

Quadrant II – Transcript and Related Materials (Notes)

Programme	: Bachelor of Science (First Year)
Subject	: Geology
Paper Code	: GEC 102
Paper Title	: Introduction to Petrology
Unit	: 1
Module Name	: Textures (Shapes of crystals and Mutual relations of crystals – Equigranular (Allotriomorphic, Hypidiomorphic & Panidiomorphic))
Name of the Presenter	: Kimberly Fiona Afonso

Notes:

Fabric of crystals

- The fabric or pattern of a rock is a composite term that depends on
- The shape or degree of perfection of the form of the crystals(Shape of Crystals)
- On the relative sizes and arrangement of the different constituent minerals(Mutual relationship of crystals)

Shape of crystals

- If most of the grains are *euheral* - that is they are bounded by well-formed crystal faces. The fabric is said to be *Panidiomorphic*.
- If most of the grains are *subheral* - that is they are bounded by only a few well-formed crystal faces(an intermediate stage of development), the fabric is said to be *Hypidiomorphic*
- If most of the grains are *anhedral* - that is they are generally not bounded by crystal faces or crystal faces are absent, the fabric is said to be *Allotriomorphic*.
- Shape or form of the crystals is best seen under microscope thin sections

- If the grains have particularly descriptive shapes, then it is essential to describe the individual grains.

Some common grain shapes are:

- *Tabular* - a term used to describe grains with rectangular tablet shapes.
- *Equant* - a term used to describe grains that have all of their boundaries of approximately equal length.
- *Fibrous* - a term used to describe grains that occur as long fibers.
- *Acicular* - a term used to describe grains that occur as long, slender crystals.
- *Prismatic* - a term used to describe grains that show an abundance of prism faces.

Mutual Relationship of the Crystals Fabric based on relative sizes of the crystals

- Equigranular textures: Describes the textures in which the constituent minerals are all of approximately same size.
- This is seen usually in rocks such as in Granites and Felsites
- When most of the crystals are Equigranular & Anhedral → *Allotriomorphic*.
- When the crystals are Equigranular & Subhedral → *Hypidiomorphic*.
- When majority of the crystals are Equigranular & Euhedral → *Panidiomorphic*.