

PETROGENETICAL GROUPING OF THE MOST IMPORTANT SILICEOUS SEDIMENTS

Character of sediment		Way of appearance of the siliceous material		Way of SiO ₂ precipitation		primary					secondary													
				Textural image of the SiO ₂	Dominant SiO ₂ phase	Adhesion			Chemical		Biogene precipitation			By replacing carbonates, tuffite and clay		By leaching of flint and siliceous limestone	By evaporation of weathering solution of magmatites and clastic sediments	By leaching of siliceous material of sandstone & aleurite						
						SiO ₂	Other	Quartz	Chalcedony	Recent Opal-A	Opal-A, Opal-A-	Opal-CT	Chalcedony and / or Quartz	Chalcedony	Opal and / or chalcedony microcrystalline Quartz	Opal-CT								
P u r e	Layered or laminated	Biomorphic	>80% <10% Fe ₂ O ₃ 1-20% carbonate and clay	Siliceous schist s.s.	Limonite-chalcedonite Geisirite	Limonite-chalcedonite Limoniteopalite	with Diatoms with Radiolaria with sponge spicules	Silt	Diatomaceous earth Radiolarian earth Porose spiculite	Diatomite Radiolarite	Layered chert	Opal-CT and (quartz) porcellanite	(novaculite, lydite)	Siliceous schist s.l.	Tripoli	Siliceous crust	Massive opal under calcareous crust							
																		Massive	Nodular	Opal-CT and (quartz) porcellanite	Nodular chert (flint)			
																						Layered	Massive	Nodular
	M i x e d	Layered or laminated	Abiomorphic	40-80%	Marly Dolomitic Clayey	Dolomitic Calcareous Marly	Limnic chalcedonite	Limnic opalite	Jaspilite Takonite Itabirite	Diatomaceous earth	Spongiolite Diatomite	Radiolarite	Siliceous clay schist and tuffite	Cherty limestone etc.	Siliceous limestone etc.									
																35-75%	10-66% Fe ₂ O ₃	Dolomitic Calcareous Marly Clayey	Diatomaceous earth	Spongiolite Diatomite	Radiolarite	Siliceous clay schist and tuffite	Cherty limestone etc.	Siliceous limestone etc.
10-40%	Limestone Marl Clay Tuffite	Limestone Marl Dolomite Marl	with Diatoms with Radiolaria with sponge spicules	Siliceous clay schist and tuffite	Cherty limestone etc.	Siliceous limestone etc.																		
							Nodular	Limestone Marl Dolomite Marl	with Diatoms with Radiolaria with sponge spicules	Siliceous clay schist and tuffite	Cherty limestone etc.	Siliceous limestone etc.												
													Fine dispersed	Limestone Marl Dolomite Marl	with Diatoms with Radiolaria with sponge spicules	Siliceous clay schist and tuffite	Cherty limestone etc.	Siliceous limestone etc.						
Sedimentation environment		Pelagic marine region	Bathyal hydrothermae	Surface thermal spring, hot spring lakes	Sea, lagoon, lake	Pelagic and hemipelagic marine regions	Sea, lagoon, lake	Pelagic and hemipelagic marine regions	Terrestrial and lacustrine regions															

After BALOGH (1991) Fig 26.23/b