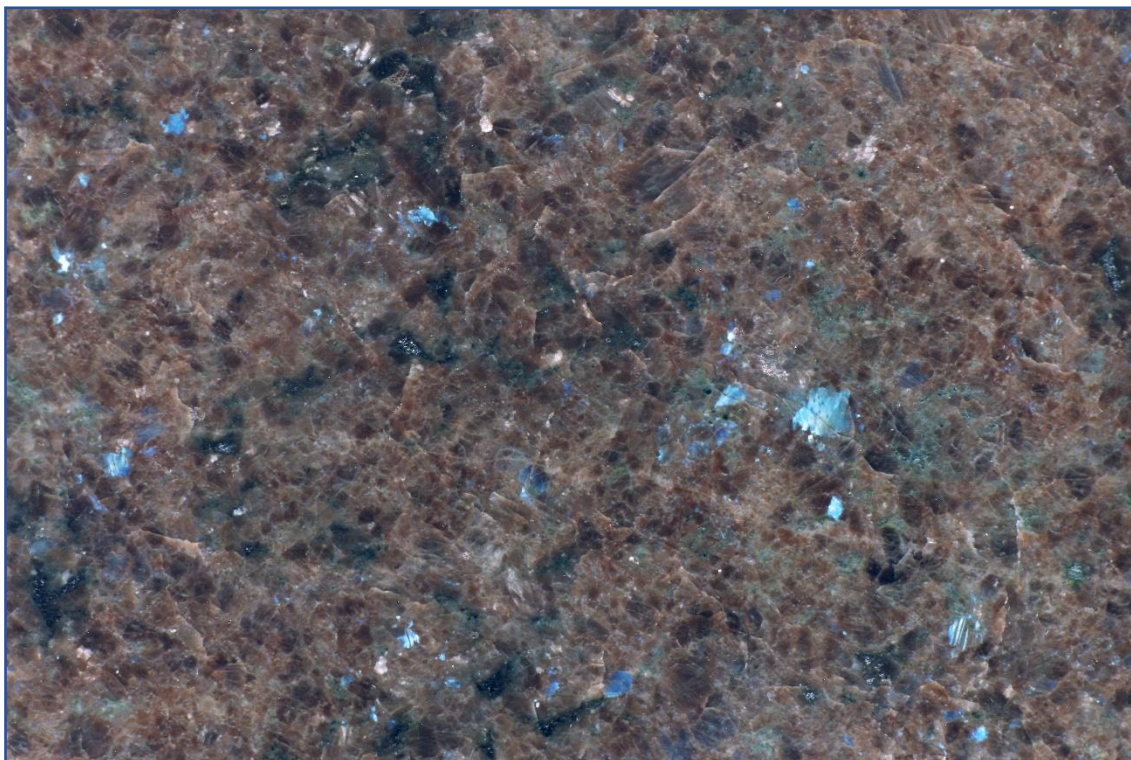


Sirevåg Anortositt (Sirevåg Anorthosite)

Labrador Antique

Lundhs Antique

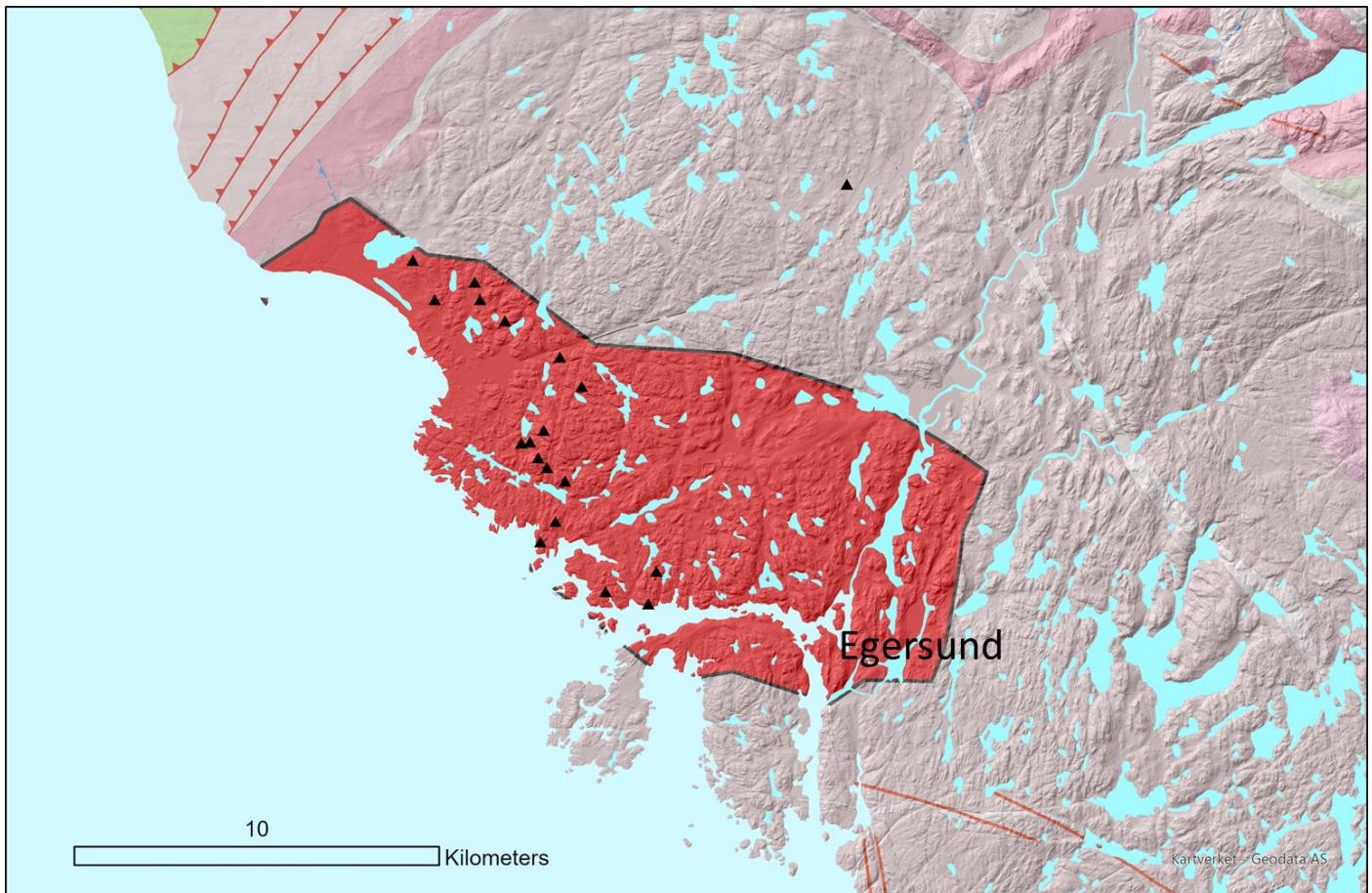


5 centimeters

Short description: Brown with black streaks and blue to green schillerization within plagioclase crystals with labradorite composition. The image displays a polished surface.

Commodity (vocabulary)	Lithology (vocabulary)	Typical colour (code list)	Place of origin			
			Country	County / District / Province	Municipality / Community	Place/town / Village
Commercial Granite	Anorthosite	Brown	Norway	Rogaland	Hå Eigersund	Sirevåg Hellvik

Geological setting



Geology: Brown, labradorite-containing anorthosite (red marking) forms a part of a large igneous complex of app. 950 Ma age, situated in SW Norway. Nearest town is Egersund. Black triangles are quarries, registrations and/or deposits.

Production: There are two main quarry areas in the central part of the map. Else, there are mapped, unexploited resources. Early 20th century there some exploitation on a small scale. New production started around 1995 at several sites.

Geological age: Vendian (Late Proterozoic) 950 Ma

Geological unit: [Rogaland Anorthosite Complex](#)

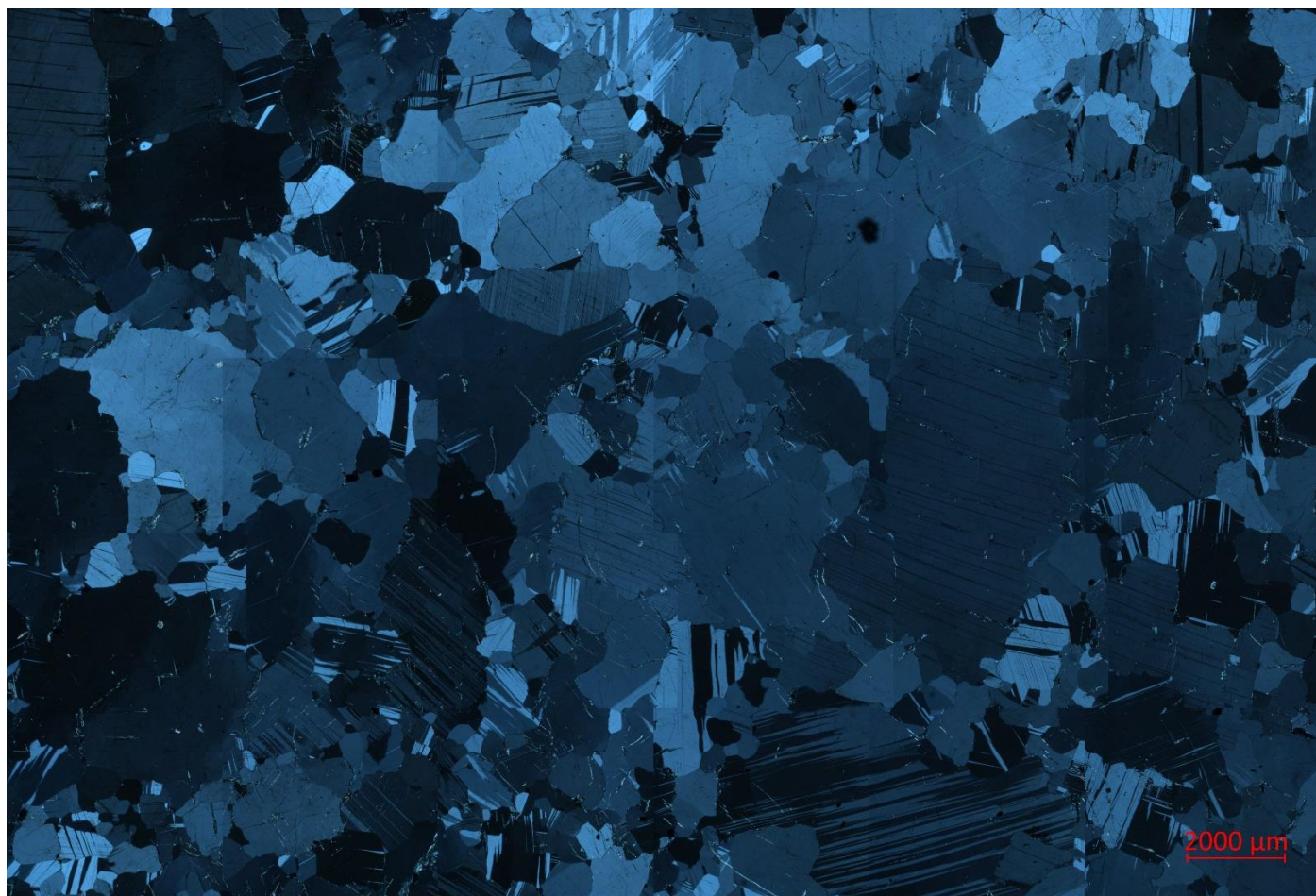
Application, use and heritage

Description: Anorthosite with the labradorite crystals were first discovered and exploited in a small scale in the early 20th century. It was later rediscovered in the 1990s, and quarrying has taken place since 1995. Most of the production is exported and the main uses are kitchen tops, facades and interior floors.



Use of the anorthosite in kitchen and bathroom (Photo: Lundhs/Morten Rakke)

Petrography



Description: The rock is predominantly composed of plagioclase feldspar (more than 90%) but may also contain orthopyroxene, chlorite and magnetite/ilmenite. The blue play of colour is caused by twin lamellae in the labradorite feldspar crystals. Photomicrograph of thin section (mosaic), crossed polarized light showing plagioclase (andesine to labradorite in composition). Small, bright lines and dots are secondary sericite.

Source of information: Geological Survey of Norway

Mineral composition

If no accurate number, use MM=main minerals, SM = Subordinate minerals, AM=accessory minerals

Feldspars (%)	Pyroxene (%)	Chlorite (%)	Opakes (%)			
92	5	1,5	1,5			

Source of information: [Lundhs](#)

Physical properties

Apparent density (EN 1936), kg/m ³	Open porosity (EN 1936), % vol	Water absorption at atmospheric pressure (EN 13755), % wt	Uniaxial Compressive strength (EN 1926), MPa	Flexural strength under concentrated load (EN 12372), MPa
2698	0,27	0,09	155,5	10,7

Real density (EN 1936), kg/m ³	Total porosity (EN 1936), % vol	Water absorption coefficient by capillary (EN 1925) (g/m ² x s ^{0,5})	Flexural strength under constant moment (EN 13161), MPa

Frost resistance (EN 12371)				
Technological Test (Test A)				Identification Test (Test B): Number of cycles completed prior to stone failure
Flexural strength (EN 12372) after freeze-thaw cycling, MPa	Number of cycles	Uniaxial compressive strength (EN 1926) after freeze-thaw cycling, MPa	Number of cycles	
11,1	56			

Resistance to ageing by thermal shock (EN 14066)			
Change in dynamic modulus of elasticity (increase: +; decrease: -), %	Change in open porosity (increase: +; decrease: -), %	Change in ultrasound pulse velocity (increase: +; decrease: -), %	Change in flexural strength under conc. load (increase: +; decrease: -) %

Abrasion resistance (EN 14157)			Resistance to salt crystallisation (EN 12370)	Breaking load at dowel hole (EN 13364)	
Method A - Wide Wheel Abrasion Test, mm	Method B - Böhme Abrasion Test, cm ³ / 50cm ²	Method C - Amsler Abrasion Test, mm	Change in mass (increase: +; decrease: -), %	Breaking load, N	Thickness of the test specimens, mm
17,5					

Slip resistance by means of the pendulum tester (EN 14231 / CEN/TS 16165)			Rupture energy (EN 14158), Joule	Thermal Conductivity (EN 1745), W/m·K
Tested surface finish	Slip Resistance Value — SRV			
	Dry test condition	Wet test condition		
Polished	67	8		

Source of information: [Lundhs](#)

Chemical properties

Main elements

SiO ₂ (%)	Al ₂ O ₃ (%)	Fe ₂ O ₃ (%)	TiO ₂ (%)	MgO (%)	CaO (%)	Na ₂ O (%)	K ₂ O (%)	MnO (%)	P ₂ O ₅ (%)	SO ₃ (%)	LOI (%)

Trace elements

V (ppm)	Cr (ppm)	Mn (ppm)	Co (ppm)	Ni (ppm)	Cu (ppm)	Zn (ppm)	As (ppm)
Sr (ppm)	Cd (ppm)	Ba (ppm)	Pb (ppm)	Be (ppm)	Rb (ppm)	Bi (ppm)	U (ppm)
Sc (ppm)	Y (ppm)	Th (ppm)	Sb (ppm)	Ta (ppm)	Nb (ppm)	Zr (ppm)	Sn (ppm)
Ag (ppm)	B (ppm)	Mo (ppm)	W (ppm)	Ga (ppm)	Ge (ppm)	Se (ppm)	Cs (ppm)
Tl (ppm)							

REE

La (ppm)	Ce (ppm)	Pr (ppm)	Nd (ppm)	Sm (ppm)	Eu (ppm)	Gd (ppm)	Tb (ppm)
Dy (ppm)	Ho (ppm)	Er (ppm)	Tm (ppm)	Yb (ppm)	Lu (ppm)		

Methods applied and source of information:

Sources of more information

Type of information	Name of provider	URL
This data sheet	Geological Survey of Norway	
Maplink	Geological Survey of Norway	https://geo.ngu.no/kart/common_mobil/?_lang=eng::extent=-44623.852497632164,6515435.699831528,-15089.72749763216,6527790.949831528::map=9
Non-commercial directory	Natural stone online	Detailansicht (naturalstone-online.com)
Commercial directory		
Scientific publication	Geological Survey of Norway	https://www.ngu.no/FileArchive/NGUPublikasjoner/Bulletin427_123-126.pdf
Other publication		

Compiled by:	Geological Survey of Norway (NGU) https://www.ngu.no/	 GEOLOGICAL SURVEY OF NORWAY - NGU -
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