

# LIMESTONE

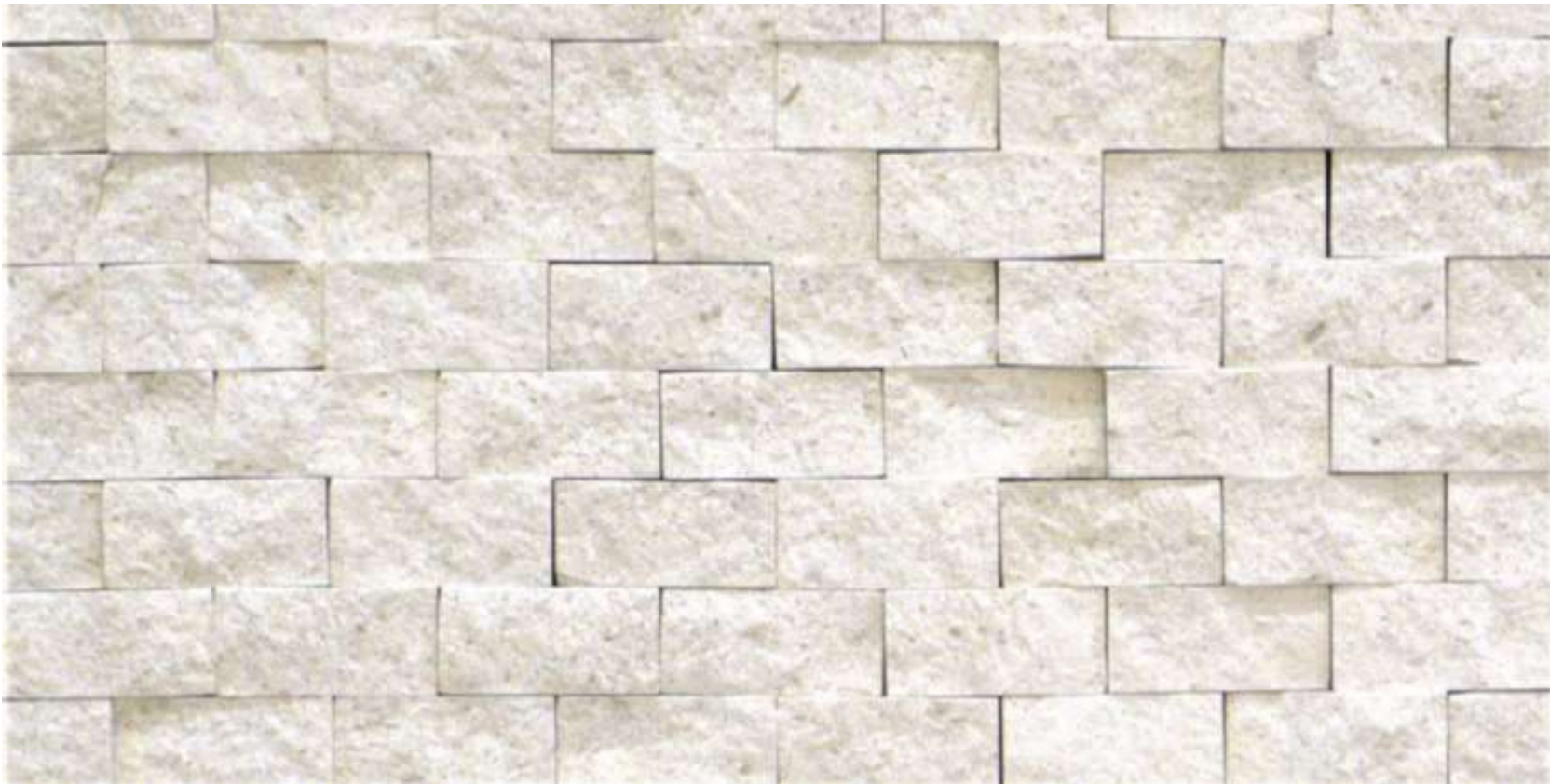


## Water absorption at atmospheric pressure

DESCRIPTION	UNIN	TEST RESULT					
Sample	No	1	2	3	4	5	6
Sample Specific Gravity	g.	326.7	308.5	319.4	318.3	319.7	309
Water-saturated mass of the sample	g.	331.5	312.8	324	323.8	324.8	314.4
Water absorption volume	%	1.5	1.4	1.4	1.7	1.6	1.7
Average water absorption	%	1.6					



# LIMESTONE



## Water absorption at atmospheric pressure

TEST RESULT			
	DESCRIPTION	UNIT	RESULT
1	Test Temperature	°C	21.0
2	Density Of Water At Test Temperature	g./cm <sup>3</sup>	0.998
3	Mass Of Pycnometer	g.	44.08
4	Pycnometer Mass Filled With Water Only	g.	145.07
5	Mass Of Specimen Ground And Dried	g.	20.00
6	Mass Of Pycnometer With Dry Sample	g.	64.08
7	Mass Of The Pycnometer Filled With Sample And Control Liquid	g.	157.53
8	Pycnometer Volume	cm <sup>3</sup>	101.19
9	Sample Density	gr./cm <sup>3</sup>	<b>2.654</b>

# LIMESTONE







RAPORT TESTIMI NR. / TEST REPORT N° :3309/18

**PERCAKTIMI I REZISTENCES NE SHTYPJE NJE AKSIALE TE GURIT NATYRAL**  
**DETERMINATION OF UNIAXIAL COMPRESSIVE STRENGTH OF NATURAL STONE**

Nr.Porositese/Order n°: 0473/18  
 Nr.Regjistrimit te mostres/Register n° of sample: 0616/18  
 Porositesi/Purchaser: "REALIZ" sh.p.k  
 Adresa/Address: Skrapar  
 Mostra/ Sample: Gure Natyrore,origjina Melove-Skrapar  
 Data e marrjes se mostres/Date of Sampling: 20.06.2018.  
 Data e testimit/Date of test: 23.06.2018,  
 Metoda e testimit/Test Method: SSH EN 1926:2006  
 Numri faqeve/Number of page: 1-1.

PERSHKRIMI DESCRIPTION	NJESIA UNIT	REZULTATET E TESTIMIT TEST RESULTS										
		1	2	3	4	5	6	7	8	9	10	
Mostra Sample	no.											
Lartesia Heigh (h)	mm	50	50	50	49.9	50.1	50.1	50	50	49.9	50	
Dimensioni anesor Lateral dimension (l)	mm	49.9	50	49.8	50.1	50.1	50	49.9	50	49.9	50	
Sip.e seksionit terthor Cross -Sectional area (A)	mm <sup>2</sup>	2490.0	2500.0	2480.0	2510.0	2510.0	2500.0	2490.0	2500.0	2490.0	2500.0	
Orientimi i forces se ngarkimit Orientation of the axis of loading	( l or ⊥ ) *	-	-	-	-	-	-	-	-	-	-	
Ngarkesa ne shkaterrim Failure Load (F)	N	232907	312999	231665	277525	247744	217696	273751	234285	262304	269599	
Rezistenca ne shtypje Compressive strength (R)	MPa	93.54	125.2	93.412	110.57	98.702	87.078	109.94	93.714	105.34	107.84	
<b>Rezistenca mesatare ne shtypje Mean Value of Compressive strength (R)</b>	<b>MPa</b>	<b>103</b>										
<b>Devijimi standart Standard Deviation (s)</b>	<b>MPa</b>	<b>11.38</b>										
<b>Koeficienti i variacionit Variation Coefficient (v)</b>		<b>0.11</b>										

⊥ - ngarkesa pinglul me planet e anizotropise  
 l - ngarkesa paralel me planet e anizotropise  
 l - load parallel to the planes of anisotropy  
 ⊥ - load normal to the planes of anisotropy

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Eng.Aranit KACDEDJA

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Eng. Maringlen NDOJI



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RAPORT TESTIMI NR. / TEST REPORT N° :3310/18

**PERCAKTIMI I UJETHITHJES NE PRESION ATMOSFERIK**  
**DETERMINATION OF WATER ABSORPTION AT ATMOSPHERIC PRESSURE**

Nr.Porositë/Order n°:	0473/18
Nr.Regjistrimit të mostres/Register n° of sample:	0616/18
Porositësi/Purchaser:	"REALIZ" sh.p.k
Adresa/Address:	Skrapar
Mostra/ Sample:	Gurë Natyrore, origjina Melovë-Skrapar
Data e marrjes së mostres/Date of Sampling:	20.06.2018.
Data e testimit/Date of test:	23.06.2018.
Metoda e testimit/Test Method:	S SH EN 13755:2008
Numri faqeve/Number of page:	1-1.

PERSHKRIMI DESCRIPTIONS	NJESIA UNIT	REZULTATET E TESTIMIT TEST RESULT:					
		1	2	3	4	5	6
Mostra Sample	no.						
Pesha e mostres në gjendje të thatë Dry mass of the specimen (m <sub>d</sub> )	g	326.70	308.50	319.40	318.30	319.70	309.00
Pesha në gjendje të ngopur me ujë e mostres Mass of the saturated specimen (m <sub>s</sub> )	g	331.50	312.80	324.00	323.80	324.80	314.40
Ujethithja Water absorption (Ab)	%	1.5	1.4	1.4	1.7	1.6	1.7
Vlera mesatare e ujethithjes Mean value of Water absorption (Ab)	%	1.6					

Shënim  
Note:

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RAPORT TESTIMI NR. / TEST REPORT No 3311/18

**PERCAKTIMI I DENSITETIT DHE UJETHITHJES**  
**DETERMINATION OF PARTICLE DENSITY AND WATER ABSORPTION**

Nr.Porositse/Order n°: 0473/18  
 Nr.Regjistrimit te mostres/Register n° of sample: 0616/18  
 Porositesi/Purchaser: "REALIZ" sh.p.k  
 Adresa/Address: Skrapar  
 Mostra/Sample: Gure Natyror,origjina Melove-Skrapar  
 Data e marrjes se mostres/Date of Sampling: 20.06.2018.  
 Data e testimit/Date of test: 23.06.2018.  
 Metoda e testimit/Test Method: S SH EN 1097-6-2013 (Pyknometer method)  
 Numri i faqeve/Number of Page: 1/1.

REZULTATET E TESTIMIT				
TEST RESULTS:				
no.	PERSHKRIMI DESCRIPTION		NJESIA UNIT	REZULTATET RESULTS
1	Temperatura e testimit Test Temperature	( t )	°C	21.0
2	Densiteti i ujit ne temperaturen e testimit Density of Water at the test temperature	(pw)	g/cm <sup>3</sup>	0.998
3	Masa e piknometrit Mass of pyknometer	( M <sub>1</sub> )	g	44.08
4	Masa e piknometrit te mbushur me uje Mass of the pyknometer filled with water only	( M <sub>2</sub> )	g	145.07
5	Masa e mostres se bluar dhe te thate Mass of the specimen ground and dried	( M <sub>3</sub> )	g	20.00
6	Masa e piknometrit me moster te thate Mass of pycnometer with the dry specimen	( M <sub>4</sub> )	g	64.08
7	Masa e piknometrit se bashku me mostren dhe ujin Mass of pycnometer filled with specimen and control liquid	( M <sub>5</sub> )	g	157.53
8	Volumi i piknometrit Volum of pyknometer	( V )	cm <sup>3</sup>	101.19
9	Densiteti i mostres Density of the sample	( g m )	g/cm <sup>3</sup>	2.654

SHENIME  
NOTES:

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RAPORT TESTIMI NR. / TEST REPORT N° : 3313/18

**PERCAKTIMI REZISTENCES NDAJ NGRICAVE**  
**DETERMINATION OF FROST RESISTANCE**

Nr. Porosise/Order n°: 0473/18  
 Nr. Regjistrimit te mostres/Register n° of sample: 0616/18  
 Porositesi/Purchaser: "REALIZ" sh.p.k  
 Adresa/Address: Skrapar  
 Mostra/Sample: Gure Natyrore, origjina Melove-Skrapar  
 Data e marrjes se mostres/Date of Sampling: 20.06.2018.  
 Data e testimit/Date of test: 14.07.2018.  
 Metoda e testimit/Test Method: S SH EN 12371:2010  
 Numri faqeve/Number of page: 1-1.

REZULTATET E TESTIMIT TEST RESULT:		VLERA E MOSTRAVE VALUE OF SAMPLES						
PERSHKRIMI DESCRIPTIONS	NJESIA UNIT	1	2	3	4	5	6	7
Inspektimi vizual Visual inspection		Demtim i nje rendesie te vogel (rrotullime te vogla ne qoshe dhe skaje) qe nuk kompromentojne integritetin e mostres Damage of minor importance (minor rounding of corners and edges) that do not compromise the integrity of the specimen)						
Masa e ngopur e mostres pas zhytjes ne uje, para ngrirjes Saturated mass of the specimen after immersion in water, prior to freezing ( $M_{so}$ )	g	310.59	327.28	326.21	320.11	316.94	317.13	347.60
Masa e dukshme e mostres ne uje, para ngrirjes Apparent mass of the specimen in water, before freezing ( $M_{ho}$ )	g	151.00	158.10	152.50	150.10	148.90	158.20	155.10
Volumi i dukshem i mostres para ngrirjes Apparent volume of the specimen before freezing ( $V_{bo}$ )	ml	159.59	169.18	173.71	170.01	168.04	158.93	192.50
Masa e ngopur e mostres ne 14 cikle Saturated mass of the specimen at 14 cycles ( $M_{so}$ )	g	310.57	327.18	326.05	320.01	317.00	317.39	347.10
Masa e dukshme e mostres ne uje, ne 14 cikle Apparent mass of the specimen in water, at 14 cycles ( $M_{hn}$ )	g	154.00	160.30	154.90	152.30	151.10	161.00	156.90
Volumi i dukshem i mostres ne 14 cikle Apparent volume of the specimen at 14 cycles ( $V_{bo}$ )	ml	156.57	166.88	171.15	167.71	165.90	156.39	190.20
Volumi i dukshem i mostres i modifikuar Modified apparent volume of the specimen ( $\Delta V_b$ )	%	1.9	1.4	1.5	1.4	1.3	1.6	1.2
Rezistenca ne ngjeshje para ngrirjes Compressive Strength before freezing	Mpa	103						
Rezistenca ne ngjeshje pas 14 ciklesh Compressive Strength after 14 cycles	Mpa	100						

Shenime/Note: \_\_\_\_\_

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TESTING RAPORT NO.3314/18

## PETROGRAPHIC ANALYSIS

The order's number: 0473/18  
Registration number of sample: 0616/18  
The customer: "REALIZ" sh.p.k  
The region of sampling: Sample taken to: Melov-Skrapar  
Date of sampling: 20.06.2018.  
Date of testing: 20.07.2018.  
Testing method: Petrography with optical microscope

The sample was taken in the field by the customer. The petrographic description is performed with an optical microscope with polarizer and analyzer magnifying from 10 to 50 times.

**Macroscopically:** white granular limestone



Figure 1: The macroscopically view of the sample

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Microscopically: Peloidal intraclastic rudstone-floatstone

An important number of grains is micritized and differs in morphometric criteria: generally, they are rounded and show different sphericity with sizes ranging from 0.2 to 3 mm for the largest particles, while the smallest grains are smaller than 0.5 mm represented by unidentified micritized particles. Regarding the roundness, they show different sphericity: subrounded, rounded and well rounded. The diversity in roundness and sphericity of grains, the different range in size as well as the poor sorting indicate mixing of grain populations. The diversity of skeletal grains is low mainly represented by debris of bivalves, fragments of echinoderms, fragments of discocyclinid foraminifera, red algae and cyanobacteria of Cayeuxia type.

Inner platform. Above fair weather wave base.

The age is probably Paleogene

**The used classification of limestone is after Dunham.**

**The used roundness and sphericity scale is after Krumbein and Sloss 1963.**

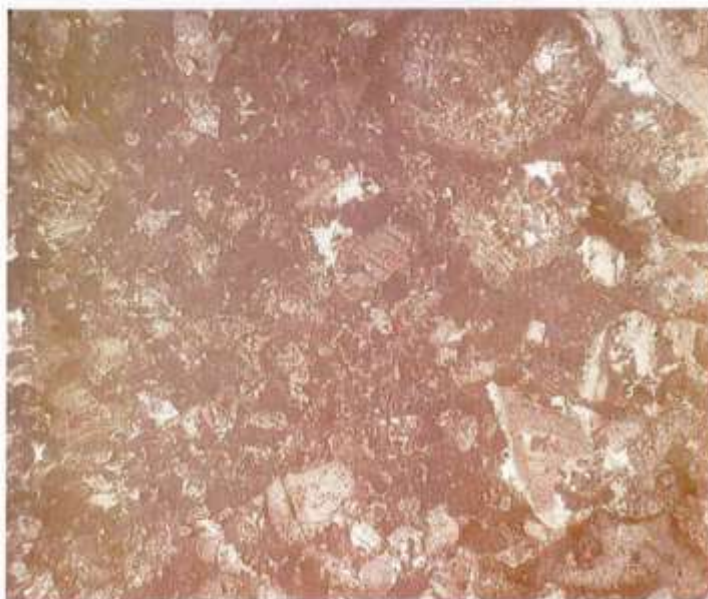


Figure 2: The sample under polarized light, magnified 10 times. Peloidal intraclastic rudstone-floatstone



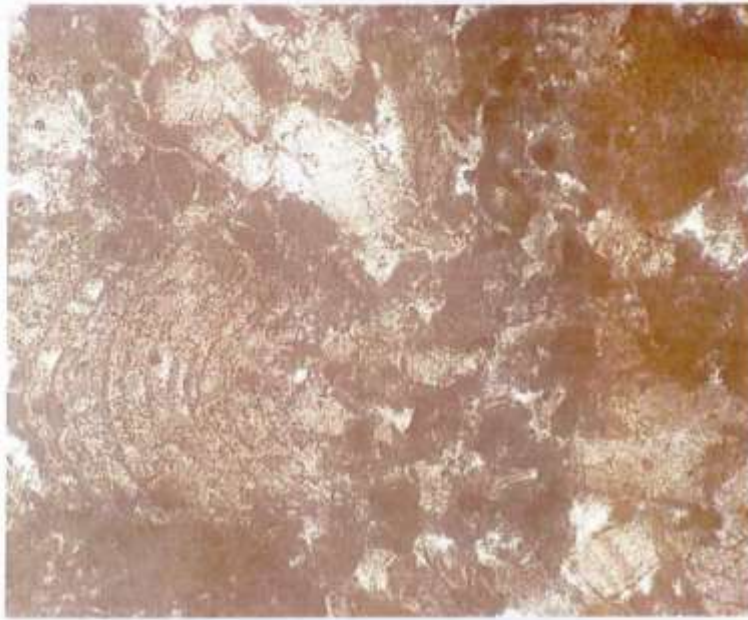


Figure 3: The sample under polarized light, magnified X times: red algae (left side)



Figure 4: The sample under polarized light, magnified x times: *Cayeuxia* sp (cortoid) showing a thin micrite envelope

**EXAMINER**

Msc. Andreea UTA

Asoc. Prof. Dr. Bardhyl MUCEKU

**HEAD OF THE LABORATORY**



Ing. Maringlen NDOJI

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