

GROUP OF COMPANIES










Made  
in  
Ukraine



# SOIL

## reasons of soil degradation




-  heavy irrigation contributes to salinization of the soil;
-  loss of organic matter;
-  excessive use of pesticides and agrochemicals;
-  irrational use of sown areas;
-  random cattle grazing;
-  wind and water erosion due to deforestation;
-  soil pollution by industry;





# The HUMIC acids (humic and fulvic)

are essential to plants in three basic ways:

-  Humic acid enables plants to extract nutrients from the soil.
-  Humic acid stimulates and increases root growth.
-  Fulvic acid helps plants overcome stress, enhances the bio-availability of important trace minerals and their uptake.





# LEONARDITE



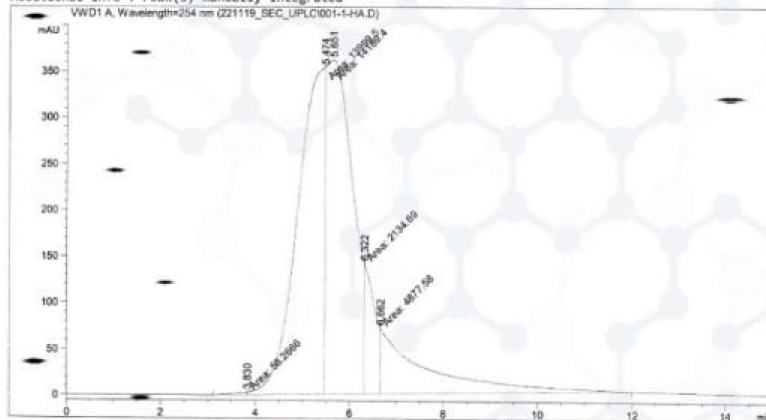
- Humic and Fulvic acids are the final break-down constituents of the natural decay of plant and animal materials.
- Humic matter is formed through the chemical and biological humification of plant and animal matter and through the biological activities of micro-organisms.
- Humic acids are complex molecules that exist naturally in soils, peats, oceans and fresh waters. The one source of humic acids are the sedimentation layers referred to as **LEONARDITE**.
- The decomposition of concentrated organic HUMIC AND FULVIC acids is a lengthy process taking millions of years in the natural environment.

The content of HUMIC and FULVIC acids in NATURAL sources (%)

Leonardite	65-85
Black peat	10-40
Sapropel	10-20
Brown coal	10-30
Humus	5-15
Compost	2-5
Soils	1-5
Sludge	1-5
Coal	0-1

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 Acq. Operator : Луїв Володимир Seq. Line : 1  
 Acq. Instrument : Instrument 3 Location : 1  
 Injection Date : 22-Nov-19 10:50:06 Inj : 1  
 Inj Volume : 5.000 µl  
 Different Inj Volume from Sample Entry! Actual Inj Volume : 25.000 µl  
 Acq. Method : C:\Chem32\1\Methods\SEC UPLC SDS.M  
 Last changed : 22-Nov-19 10:48:38 by Луїв Володимир  
 Analysis Method : C:\Chem32\1\Methods\Glargine\_EurPh\_Daiso 4.6 x 150.M  
 Last changed : 22-Nov-19 11:21:47 by Луїв Володимир  
 (modified after loading)

Additional Info : Peak(s) manually integrated



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 Area Percent Report  
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Sorted By : Signal  
 Multiplier : 1.0000  
 Dilution : 1.0000  
 Use Multiplier & Dilution Factor with ISTDs

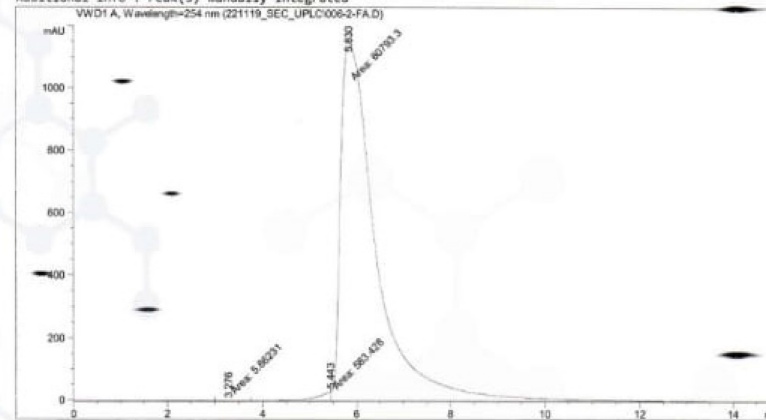
Signal 1: VWD1 A, Wavelength=254 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	3.830	MF	0.3306	58.26658	2.93701	0.1653
2	5.474	MF	0.6611	1.39995e4	352.95581	39.7043
3	5.651	MF	0.6555	1.41894e4	368.79709	40.2429
4	6.322	MF	0.1863	2134.69141	140.34209	6.0542
5	6.662	FM	1.1428	4877.58195	71.13234	13.8334



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 Acq. Operator : Луїв Володимир Seq. Line : 6  
 Acq. Instrument : Instrument 3 Location : 2  
 Injection Date : 22-Nov-19 12:24:02 Inj : 1  
 Inj Volume : 5.000 µl  
 Different Inj Volume from Sample Entry! Actual Inj Volume : 2.000 µl  
 Acq. Method : C:\Chem32\1\Methods\SEC UPLC SDS.M  
 Last changed : 22-Nov-19 10:48:38 by Луїв Володимир  
 Analysis Method : C:\Chem32\1\Methods\Glargine\_EurPh\_Daiso 4.6 x 150.M  
 Last changed : 22-Nov-19 12:48:51 by Луїв Володимир  
 (modified after loading)

Additional Info : Peak(s) manually integrated



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 Area Percent Report  
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Sorted By : Signal  
 Multiplier : 1.0000  
 Dilution : 1.0000  
 Use Multiplier & Dilution Factor with ISTDs

Signal 1: VWD1 A, Wavelength=254 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	3.276	MF	0.3592	5.86231	2.72010e-1	9.550e-3
2	5.443	MF	0.3212	583.42767	30.27314	0.9505
3	5.830	FM	0.8757	6.07933e4	1156.99622	99.0400

Totals : 6.13826e4 1187.54137





# About COMPANY

**DVINT LLC is a pioneer innovation company, producer of organic FERTILIZERS from leonardite**

The production line of our company allows us to produce organic fertilizers using natural properties of leonardite and high quality organic additives without using other chemicals elements and catalyzers.

Quality control at all stages of production process provides our customers with high-quality organic fertilizers with unified characteristics.

All products are manufactured under required LICENSES, under strict QUALITY CONTROL. The products are TESTED and ANALYSED by the authorized research centres and analytical laboratories.



## QUALITY CHARACTERISTICS

Parameters, measure	Test units	Test results
pH		9.55±0,2
Humified organic matter	%	88.2±0,1
Organic matter (on dry matter)	%	67.1±0,1
Total humic extract	gr/litre	160±0.1
Humidity	%	95.6±0,01
Phosphorus (P2O5)	%	0.2±0.004
Potassium, K2O	%	1.1±0,01
Calcium CaO	%	0.14±0,01
Magnesium MgO	%	0,04±0,002
Sodium	%	0,005±0,00044
Zinc	%	0.002±0,00044
Copper	%	0.0016±0,00044
Manganese	%	0.00109±0,00044
Iron	%	0,0059±0,00044
Cadmium	%	<0.0001
Nickel	%	<0.0001
Mercury	%	<0.0001
Molybdenum	%	<0.0001
Cobalt	%	<0.0001
Chromium	%	<0.0001

## LIQUID PREMIUM HUMIC



- 100% Organic fertilizer.
- Stimulates biological activity in soil.
- Increase yield up to 40%.
- Enhance nutrients uptake and increases the content of humus in soil.
- Reduce the toxicity of pesticide residue and prevents soil from contamination of heavy metallic ions as well as other harmful matters.
- Plant growth stimulant, promote root development and stimulates seed germination.
- Enhance the resilience of crops such as cold, drought, pest, disease and toppling resistance.
- Promotes healthier, stronger plants, enhance appearance and quality characteristics.
- Accelerates period of ripening up to 10 – 15 days.
- Accelerates plant cells division and promote growth.
- Can be mixed with all fertilizers.



# HUMATE POTASSIUM PREMIUM HUMIC POWDER

## Benefits of using

- 100% ecological friendly organic fertilizer.
- Soil Conditioner. Improve soil structure.
- Stimulates biological activity in soil.
- Enhance resistance to stress for soil.
- Plant growth stimulant.
- Promote root development and stimulates seed germination.
- Enhance nutrient uptake.
- Fertilizer efficiency promoter.
- Increase in yield up to 60%.
- Accelerates period of ripening up to 1-2 weeks.
- Enhance the resilience of crops such as cold, drought, pest, disease.
- Promotes healthier, stronger plants and enhance appearance.
- UV protection.
- Humate potassium can be mixed with all types of fertilizers and used for all crops.



CHARACTERISTICS	Installed by analysis
External appearance	Black Powder
Mass fraction of moisture, % no more	20,0
pH of 1% aqueous solution, pH	9,2
The mass fraction of Humic and Fulvic acids in recalculation on dry organic weight, % not less Including: Humic acid Fulvic acid	76-85  68-72 8-13
Mass fraction of phosphorus (P2O5) %	0,04
Mass fraction of nitrogen (N) %	0,25
Mass fraction of potassium (K2O) %	13,1
Mass fraction of calcium (CaO) %	1,91
Mass fraction of sulfur (SO3) %	2,12
Solubility %	96,8

# QUALITY CHARACTERISTICS

## HUMIGRAN



Parameters, measure	Test units	Test results
pH		10-12
Humic acids	%	18-21
Phosphorus (P2O5)	%	3,7-5,2
Potassium, K2O	%	19-23
Calcium CaO	%	9.4-10.9
Magnesium MgO	%	6.9-7.4
Sulphur SO3	%	5.2-6.7
Fe, B, Zn, Cu, Mn, Cr, Mo, Co		

- 100% Organic granulated fertilizer.
- Increase productivity up to 40% without extra use of fertilizers.
- Can be used for all types of plants.
- Restoration of soil fertility.
- Enhance nutrients uptake and increases the content of humus and macro-elements in soil.
- Reduce the toxicity of pesticide residue and prevents soil from contamination of heavy metallic ions as well as other harmful matters.
- Promotes healthier, stronger plants, enhance appearance and quality characteristics.
- Improve quality characteristics of crops and fruits.
- Prolonged effect of fertilizer.



# HUMIGRAN NPK



- Stimulates the creation of a strong root system.
- Stimulates the production of root exudes by enriching the soil microbiota.
- Increases permeability of plant's cell membranes.
- Promotes assimilation of nitrogen, phosphorus and potassium, and prevents the formation of nitrates.
- Increases the efficiency of enzymes.
- Increases the plant's resistance to diseases, pests and adverse weather conditions.
- Increases the content of vitamins and minerals in plants.
- Stimulates plant growth.
- Humic acids contained in the fertilizer intensify the synthesis of nucleic acids.

## QUALITY CHARACTERISTICS

Parameters, measure	Test units	Test results
Moisture	%	11,6
pH		6,7
Humic acids	%	30
Phosphorus (P2O5)	%	1,6
Nitrogen	%	3,32
Potassium, K2O	%	2,33
Fe, B, Zn, Cu, Mn, Cr, Mo, Co		





# Technological process of USING HUMIC ACIDS products for SOIL restoration and PLANTS growing

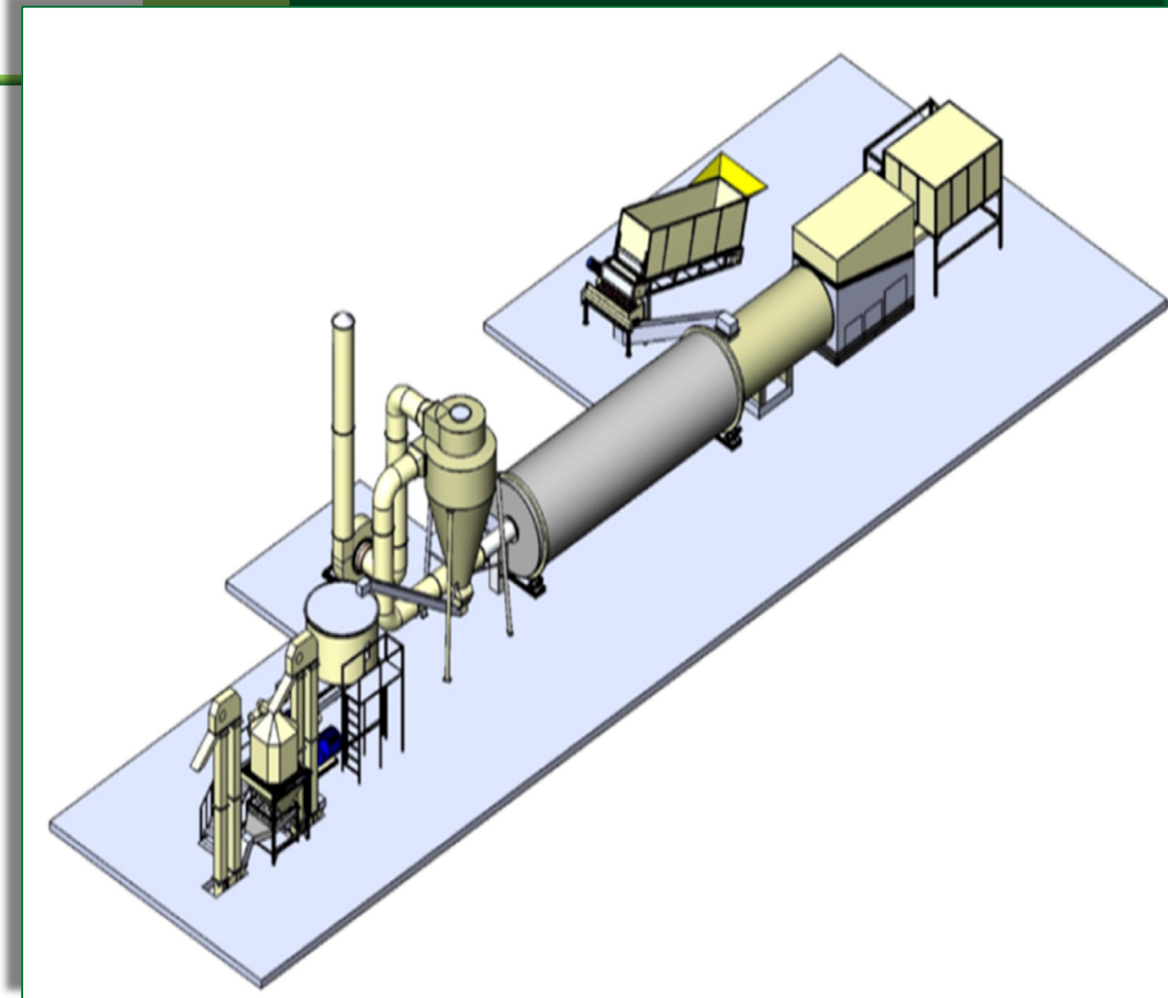


- **FORMING OF SOIL LAYER**  
Soil Former (Humigran NPK + leonardite ) 500 – 2000 kg\1 hectare. Disking.
- **PLANTING of fast growing plants**  
Planting of fast growing plants. Watering Humate potassium Premium humic Disking after 10-14 days.
- **FORMING MINERAL CONTENTS OF SOIL**  
Humigran 200-500 kg\hectare.
- **SOAKING SEEDS**  
Humate potassium Premium humic.
- **AFTER PLANTING**  
Watering with Humate potassium Premium Humic according to Application to use.



# Technological lines of organic fertilizers production

-  Our company specializes in designing, creating, introducing, installing and putting into service various production lines for agricultural enterprises.
-  The manufacturing lines for liquid humates production developed by our specialists allow to produce high quality liquid non ballasted humates with concentration 160 grams per litre.
-  The manufacturing line for dry organic fertilizer developed by our specialists allow to process chicken manure and leonardite into dry pellet organic fertilizers. Implementation of such type of production line reaches 2 main goals – utilization of livestock droppings and producing of organic NPK fertilizer.
-  Our company will provide you with unique technology and guaranteed provision of raw material and technological support.



# THANKS for your attention!

## PARTNERS WITH NATIONAL REGISTRATION FERTILIZER



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