

Pedology علم البيدولوجيا

Pedo

Pedology

Logus

Logy

Pedon

:

Soil genesis and Soil formation

. Soil morphology

. Soil Survey, Classification and Evaluation

Soil Mineralogy

Geomorphology

Geology

:

Soil Genesis

-

Soil Morphology

-

Physiography

Soil Classification and Evaluation

-

.

:

Static

External Change

Three

main Geospheres

80-60

Crust of Weathering

Biosphere

.

:

:

: -1

Regolith

Atmosphere

Lithosphere

Biosphere

Hydrosphere

: **Ramann** -2

Mitsherlich -3

Dokuchaev -4

Vagelar -5

⋮

%47

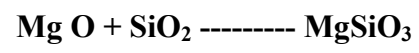
0.44			
0.14		46.60	
0.118			

0.1		27.72	
0.07			
0.052		8.13	
5.045			
0.040		5.00	
0.032			
0.020		3.63	
0.020			
0.016		2.83	
0.012			
0.011		2.59	
0.008			
0.286		2.09	
1.41		98.59	

%99

%47

%99



Minerals

Minerals and Rocks

Mineral :

Ore

Vitamin

() Halite

Mineral Structure :

Crystalline

Structure

()

Pyrite

FeS_2

Marcasite

:

.Silicate Minerals

.Non – Silicate Minerals

:

Silicon oxygen

%90

tetrahydron

8

4

Si⁺⁴

O⁻²

2

8 - =

(4+)

. (SiO₄⁻⁴)

-:

Hornblend

Augite

Olivine

Orthoclase

Muscovite

Biotite

Quartz

- Anorthite

Albite

:

Ferromagnesian Minerals :

-1

.

Olivine : 1-1

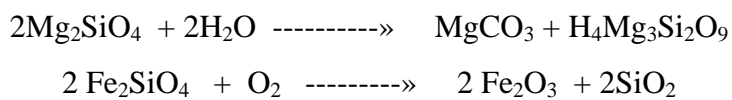
3.37 3.27

Olivine color

.

CO₂

Serpentine



Serpentine

.

Augite : 2-1

3.2

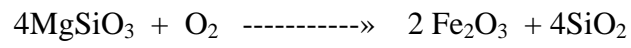
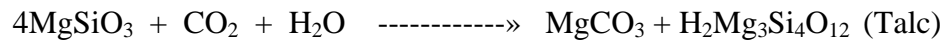
.

. 90

3.4

CO₂

:



Hornblend :

3-1

Na, Ca, Al

56o

3.2

124

Biotite :

4-1

3 2.5

3.2 2.8

Non Ferromagnesium

- 2

non Ferromagnesium

. (3 2.3)

Muscovite : 1 -2

Muscovy

2.9 2 -2.5

Feldspars : 2-2
()

.

:

:

Orthoclase :

.

(Orthos)

2.57

.

.

Plagioclase :

Plagiocase

. 2.5

6.5 6

Quartz : 3-2

Smoke Quartz

Milky quartz

. 2.7

7

Non Silicate Minerals

Oxides

(1

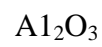
Hematite :

5.2

6.5

5.5

Corundum :



04

Rudy

Pyrolusite :

:



2.5 2

4.8

Cassiterite :



7 6

7.1 6.8

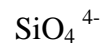
Sulphite minerals : (2

Pyrite :



. 5.1 6.5 0.6 .

:Carbonates and Sulfate Minerals (3



3



Dolomite

Calcite

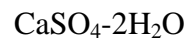
. 2.72

3

4.5 3.5

2.85

Gypsum :



2

2.3

:

:

(4

2.5 2

CaF₂

3.2

4