Analysis datasets

Belmiro et. al

Table 1: Dataset for macroscopic description of the geological samples.

Variable	Allowed values	Description
Raw Material Type	-	Type of raw material.
Color Distribution	Single, Mix sharp, Mix diffuse.	Distribution of color on the sample<92>s surface. Single - the color is uniformly distributed across the surface; Mix sharp - there is color variability with a sharp contact between colors; Mix diffuse - the color has differences across the surface without a sharp contact.
Munsell Color	-	Colors according to the Munsell Soil Color Chart. All color variability on the sample's surface is registered.
Luster	Shiny, Medium, Dull.	The character of light reflected by minerals. Shiny refers to when the piece has a very intense luster; Medium refers to when the piece has some luster but it is not very intense; Dull refers to when the piece has no luster. According to Crandell (2006) and Luedtke (1992).
Translucency	Translucent, Sub-translucent, Opaque.	Degree to which the light can penetrate a material when held 5cm from a 40w lamp. Translucent - silhouettes can be seen through the sample's thin part and/or light passes through the thick parts; Sub-translucent - light only passes through the thin parts; Opaque - no or almost no light passes through. According to Bressy (2002) and Crandell (2006).
Feel	Smooth, Semi-smooth, Rough.	A fingernail is dragged across the sample's surface. Smooth - nothing can be felt; Semi-smooth - slight rough feel; Rough - if the sample is distinctly rough. According to Bressy (2002) and Crandell (2006).
Grain	Coarse, Medium, Fine.	The size of the grain is observed macroscopically and classified. These classifications can be then compared to the microscopic classification (in brackets). Coarse - large, noticeable grains and individual particles can easily be discerned (macrocryptocrystaline); Medium - small but still noticeable grain (macrocryptocrystaline); Fine - no noticeable grain (micro-cryptocrystaline). According to Bressy (2002) and Crandell (2006).

Table 1: Dataset for macroscopic description of the geological samples.
(continued)

Variable	Allowed values	Description
Distribution	Even, Uneven.	Refers to the distribution of grain, luster, and transparency. Even - grain, luster, and transparency are homogeneous across the sample; Uneven - grain, luster, and transparency are heterogeneous across the piece. According to Luedtke (1992).
Distribution type	Gradual, Abrupt.	The transition of the distribution of grain, luster, and transparency. Gradual - the transition between different characteristics is gradual; Abrupt - the transition between different characteristics is abrupt.
Pattern	Shaded, Spots, Lines, Mix, Other, None.	Type of pattern present on the sample. According to Crandell (2006).
Spots type	Spotted, Splotched, Broad mottling, Marbled mottling, Speckling, Flecks.	Can be described based on the size and regularity. Spotted - circle patterns less than 30% of the surface area; Splotched - irregular shapes less than 30% of the surface area; Broad mottling - large, irregular blotching, covering more than 30% of the surface; Marbled mottling - large relatively round shapes, covering more than 30% of the surface; Speckling - small dots, well distributed over the surface; Flecks - small dots, grouped together. According to Crandell (2006).
Spots distribution	Even, Uneven.	Distribution of spots on the surface. They may be even if they are evenly distributed or uneven if they are irregularly spread throughout the surface (grouped). According to Crandell (2006).
Spots percentage	1-49%, 50-99%, 100%.	Percentage of the sample occupied by spots on the sample's surface.
Lines type	Banded, Streaked, Laminated, Finely laminated.	Thickness of line present on the sample. Banded - regular lines greater than 10mm thick; Streaked - less regular form of banding; Laminated - lines with thickness less then 10mm; Finely laminated - series of lines less than 1mm. According to Crandell (2006).
Lines direction	Horizontal, Concentric.	Orientation of lines. Can be horizontal or concentric circles originating from a central point. According to Crandell (2006).
Lines percentage	1-49%, 50-99%, 100%.	Percentage of the sample occupied by lines on the sample's surface.
Cortex presence	Yes, No.	Presence of cortex on the pieces.
Cortex type	Outcrop, Pebble, Unknown.	Type of cortex. Outcrop refers to a cortex from an outcrop; Pebble refers to a rounded, smooth cortex.
Cortex transition	Sharp, Gradual.	Type of transition between cortex and interior. Sharp if the transition is sharp and obvious; Gradul refers to a transition which is blurred and prolonged. According to Crandell (2006).

Table 1: Dataset for macroscopic description of the geological samples.
(continued)

Variable	Allowed values	Description
Cortex nature	No reaction, Weak reaction, Strong reaction.	A drop of HCL (10%) is placed on the cortex present in the sample and the chemical reaction is described. No reaction - the drop of acid produces no reaction on the sample; Weak reaction - the drop bubbles slightly and produces some vapor; Strong reaction - the drop bubbles intensely, producing vapor and audible sound.
Inclusions presence	Yes, No.	Presence of inclusions.
Inclusions type	-	Description and classification of inclusions.
Fracture type	Conchoidal, Uneven, Other, Unknown.	Type of fracture on the rock. Conchoidal - Conchoidal fracture as described by Luedtke (1992); Uneven - Uneven, non-conchoidal fracture; Other - Other types of non-conchoidal fracture; Unknown - When the character of the fracture cannot be identified.
Surface homogeneity	Homogeneous, Fractures, Cleavage plains.	The homogeneity of the sample's surface, specifically the presence or absence of fractures or cleavage plains. Homogeneous - No visible fractures on the sample; Fractures - The sample has visible natural fractures; Cleavage plains - The existence of a visible crystallographic plane where the sample cleaves through.
Quality	Good, Acceptable, Low.	Knapping quality of the raw material. Good - Fine grain, conchoidal fracture and homogeneous surface; Medium - Fine grain, non-conchoidal fracture, and/or presence of fractures or cleavage plains; Low - Coarse or medium grain, non-conchoidal fracture, and/or presence of fractures or cleavage plains.

Table 2: Dataset for petrographic analysis

Variable	Allowed.Values	Description	Reference
ID		Individual thinsection ID.	
Outcrop/level		Outcrop name or archaeological level.	
Lithology		Type of rock	
Texture	Mudstone, Wackestone, Packstone, Grainstone, Boundstone, Other	Mudstone: Muddy carbonate rock containing less then 10 % grains; Wackestone: Mud-supported carbonate rock containing more than 10 % grains; Packstone: Grain-supported muddy carbonate rock; Grainstone: Mud-free carbonate rocks, which are grain supported; Boundstone: Carbonate rocks showing signs of being bound during deposition.	According to Dunham (1962)
Microstructure	Homogeneous, Banded, Laminar, Nodular, Brexoid, Other	Distribution of crystals and clasts within the rock at a microscopic scale. Homogeneous: equally spread in the rock; Banded: distributed in bands; Nodular: distributed in clumps; Brechoid: fracturing of the rock irregularly.	According to Dorado (1989, pp. 21)
Orthochem		Materials formed in two ways: 1) deposited directly from supersaturated aqueous solutions due to chemical reactions or evaporation; 2) formed by the replacement of existing sedimentary materials.	According to Vernon (2018, pp. 24-25)
Orthochem type	Essential (ES), Accessory (AC), Secondary (SE)	Essential: minerals that form more than 5% of the volume of the rock; Accessory: Minerals with proportion of less than 5% of the volume of the rock; Secondary: products of the alteration (hydrothermal or physical), independent of the proportion within the rock.	According to Dorado (1989, pp. 26)
Orthochem description		General description of the orthochem and where it is identified.	
Orthochem (%)		Approximate percentage of the orthochem's presence in the total thin-section area.	
Allochem		Material formed by the movement and reorganization into new shapes by chemical, physical or biological processes within the depositional basin (ex. ooliths, fecal pellets, iron oxide minerals).	According to Vernon (2018, pp. 25, 27)
Allochem (freq)	Rare, Uncommon, Common, Very frequent	Rare: present one or two elements; Uncommon: present three to 10 elements; Common: present 11 to 20 elements; Very frequent:> 20 elements.	
Bioclast		Also known as skeletal particles, are the remains (complete or fragmented) of the hard parts of carbonate-secreeting organisms.	According to Adams, McKenzie and Guilford (1991, pp. 39)
Bioclast (freq)	Rare, Uncommon, Common, Very frequent	Rare: present one or two elements; Uncommon: present three to 10 elements; Common: present 11 to 20 elements; Very frequent:> 20 elements.	
Porosity (%)		Approximate frequency of effective porosity.	
Porosity type	Interparticle, Moldic, Fenestral, Fracture, Vuggy, Shelter, Other	Interparticle: porosity between particles; Moldic: Porosity formed by selective removal of an individual constituent of the rock; Fenestral: Pores larger than grain-supported interstices (interparticle); Fracture: Porosity formed by fracturing; Vug: Pores larger then 1/16 mm in diameter and somewhat equant in shape; Shelter: Porosity created by the sheltering effect of large sedimentary particles; Other: Other types of porosity.	According to Choquette and Pray (1970)
Sedimentary structures	Parallel lamination, Convoluted lamination, Bands/zonations, Burrow, Other	Parallel lamination: sedimentary strata less than 10 mm thick, recognizable due to variation in structure or composition and more or less parallel bounding surfaces; Convoluted lamination: symmetrical about a vertical plane or leaning and asymmetrical, and usually exhibit narrow vertical upturned laminae, often truncated at the top, separated by a broader synclinal downfolds; Bands/zonations: limited areas with different characteristics related to changes in the sedimentation or cementation process; Burrow: bioturbation structures caused by activity of an organism that disrupts the stratification features; Other: Other types of sedimentary structures.	According to Middleton et al. (2003)