

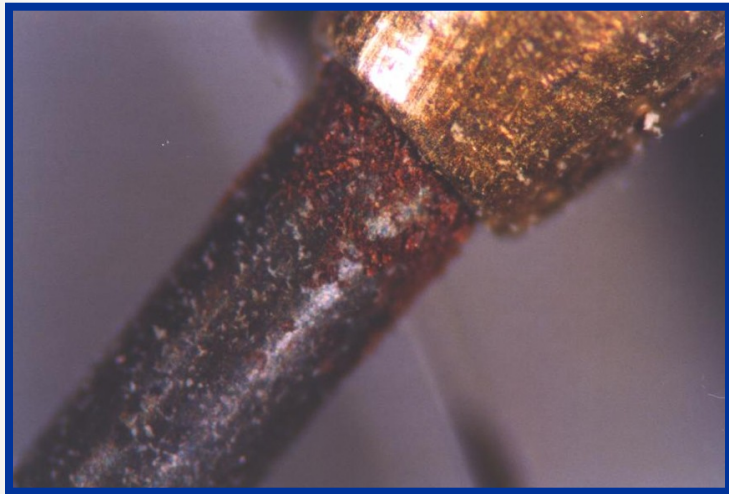


**State research centre of Russia - Institute for Bio-Medical problems Russian
academy of sciences**

**Experimental test of new express-method of microbiological
control of hermetically closed object surface statement in
«MARS 105» experiment**

Suprunova Yu., Zarubina K., Poddubko S., Novikova N.

Microbiological corrosion of signalling device of smoke



Device for regular method



Internal view



External view


Device for new express-method



Minithermostat «Microflora»



Slide

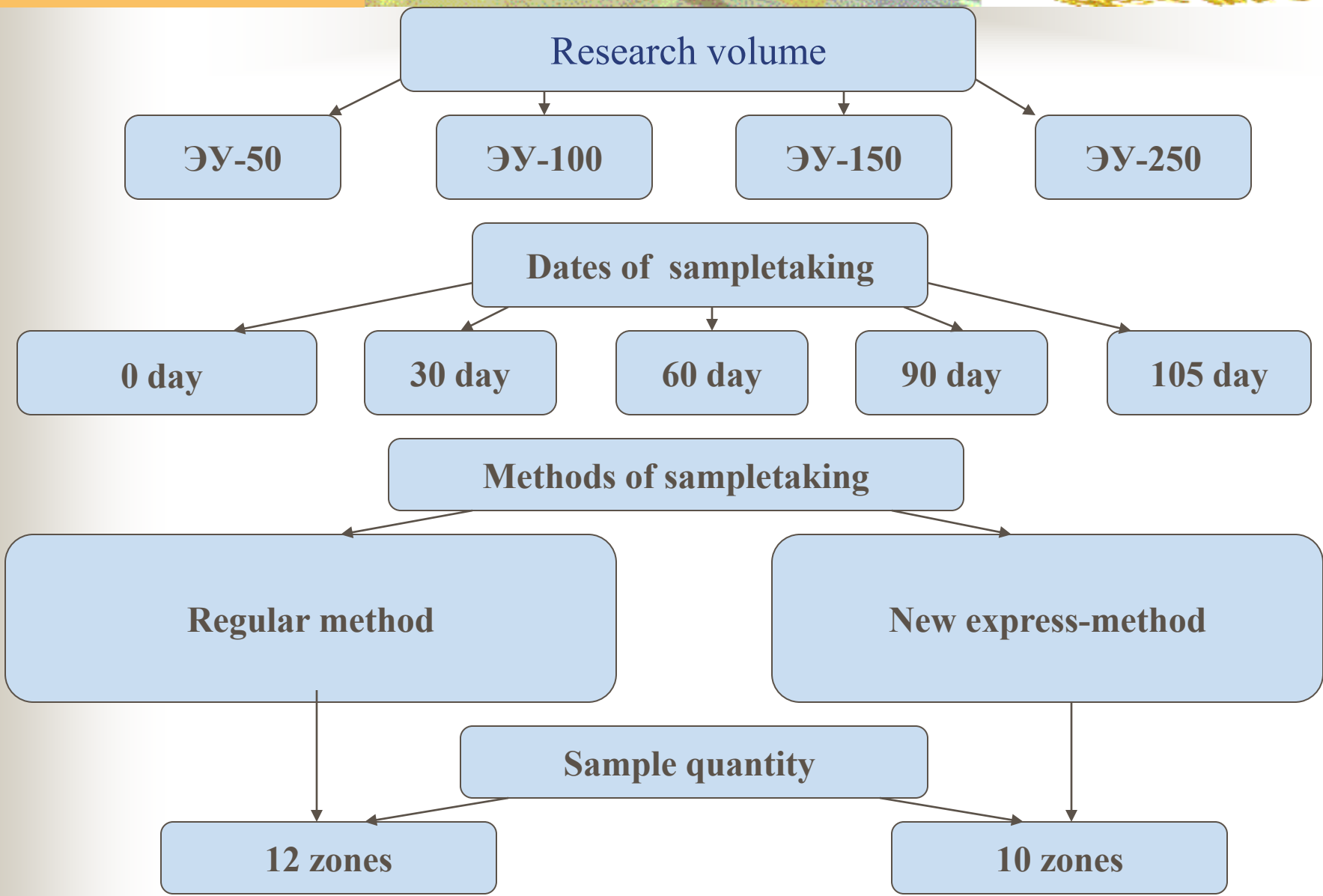


Purpose of research – test of new express-method of microbiological control of hermetically closed object surface statement in «MARS 105» experiment



Issues of research

1. Test of new express-method of microbiological control of hermetically closed object surface statement in «MARS 105» experiment
2. Comparative analysis of regular method and new express-method
2. Evaluation of specific structure and quantitative structure of bacterial flora in the experiment of «MARS-105».



RESULTS

9 species of bacteria are found

Of them

Bacteria of 4 groups of pathogenicity

Klebsiella pneumoniae

Stenotrophomonas maltophilia

Ochrobactrum anthropi

Acinetobacter

Acinetobacter lwoffii

Pantoea agglomerans

Table 1. Specific structure of bacteria at zone 8, EU-250 storehouse of clothes

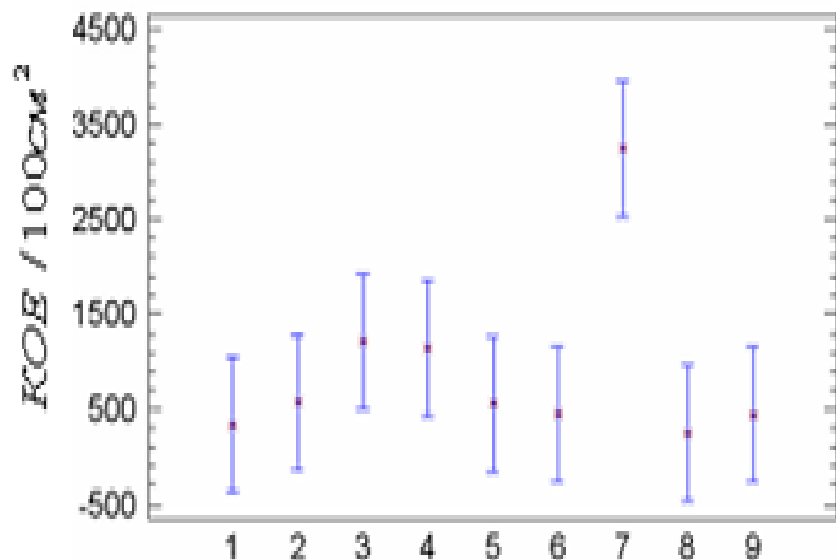
Microorganism	0 day		30 day		60 day		90 day		105 day	
	I	II	I	II	I	II	I	II	I	II
Staphylococcus sp.	Green		Green	Orange	Green	Orange	Green			Orange
Micrococcus sp.	Green		Green		Green	Orange			Green	
Bacillus sp.	Green		Green	Orange	Green			Orange	Green	Orange
Corynebacterium sp		Orange		Orange	Green			Orange		

I – sample taking by new express-method

II – sample taking by regular method

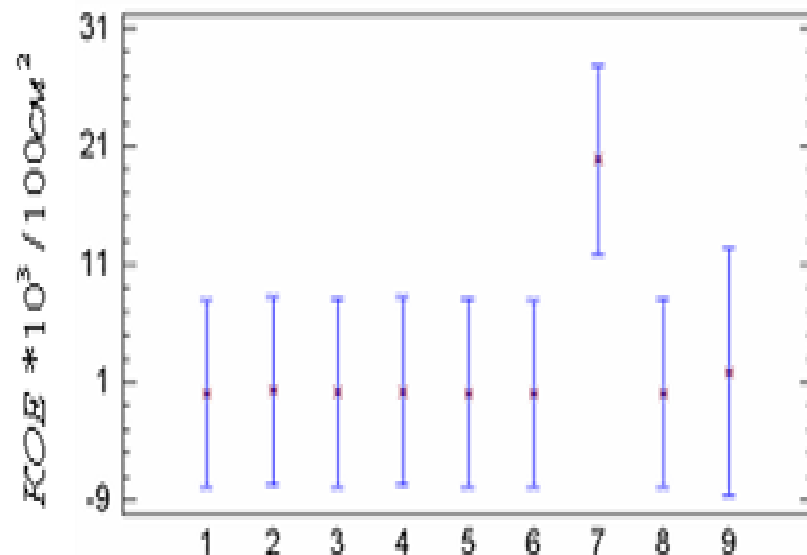
Table 2. . Specific structure of bacteria at zone 1, EU-100 Bathroom

Microorganism	0 day		30 day		60 day		90 day		105 day	
	I	II	I	II	I	II	I	II	I	II
Staphylococcus sp.			Green	Orange	Green	Orange				
Bacillus sp.			Green		Green				Green	Orange
Micrococcus sp.					Green		Green	Orange		
Corynebacterium sp							Green		Green	Orange
Klebsiella pneumonia							Green	Orange	Green	Orange



Точки отбора проб

A.

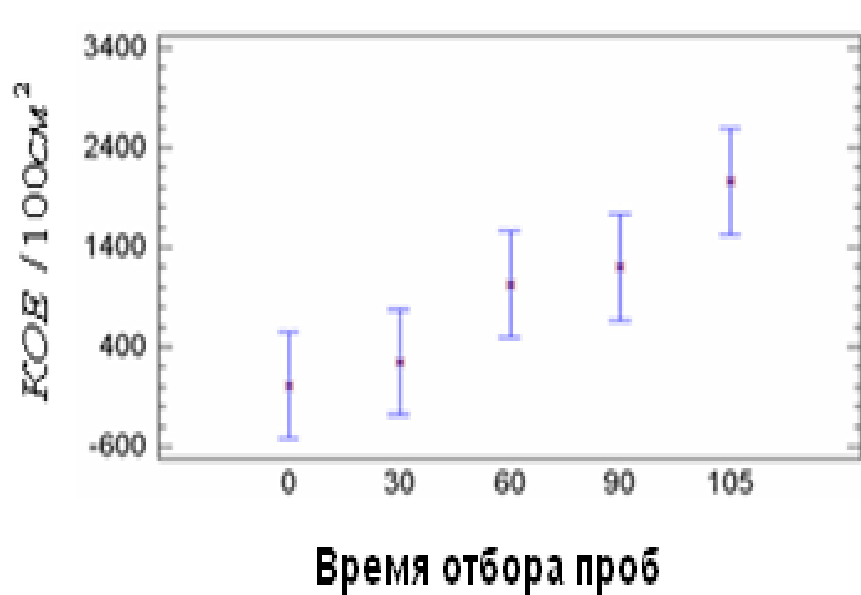


Точки отбора проб

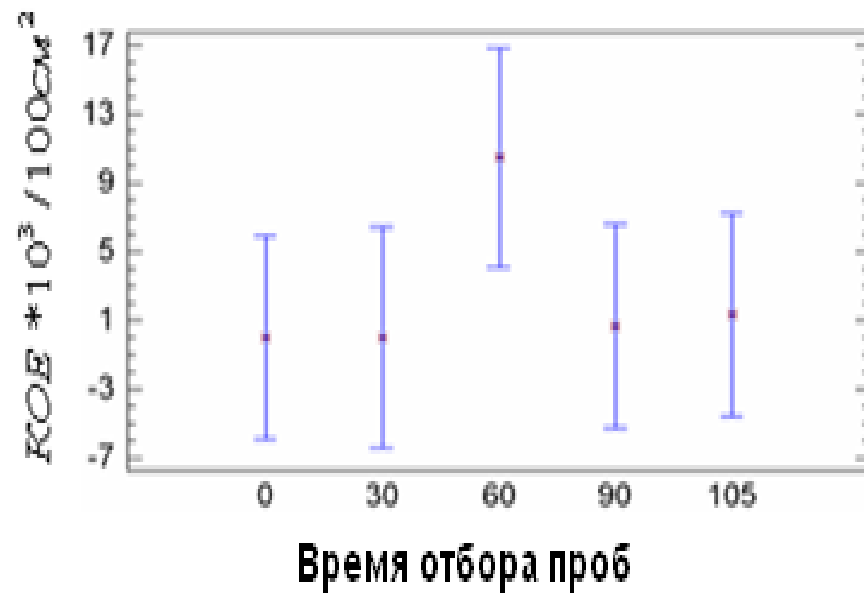
B.

Average value of quantify KOE/100cm² and 95% confidential intervals

A. – new express-method, B. –regular method



A.



B.

- Average value of quantify KOE/100cm² and 95% confidential intervals
- A. – new express-method, B. –regular method



Conclusions

1. Specific structure is increased in time
2. Specific structure are inreached of medical importance bacteria
3. Specific structure is constant in time in zones with minimal crew contact. . Specific structure are inreached in time in zones with maximal crew contact.
4. New express-method is successfully tested and recommended for use.