



«BIOLER» LLP
Scientific & Manufacturing Enterprise

FOOD, FEED, PHARM. PHOSPHOLIPIDS. SUNFLOWER PHOSPHOLIPIDS TECHNOLOGY

QUALITY CERTIFICATE
 Dietary addition “Lecithin” from sunflower
 TUU 21.1-38873237-001:2013

Name of the examination by TUU 21.1-38873237-001:2013	Character and standard	Results
Outward appearance	Free flowing powder without inclusions	appropriate
Smell and taste	Without smell and taste. The presence of slight smell and taste of oil are permissible	appropriate
Color	From yellow-gray to yellow-brown	appropriate
Mass percentage of moisture, n/m	1.4	1.2
Mass percentage of oil, n/m	1.5	1.1
Peroxide amount of extracted oil, mmol/kg ½O ₂ , n/m	7.0	7.0
Acid amount, mg KON/g, n/m	24.0	15.0
Mass percentage of substances indissoluble in toluene, n/m	1.5	0.6
Mass percentage of phospholipids, n/l	95.1	97.1
pH 1% water solution	6-7	6.4
Maintenance of toxic elements, mg/kg, n/m:		
lead	0.1	< 0.1
cadmium	0.05	<0.039
arsenic	0.1	< 0.1
mercury	0.02	< 0.0145
Aflatoxin B1	0.005	< 0.005
Microbiological data:		
E coli in 1 g	absent	appropriate
Salmonella in 10 g	absent	appropriate
S. aureus in 1 g	absent	appropriate
Radionuclides, Bk/kg, n/m		
¹³⁷ Cs	150	< 7.0
⁹⁰ Sr	50	< 15.2

The product corresponds of requirements of TUU 21.1-38873237-001:2013.

Guarantee term of keeping: min 12 months after production when stored in original packages at a cold and dry place.

Deputy Director on Research

Dr Andrey Glukh