podvesky Limit drummer in one period oscillations. Novaya proposals Constructions podvesky drummer, kotoraja daet Ability realyzovыvat polychastotnыy regime movement. Created laboratornaya model dvohmassovoy эlektromahnytnoy shock vybratsyonnoy installation with magnetic podveshennoy Constructions drummer.

Keywords: polychastotnыy mode oscillations, shock vybratsyonnaya setting, magnetic podveshennaya Constructions drummer

Annotation.*The problem to create poliharmonic vibration conditions of work platform electromagnetic vibroimpact machine for concrete compression was described. Rational mathematic equation of suspended impactor springiness within one period of oscillation was determined as a result of theoretical investigation. The new suspended impactor design which gives a possibility to realize poliharmonic vibration conditions was proposed. The laboratory model two-mass electromagnetic shock-vibration machine with magnetically suspended construction of impactor was created.*

Key words: ***poliharmonic vibration conditions,shock-vibration machine, magnetically suspended construction of impactor***
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RESEARCH TRAINING SYROVYNYDO BIOTECHNOLOGY MECHANICAL EXTRACTION POLISAHARYDIVDLYA MUSHROOM PRODUCTION MIKOBIOPREPARATIV

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Abstract. *Studied engineering approaches to machining raw performance crusher, fractional composition of fungal biomass and proposed experimental variable sieve crusher, which provides requirements for the preparation of mushrooms biotechnology extraction of fungal polysaccharides.*

Keywords: biomass mushroom, mushroom, grinding, mikobiopreparat, fruit body, faction, dimensions, weight

Formulation of the problem. For biotechnology production mikobiopreparativ proposed use of fruiting bodies afiloforalnyh tree destroying fungi. One of the main manufacturing operations are grinding production mikobiopreparatu fruiting bodies of these fungi in order to

optimize the preparation of fungal biomass for extraction to obtain fungal biopolymer, as the main active ingredient mikobiopreparatu [1, 3, 4].

Analysis of recent research. Conducting a pilot study involves the examination process of grinding, in order to determine the mode of crushing unit, variable diameter holes sieves for optimal fractional composition of fungal biomass for maximum performance crusher [2]. Key indicators optimize efficiency operation crushing mills are at different holes sieves and variable size fractions of the original biomass.

The purpose of research - determine the impact of variables sieves of different diameter and milled fruiting bodies of fungi (Fomes fomentarius (L. Fr.), Gill.) on productivity and uniformity of fractional crushed fungal biomass.

Materials and methods of research. Prototypes - fruiting bodies of the fungus (Fomes fomentarius (L. Fr.), Gill.) Collected from birch,

previously been dried in room-dry conditions to operational humidity of 11-15%.

To justify the technological process of grinding operations in search of mushrooms experiments investigated crusher industrial production, which did not give a positive result. The most effective was the use of the crusher production research and pilot plant equipment non-standard "small-sized crusher DM. 00.00.000 RЭ. "

In preparing mushrooms for crushing fruit bodies of more than 200 · 80 · 80 mm rozrubuvaly ax on prototypes freely pass through bootable compact crusher neck DM. 00.00.000 RЭ. The changeable parameters mills were kolibrovochni lattice diameters of 4, 6, 8 mm (Fig. 1).

Fig. 1. General view of variable calibrated grids 4 - sieve diameter 4 mm; 6 - 6mm diameter sieve; 8 - 8 mm diameter sieve.

Frequency crusher rotor with fixed knives with installed capacity of 3.0 kW engine was 1,500 rev / min.

Prototypes of fruiting bodies of fungi (Fomes fomentarius (L. Fr.), Gill.) Uniform chunks downloaded through the neck into the loading chamber. After starting the machine simultaneously with the loading of samples prepared mushrooms turned on the stopwatch. The experimental ranges were selected to continue the process of grinding and after the time set for the weight of the finished powdered biomass were determined grinding performance and visual quality grinding set.

Results. The criterion for assessing the operation served grinding performance and the presence of shredded biomass particles tubular heminoforu not broken. Samples were crushed biomass in Fig. 2.

Fig. 2. Sample chopped fruiting bodies of fungal biomass.

The results of experimental studies crushing performance shown in the Table. 1.

1. The amount of biomass chopped mushrooms with different diameter sieves variables.

№ p / p	Duration shredding sec	The weight of chopped mushrooms, kg		
		d = 4 mm	*d = 6 mm*	*d = 8 mm*
1	900	1.97	3.60	5.17
4	1800	3.97	7.30	10.37
7	2700	6.00	11.03	15.57

10	3600	8.17	14.77	20.90

The analysis of experimental results presented in the table shows productivity, which can be achieved by grinding the fruiting bodies of fungi (Fomes fomentarius (L. Fr.), Gill.) Birch collected and brought to the appropriate humidity.
Given the maximum performance mushrooms grinding mills using experimental results obtained were the starting point for determining the effect on the maximum size of the biomass allocation of active ingredient glucans and melanin in the fungal biomass extraction.

To study conducted studies of fractional crushed fungal biomass variables of different diameter sieves. For the selection of fractions was 100 g mushroom sample on your desktop visually selected pieces of fruit bodies larger than 3 mm (Fig. 3).

Fig. 3. Study prototypes for fungal biomass fractions.

The selected version control and weighed on laboratory scales and obtained the result recorded in the log. The results of experimental studies are shown in Table shredding. 2.

2. Value factions fungal biomass after shredding.

№ p / p	Bore holes alternating sieves, mm	Weight obtained factions g		
		to 3 mm	36 mm	38 mm
1	4	99.23	0.77	0.00
2	6	92.93	7.07	0.00
3	8	67.93	0.00	32.07

Analysis of the results obtained by experimental studies indicates that the application of a variable crusher sieve diameter 4 mm particles larger than 3 mm had studied in versions up to 1% of the mass of the test sample, while the application of variable diameter sieves 6 mm their

presence in the total reached 7.1%. Results of the study process of crushing at the crusher configuration variable diameter sieve 8 mm showed that the number of prototype particle fraction more 3 mm up to 32.07% and requires re-grinding.

Conclusion. Comparative analysis of the variable diameter sieves 4 mm,6 mm and 8 mm in the process of crushing the fruiting bodies of fungi (Fomes fomentarius (L. Fr.), Gill.) Birch collected and brought to a moisture content of 11-15% shows that the application sieve diameter 8 mm performance of the crusher - 20.9 kg / h and fractional composition of chopped mushrooms biomass particles ranging in size from 3 to 8 mm 32.07 is not much higher than the technological requirements. The use of variable diameter sieves 6 mm 23.3% crusher reduces productivity compared with variable diameter sieve 8 mmBut not broken presence fractional rate of particles larger than 3 mm less than 5% of crushed biomass. In the process of technological operations crushing recommended variable diameter sieve 6 mmThat is confirmed by experiments extraction of biomass.

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Abstract.*Yzuchena proyzvodytelnost grinder mill, fraktsyonnыy composition hrybnoy byomassы and obosnovanno variable эksperymentalnoy sieve grinder mill, kotoroe obespechyvaet yzmelchenye fungi.*

Keywords: hrybnaya byomassa, mushroom, yzmelchenye, mykobyopreparat, plodovoe Body, fraction, Dimensions, Weight

Annotation.*The productivity of crusher, factious composition of mushroom biomassy and grounded variable sieve of experimental crusher, which provides growing of mushrooms shallow is studied.*

Key words: mushroom biomassa, mushroom, growing, mikobiopreparat, fruit body, factions, sizes, mass shallow