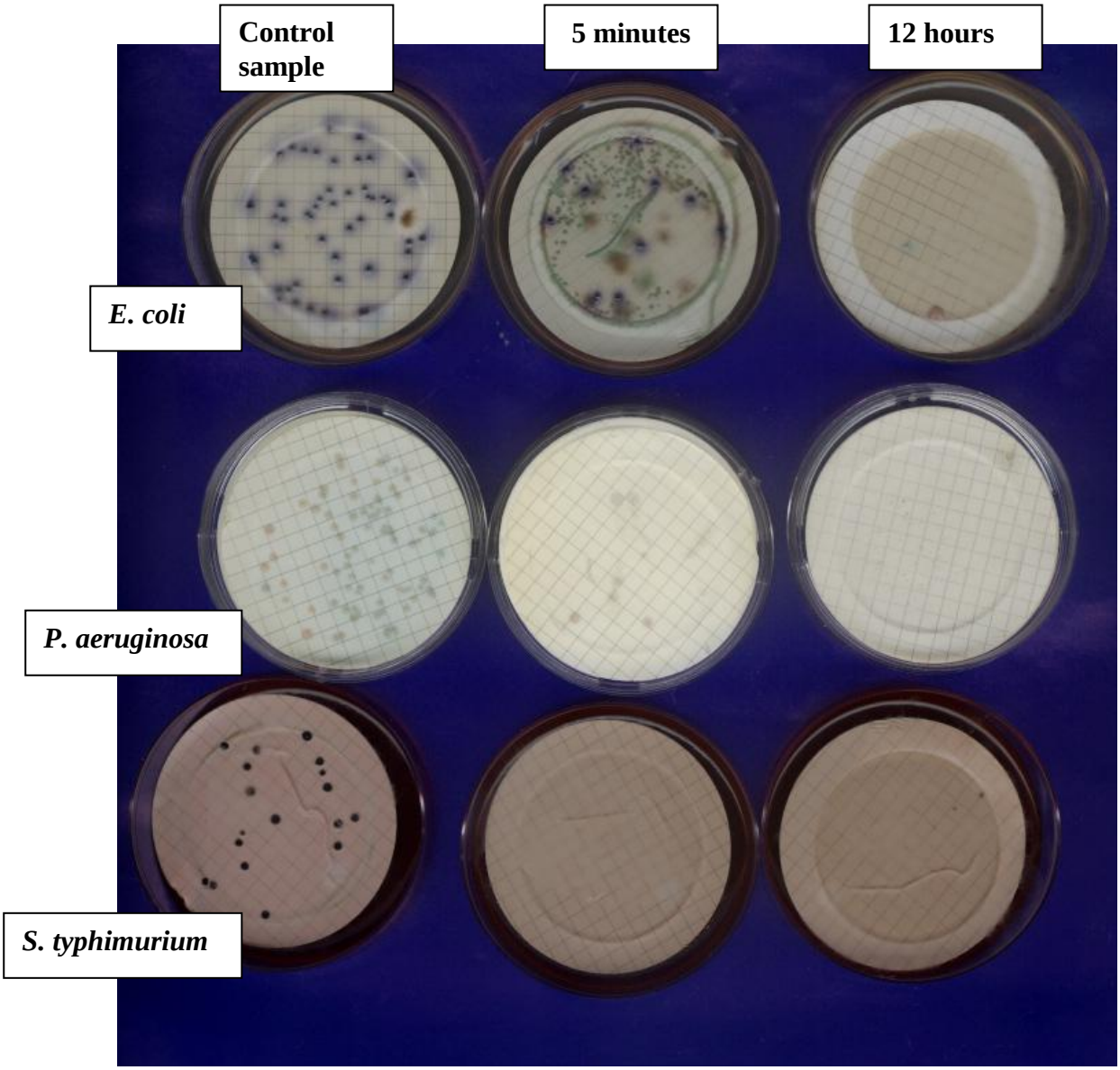
The suspensions of bacterial cells without sachets were the control samples.

III. Results

The results were presented in the table and the photo:

Control strain	Selective agar medium	Survival of cells [%] after contact with VIVATAP		
		Time of activity		
		0 min.*	5 min.	12 h
Escherichia coli	Chromocult Coliform Agar (Merck)	100	20	0
Pseudomonas aeruginosa	Drake medium (Millipore)	100	40	0
Salmonella typhimurium	XLT4 (Merck)	100	0	0

*control sample



IV. Conclusions

1. For all bacterial strains, after 12 h exposure to VIVATAP, the presence of living cells wasn't observed. This fact may confirmed antibacterial activity of the sachets.
2. VIVATAP was highly effective (100%) after 5-minutes exposure against strain *Salmonella typhimurium* only. The reduction of living cells of *Escherichia coli* and *Pseudomonas aeruginosa* was respectively 80% and 60%.
3. It is necessary to determination the minimal time of exposure to VIVATAP for obtaining 100% reduction of *Escherichia coli* and *Pseudomonas aeruginosa* cells.

IV. Additional Notes

1. Results of our experiments are preliminary, because we were unable to repeat them.

2. Moreover it was stated, that after incubaction at 37^{o}C for 48 h on the plate with Chromocult Agar (medium for *E. coli*) spoilage microflora was observed. On the membrane there were characteristic violet colonies of *Escherichia coli* and numerous greenish colonies of *Pseudomonas* sp. too. This fact permits the suggestion, that the sachets were the source of this contamination.
   In order to avoid the contamination of tap water by spoilage microflora, it is necessary to control the purity of VIVATAP sachets.

Experiments made and results compiled by

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