OROL DENGIZI *ARTEMIA PARTHENOGENETICA* SISTALARINING ORGANOLEPTIK VA FIZIK-KIMYOVIY KO‘RSATKICHLARINI TADQIQ QILISH

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Annotatsiya. Ushbu maqolada Orol dengizi *Artemia parthenogenetica* sistasining asosiy organoleptik, texnik, kimyoviy, fizik-NLP\RYL\ NRµUVD WDGTLT TLOLQJDQ $UWHPLD VLVWDODUQLQJ RUROGDJL WDELDLM NLPH\RYLQLQJ RUWDFKD GLDPHWUL kattaligi (diametri) 236.3 ¿km, WRµOLT VLVWDODUQLQJ ixkisistalarning miqdori 74% sista TREL JµL \RULT VLVWDODU ˇ JU -236,3 ^bZf XPXPL\ RTVLO PLTGRUL ″ \RJµGRJDQL JL″ KZ 0.45%, P 2.52% ni tashkil qilishi aniqlandi. Ushbu parametrlar ularni tijorat qiymatini va jahon akvakultura bozorida sotish imkoniyatini belgilaydigan asosiy NRµUVDWNLFKGLU

Kalit so‘zlar. *Artemia parthenogenetica*, sista, ummiy oqsil, \RJµGiRxitin, xitozan, kalsiy, fosfor, kul miqdori

Аннотоция. < ^Zgghc klZlv_ bamq_gu hkgh\gu_ hj l_ogbq_kdb_ obfbq_kdb_ obfbq_nkdab_dh ihdZaZl_eb iZjl_gh]_g_lbq_kdhc Zjl_fbb :jZevkdh]h fhjy K dZq_kl_gguo ihdZaZl_ejl_fbb kj_^gbc jZaf 236,3 ^bZf fdf ihegpub_kl-u˙ dhebq_kl\h `b-\ûo phk[hehqd-Z14pbkl jZklj_kdZ\rb_k-y˘pbkdhebq_kl\h pbkl \ ]k-230hc f luk kh^_j`Zgb_ h[s_]h [_edZ ″ `bjZ oblhaZgZb MklZgh\e_gh qlh ″ KZ ˇ iZjZf˘ljuWeyxlk hkgh\gufb ihdZaZl_eyfb hij_^_eyxsbfb bo dhff_jq \hafh`ghklv j_ZebaZpbb gZ fbjh\hf jugd_ Zd\Zdmevl

Ключевые слова. *Artemia parthenogenetica* pbklZ h[sbdc [_bejghklv oblbg oblhaZg dZevaphbecvgmhkkl\hj

Abstract. This article studies the main organoleptic, technical, chemical, and physicochemical parameters of the cysts of Artemia parthenogenetica from the Aral Sea. The most important quality parameters of Artemia cysts are the average size (dia PHWHU RI ˇ ¿P WKH SHUFHQWDJH RI ZKROH cysts is 74%, the percentage of cyst shells is 14%, the percentage of cracked cysts is 6%, the number of cysts in 1 g of dry mass is 220-230 thousand, the total protein content is 49.2%, the percentage of fat is 13.1%, the percentage of chitin is 7.5%, the percentage of chitosan is 3.9%, the percentage of Ca is 0.45%, and the percentage of P is 2.52%. These parameters are the main indicators that determine their

commercial value and the possibility of selling them on the world aquaculture market.

Keywords. *Artemia parthenogenetica*, cyst, total protein, fat content, chitin, chitosan, calcium, phosphorus, ash content

KIRISH. Qisqichbaqasimon Artemia butun dunyoda, Antarktidadan tashqari, GHQJL] VXYL YD WX]OL NRµOODUGD XFKUD\GL 8 JHRJUDI WRPRQLGDQ 8UPL\D NR‰OLGD TD\G HW *Shlyosser* ikkala jinsni aniqladi [2]. 2001 yilda *Martin* va *Davis* Artemia turning tDNVRQRPLN KRODWLQL LVKODE FKLTGLODU > NH\LQFKDOLN R‰WND]LOJDQ ELRNLP\RYL\ VLW qilingan turlarning tarqoqligini tasdiqladi. *Artemia parthenogenetica* bu turlarga WDDOOXTOL ER‰OPDJDQ SDUWHQRJHQHWLN LU guruhiga birlashtiriladi [4]. 6KDUTL\ (YURSD YD 2VL\RGD \D qisqichbaqalarning aksariyati quyidagi turlardan biriga tegishli - *Artemia tunisiana, Artemia species* yoki *Artemia parthenogenetica* 2[LUJL DWDPD R‰]DUI IDUTODUJD HJD ER‰OJDQ ELU TDWRU SRSXO\DW HUNDNODU LVKWLURNLVL] NR‰SD\LVK PXQNL iqlimsh qiymat L MLKDWLGDQ XODUQLQJ EDUFKDVL R‰UWDV NLFKLN WXUODUQL DQLTODVK NR‰SLQFKD MXGD \DVKDVK VKDURLWODULJD TDUDE W[5]Vkotlengizi R‰U havzasida qisqichbaqasimon *Artemia parthenogenetica* Barigozzi 1998 yil oxirida SD\GR ER‰OJDQ YD PXYDIIDTL\DWOL NRµSD\LE E qisqichbaqasimonlarning yagona tirik turi hisoblanadi [6].

Artemia sistalari tarkibida 40% dan ortiq umumiy oqsil va biologik faol PRGGDODU PDYMXG ERµOLE XQGDQ IR\GDODQI (BFQ) larni, funksional oziq-ovqat mahsulotlarini yaratishga imkon beradi. Bundan tashqari Artemia sistalaridan foydalanish veterenariya preparatlari, parfyumeriya, kosmetologiya va gigiyena vositalari samaradorligini oshirishda muhim ahamiyat kasb etadi.

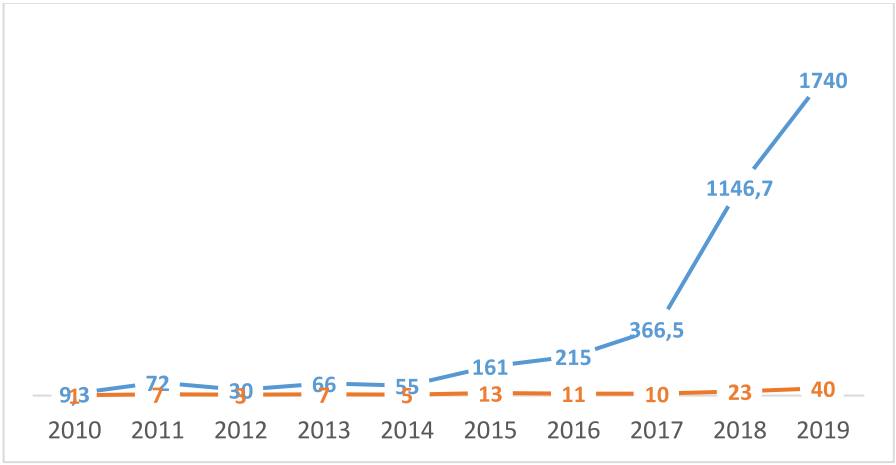
TADQIQOT USULLARI. Artemia sistalarini GOST 7631-2008 yordamida RUJDQROHSWLN YD [7], GOST 13496.4-93 yordamida namlik miqdori aniqlanadi [8]. Xar bir namunani GOST 26226-95 yordamida kuydirish pechida 600-700º C da kuydirish orqali kul miqdori aniqlanadi [9]. Umumiy oqsil miqdori GOST 13496.4-93 yordamida Keldal usulidan foydalaniladi. Keldal usuli umumiy azotni aniqlaydi va azot miqdoriga qarab umumiy oqsil miqdori hisoblab WRSLODGL > @ 8PXPL\ \RJ‘GLQL JR\G‘QLJR\ 2007 DQL‘E L ek VWUDNVL\D TLOLE DQLTODQDGL > @ $UWHPL FKLTLVK PLTGRULjmhe_vghh^]bndZa\d_rdp\Zgby pbkl jZq

OHDFK ˙ ˝ b dhjj_dlbjh\dZ d\hlu bo \ueh\Z k mq_lh
b qbklhlu [bhkujvyªRGRLNOTLRpHWDQPD \RUGDPLGD

TADQIQOT NATIJALARI VA MUHOKAMASI. *µDUEL\ 2URO [D
VKRµUOaraJasil 2009- yil GLOJD NHOLE ˆ Å JD NRµWDUL
zooplanktonlarning dominat turiga aylandi. 2010 yilga kelib Artemia
parthenogenetic D VLVWDODUL \LJµLE ROLVK GDUDMDVL
2µ]EHNLVWRQ 5HVSXEOLNDWL VDYDW\L%µLEQ]RU
$UWHPLD VLVWDODULQLQJ \LOGDQ \LOJD RUWLE
\LJµLE ROLVKLQLQJ PDKDOOLY GD NRµSD\WLULE EORUL 1D
VKXJµXOODQDGLJDQ PDKDOOLY GD [RUDO MDV. WD
4X\LGDJL UDVPGD 2URO GHQJL]LGDQ $UWHPLD V
keltirilgan (1-rasm) hamda Orol GHQJL]LQLQJ JµDUEL\ TLVPLGD
VLVWDVL ELODQ VKXJµXOODQDGLJDQ WDVVLN
yillar kesimida keltirilgan (1-grafik). Artemia sistasi RYODVK \LJµLVK
GHQJL]LQL RµUJDQL-2019) 913 tonnadan 1740,0 tonnagacha
Rµ]JDUJDQ

1-grafik

Artemia sistalarini yig‘ib olish yillar kesimida



A. sistalariga ajratilgan kovta — davlat ro‘yxatdan o‘tgan korxonalar

$UWHPLD VLVWDODUQL RYODVK \LJLVKQLQJ
6XY VDWKLGDQ
'HQJL] TLUJµRTLGDQ

AUWHPLD VLVWDODULQL \LJµLVKQLQJ VDPDUD
gidrologik xususiyatlariga qarab individualdir. Orol dengizida sistalarni ovlash,
\LJµLVK YDTWL KDU \LOL PDYVXPQLQJ LTOLP
masalan, harorat hamd D VKDPROQLQJ \RµQDOLVKL YD NX
chiqishi boshlanishini belgilaydi. Artemia sistalarining eng muhim sifat
NRµUVDWNLFKODUL EX XODUQLQJ RµOFKDPL G

WRµOLT WDUNLEOL HPUL\RQODUL GDQ RQL QDGLJ
ommabop sistalar diametri 220-230 mkm tashkil qiladi. Tijorat uchun unchalik
TLPPDW ERµOPDJDQ (URQ287 LVWDODUL GL22P HWU
280mkm ni tashkil qiladi. Artemia sistalarining chiqish darajasi, ularni tijorat
qiymatini va jahon akvakultura bozorida sotish imkoniyatini belgilaydigan asosiy
NRµUVDWNLFKGLU 2URO GHQJL]L $UWHPLD VL
kimyoviy, fizik- NLP\RYL\ NRµUVDWNLFKODULQL TX\LGD
jadval).



1-rasm. G‘arbiy orol xavzasidagi Artemia sistasini yig‘ish zo‘nasi

1-jadval

Artemia sistalarning organoleptik va fizik-kimyoviy ko‘rsatkichlari

‰	. RµUVDWNLFK QR	Orol dengizi Artemia sistasi
1	7DVKTL NRµULQL	Artemia VLVWDODUL ELU ERWLT \DULP VKDUJD diametri 236,3 ¸km dan iborat
2	Rangi	RFK MLJDUUDQJGDQ W
3	Hidi	Baliq hidli
4	Namlik massa ulushi %	50-60 (quritilgandan keyin 10-15%)
5	Begona TRµVKLQPF KD	-
6	ERµVK TRELTPODU	14,0
7	TRliq sistalar miqdori %	80,0
8	Tirik sistalar miqdori %	74,0
9	Yoriq sistalar miqdori %	6,0
10	Naupliy chiqishi %	74,0
11	kattaligi (diametr) ¸km	ˇ h l ^ ¸km)ˇ
12	1gr quruq massadagi sistalar soni	220-230 ming
13	Oqsil %	49,20

14	< R J¼µ	13,16
15	Xitin %	7,5
16	Xitozan %	3,95
17	Kul %	12,88
	Mineral moddalar:	
18	K Z	0,45
19	J	2,523

6LVWODUQLQJ KLGL EDOLT KLGL GHQJL]GDQ TXUXT VKDNOGD KLG SDVW Rµ]LJD [RVGLU 6LV namlik 50-˘ JDFKD ERµOVD X WRµT vapasi namlikda qu JD jigarrangga ay ODQDGL 'HQJL]GDQ \LJµLE 80% namlikka VL ega. Tahlil qilish uchun ular keyin quruq havoda, 10% namlikgacha quritiladi.

$UWHPLD VLVWDODUL QQJ PXKLP VLIDW (diametri) 236.3 ¸km, WRµSODU sistalar 80%, tLULN VLVWDODU PLTGRU 14%, yoriq sistalar 6%, 1gr quruq massadagi sistalar soni 220-230 mingni, umumiy RTVLO PLTGRUL ˝ \RJµGRUOLJL [LWLQ 2.52% ni tashkil qilishi aniqlandi. Bu ko µUVDWNLFKODU $NYDNXOW DKDPL\DW HJD ERµOLE tijorat qiymatini oshiradi. VWDVLQLQJ

XULOSA. Orol dengizi Artemia sistalarining organoleptik va fizik-kimyoviy NR‰UVDWNLFKODUL rangi, hidi, namligi, kattal LJL WRµOLT YDWRUTREV FKLTLVK GDUDMDVL RTVLO \RJµGRUOLJL NX 7D¶NLGODVK MR\L]NL MDKRQ ER]RULGD 230 ¸km RP tashkil qiladi. Orol dengizi Artemia sistalarining Rµ ularning (diametri) 236.3 ¸km ni tashkil qilib, Eron (260-287 ¸km) va Xitoy (233-280 ¸km) sistalaridan kichik HNDQOLJLQL NRµULVKLUPLT]XPXKTNLDQVDXDHVDRµSUF anglatadi va tannarxini oshiradi. Ushbu parametrlar ularni tijorat qiymatini va jahon akva NXOWXUD ER]RULGD VRWLVK LPNRQL\DWLQL

FOYDALANILGAN ADABIYOTLAR

0RQURLJ Ï 1DYDUUR - $PDW) *RQ]iOH] Enrichment of Artemia nauplii in essential fatty acids with different types of liposomes and their use in the rearing of gilthead sea bream (Sparus aurata) larvae. Aquaculture 251, 2006. ±P. 491 ±508.

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0 D O D Q G i $ 5 Q Q H V W D G i ,)\KQi + -soluble% H U vitamins in natural plankton (copepods) during two consecutive spring blooms compared to vitamins in Artemia franciscana nauplii and metanauplii Marine Biology 136. 2000. ±P. 765-772

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ˇ E b l \ b g _ g d h j l E f B y \ h a _ j Z o A Z i Z ^ g h c K b [b j b E E : B E b l \ b g _ g d h ? ² = G h j h c k d h [b j k d ¸ G Z m ± Z 204. ˝]

7. = H K L ^ - ˇ · J u [Z g _ j u [g u _ h [t _ d l u b i j h ^ m d p b y F _ l h ^ u h i j _ ^ _ e _ g b y h j] Z g h e _ i l b q _ o k d h b Z a Z n b e q _ · = H K 3 ± 496.4- ˝ D H J F : D H F ; B D H J F : D H F ; B D H J F H < H ? F h k d \ Z K l Z f ^ Z j l b g n ± K j f · ^

9 = H K L -˝˝ ˇ ˇ F ? @ = H K M > : J K L < ? G G U C K L : G > : J L h i j _ ^ _ e _ g b y k u j h F h k a d h \ e Z u K l Z f ^ Z j l b g n ± K j f ·

10 = H K L - ˝ ˇ D h j f Z d h f [b d h j f f [Z b d h j f h \ h _ k F u j M h _ ^ u h i j _ ^ _ e _ g b y k h ^ _ j ` Z g b y Z a h l Z b F k k u j h \ Z h K j Z f ^ Z j l b g n 2011 ±K ·

11 = H K L -˝˝^ ˇ F _ l h ^ u h i j _ ^ _ e _ g b y k h ^ _ j ` Z g b y k u j h] K l Z f ^ Z j l b g n h j f ± K 2

12. < _ k g b g Z E 3 k g ` b g Z 7 2 0 _ l h ^ h e d Z g h j a h \ g l r j b \ Z g b y p b l j Z q d Z $ U W H P L D O H D F K · ˝ b d h j j _ d l b j h \ d Z d \ h n Z d l b q _ k d h c \ e Z ` g h k l b b q b k l h l u [b h k u j v y F _ l h ^ b G h \ h k b [b j k d ± C. 32.