Phosphate Rock
Phosphate rock is a sedimentary rock contains high amounts of phosphate bearing minerals and remains of vertebrate bones.

TASFLOWRANCE produce phosphates with P2O5 30 %, 29% ,28% ,27% in jumbo bags or small bags or bulk with the chemical analysis:-

Uses phosphate Rock

Phosphates used in the detergent industry as assistant to ease water hardness , phosphates in agriculture have a three elements to feed the plants used in the fertilizer industry .

Of industrial uses of phosphate rock production of phosphoric acid and phosphate chemical production vehicles . The rock phosphate Egyptian types of phosphate relatively cannula in the world , and is exported to some of the major industrialized countries such as Japan, for many of the advanced industrial purposes . In terms of agricultural use , are the use of phosphate rock to produce calcium superphosphate fertilizer 15% (P 2 O 5) Btfail rock phosphate with sulfuric acid . Used for the production of rock phosphate fertilizer calcium superphosphate (Triple phosphate) reaction of phosphate rock with phosphoric acid . Phosphate rock used in organic farming as well as with the use of bacteria -dissolving rock phosphate

Phosphate use in fertilizers industry
Phosphate is source of phosphor (P)
Phosphate is source of Uranium
Phosphate use in the agriculture field.

Phosphate production

Phosphate in Egypt, the most important mineral deposits from both the metallurgical and economic , because the production was, and still occupies a prominent place in the field of Mining . The reason for this is the widespread presence of phosphate in Egypt as there is in the form of a belt of phosphate deposits extends to a distance of about 750 km in length from the Red Sea coast in the east to the west Dakhla Oasis . The economic importance can be summarized in that exported abroad in large quantities and are manufactured part to the kind of chemical fertilizer super phosphate .

Phosphate sites that are of economic importance in Egypt in three main areas :

Nile Valley between Adfooukna : One of the main areas of the regions of presence Mahamed and seven- and phosphate ore reserves are estimated in the region of Mahamed alone, about 200 million tons, as the percentage of phosphorus pentoxide to about 22% . The geological studies for Ahitati is estimated at 1000 million tons of areas adjacent to the area Mahamed .

Red Sea coast between Safaga and short : phosphate exists between the ports of Safaga and short the most important areas of Mount Dawi and the thirsty and Hamrawein and estimated reserves of 200 to 250 million tons of phosphate ore .

Western Sahara: Abu weakling represent plateau between Dakhla Oasis largest deposit of phosphate in Egypt, where an estimated crude reserves of about 1,000 million tons ,

but there are some obstacles that prevent the exploitation of exploitation. Optimized and that the presence of a significant proportion of impurities , which increases the cost of production.

Region of Upper Egypt : There configurations phosphate in the valley of the Nile in Upper Egypt on the banks of the Nile River , where there is on the east bank of the Nile in the area between Edfu and Qena and is found in all of the seven- and Mahamed Ali both East and West Banks , and returning phosphate ore in this region in a way miners exposed where there are layers of phosphate in this region very close to the Earth's surface but appear exposed on the surface immediately and then facilitates the mining and extraction of phosphate ores , and the disadvantage of phosphate ores extracted from the area of the valley in upper Egypt reduced the proportion of phosphate ore and the high proportion of impurities and then transported quantities large raw materials to manufacturing sites , raising the costs of production .

It is proposed to make a phosphate concentration in raw sites extracted and then lower the proportion of impurities to the lowest rate and transmits phosphate semi- clean to fertilizer plants , which reduces the amount transferred and thus reduce the price of the final product of fertilizer and thus achieves economic value to the presence of phosphate ores , whether locally or in the field global Market

Eastern Desert : There phosphate ores in the Eastern Desert , distributed in three rectangles longest stretch between the Nile and the Red Sea coast, which is as follows:

Northern rectangle : only the northern line between Hurghada and Assiut , alone among the South Safaga and Qena and has ores or Huwaitat and runners-up in the south of Hurghada , Abu sharp and Dove Valley in the north of Qena .

Rectangle East and extends between Safaga and Qena up north and Qeft up short and south , and is centered around the nine sites for the phosphate ore is located mostly west of the coastal road between Safaga and short .

Rectangle South : Only the northern line runs between the short and Qeft alone south line running between Marsa Alam and Edfu , and concentrated sites of raw materials in Westerly particular the stretch east of the Nile , where there are five sites the most famous Mahamed versus mines Seven , one of the oldest areas of phosphate mining in Egypt , where they were mining since 1897 .

Western Sahara : studies found g to identify a wide area extension includes layers of container for phosphate ores in the south of Western Sahara in both low oases emerging and low Dakhla Oasis and the plateau Abu weakling , all of which are located west of the Nile Valley and stretches west to plateau Gilf Kebir , which lies in the South Western Sahara .

And hinders the economic exploitation of phosphate ores in this region the difficulty of transporting crude to export ports for lack of means and the length of the distance. It can get rid of all these problems at the exploitation of this resource as a great strategic state is no less important than the gold mines , which until now have not benefited from them.

Kharga , Dakhla phosphate : Other sites Kharga , Dakhla has estimated reserves Al?julo?ah tentatively . And excludes it from the site near Gibraltar northeast of emerging low as estimated reserves Al?julo?ah tentatively estimated at 40 million tons . This site

has been extracted from limited quantities of phosphate during the twenties and early thirties . And also excludes some of the sites involved in the visions that he can run the mines open and was estimated at 500 700 million tons in recognition ?julo?aa initially

Phosphate ASSISTANCE : Wrong phosphate ASSISTANCE high percentage of impurities in it, which would lead to higher costs and lower quality, and the inability to foreign competition , which is for export outlets Foreign away from Safaga, about 500 km However Vav contains some rare metals and no fear of demand for it in the future in the global market with the growing need to fertilize crops , especially rice in Southeast Asia .

Chemical properties

Phosphate is a natural substance , consists mainly of phosphate tri calcium which is slightly soluble in water, so it is not used directly but after treatment and improve quality by drying and purification (removal of organic material and dual carbon dioxide and separated from the clay ....) of the most important derivatives of phosphate fertilizers, phosphate used in agriculture and phosphoric acid (H3PO4). The quality is measured by five- phosphate phosphorus oxide .

Most Ckoralvosvat exist in nature in one of the following images :

Rock phosphate of sedimentary : It is the most important sediment in terms of proliferation and size and exploitation , which constitute about 80% of the sediment global concentration of phosphorus pentoxide which is between (20 % -30%) , a residue free granular such as phosphate deposits in Egypt and the North Africa and the phosphate deposits in the north of Saudi Arabia and in Iraq and Jordan.

Phosphate rocks of igneous origin : It is the result of rocks and boulders isocyanate Alnevelin Alkrbunataatat and Alberoxinat containing a significant amount of phosphate minerals of which the most important mineral apatite , and these deposits are not common , and examples Chenba deposits in Russia .

The a result of the accumulation of waste seabirds above the limestone rock , such as deposits Enyora Island in the Pacific Ocean .

Phosphate is used in many chemical industries the most important element of the preparation of phosphorus and phosphorus acid , used in the mining industry and the military , medical, food and ceramic , fabric and Vestas . And goes most of the phosphate mined for the manufacture of fertilizer to increase crop yields in addition to the possibility of extracting some rare metals and radioactive elements . Among these elements there is a side -product of uranium which can be obtained during the conversion of phosphate into fertilizer or phosphoric acid . And containing phosphate ores desert on 200 grams of uranium per ton . (Note: Rock tons of gold contains 3 grams : 80 grams , and is fighting it , but tons of phosphate contains 200 grams) .

The international interest in phosphates is normal, as included in the number of manufacturing industries and the most important of which uranium mining and chemical fertilizers , making it an important resource has an increasing demand by the majority of countries of the world , especially those concerned with agricultural production and defend their food security , which

has become linked to a certain extent the ability of the country to get this fertilizer as a factor to increase the quantity of agricultural production , and that's what makes the demand for chemical fertilizers has very carefully in the international market , so it is not surprising that Morocco is seeking to monopoly total phosphate fertilizer , which in the current situation nearly 80% of global production of fertilizers

Phosphate rock(24%P_2O_5)Chemical analysis

Element	%Result
P_2O_3	24 min
Cao	40.0-44.0
Mgo	0.30-0.50
Fe_2O_3	1.80-2.10
Al_2O_3	0.50-1.00
Cl	0.08-0.15
F	2.00-2.50
SO_3	1.50-2.50
SiO_2	15-18
Na_2O	0.30-0.50
K_2O	0.05-0.10
L.O.I	8-9.5
CO_2	6.20-7.70
$CaCO_3$	14-19
O.M	0.1-0.2

Size analysis

Size. mesh	Result%
+4	0.00-2.00
-4+100	70.0-80.0
-100+200	10.0-15.0
-200+270	3.00-5.00
-270	5.0-8.00
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-

Phosphate rock(26%p_2o_5) Chemical analysis

Element	%Result
P_2O_5	26 Min
Cao	44-45

Mgo	0.3-0.5
Al_2O_3	0.5-0.8
Fe_2O_3	1.90-200
K2O	0.02-0.06
Na_2O	0.30-0.60
SiO_2	11-14
SiO_2	1.5-2.0
F	2.5-2.6
Cl	0.05-0.07
L.O.I	8-10
CO_2	6-8
$CaCO_3$	4-18

Size analysis

Size. mesh	%Result
+4	0.00-2.00
-4+100	70.0-80.0
-100+200	10.0-15.0
-200+270	3.00-5.00
-270	5.0-8.00

-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-

CHEMICAL ANALYSIS FOR PHOSPHATE ROCK (30% P_2O_5)

ASSAY	% RESULT
P2O5	29.50-30.00
CAO	47-49
MGO	0.35-0.45
FE2O3	2.00-2.50
AL2O3	0.35-0.55
K2O	0.05-0.065
NA2O	0.35-0.065
SIO2	7.00-9.00

SO3	1.50-2.50
F	2.50-3.50
CL	0.04-0.07
L.O.I	6.5-7.50
CO2	5.00-5.50
ORG.MATT.	0.15-0.25
H2O	4-6

SIZE ANALYSIS	% RESULT
+ 4.50	00-2.00
-4.50+ 100	70-80
-100+200	10-15
-200+270	3-5
-270	5-8

CHEMICAL ANALYSIS FOR PHOSPHATE ROCK (28% P_2O_5)

ASSAY	% RESULT
P2O5	27.50-28.00
CAO	47-49
MGO	0.35-0.45

FE2O3	2.00-2.50
AL2O3	0.35-0.55
K2O	0.05-0.065
NA2O	0.35-0.50
SIO2	7.00-9.00
SO3	1.50-2.50
F	2.50-3.50
CL	0.04-0.07
L.O.I	6.5-7.50
CO2	5.00-5.50
ORG.MATT.	0.15-0.25
H2O	4-6

SIZE ANALYSIS	% RESULT
+ 4.50	00-2.00
-4.50+ 100	70-80
-100+200	10-15
-200+270	3-5
-270	5-8

CHEMICAL ANALYSIS FOR PHOPHTE ROK (29% P_2O_5)

ASSAY	% RESULT
P2O5	29.00
CAO	47 – 49

MGO	0.35 -0.45
FE2O3	2.00 -2.50
AL2O3	0.35 -0.55
K2O	0.05 -0.065
SIO2	7.00 -955
SO3	1.50 -2.50
F	2.50 – 3.50
CL	0.04 -0.07
L.O0I	6.5 -7.50
CO2	5.00 – 5.50
ORG.MATT.	0.15 -0.25
H2O	4 - 6

SIZE ANALYSIS	% RESULT
+ 4.50	00 -2.00
-4.50 + 100	70 -80
-100 + 200	10 -15
-200 + 270	3-5
	5 -8












MAER





Country of origin : Egypt
LOT NO : 52 / 2014
MFG DATE : October 2014
EXPIRY DATE : October 2017
NET WEIGHT : 50 KG

K LINE












50.00

50.05