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XXVI.—*Description of the Lapis Lazuli found in large quantities
 in the Cordilleras of the Andes.*

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The discovery of immense masses of a bright blue rock, in the Cordilleras, led a miner to suppose he had discovered a vein of the blue carbonate of copper. On analyzing a specimen, I found it to be perfectly destitute of that metal, and to be in fact a true lapis lazuli, interspersed with small veins of pure carbonate of lime. Heated by itself, it loses colour, but regains its primitive appearance on cooling; with nitre, on the application of the blow-pipe flame, it becomes highly incandescent, and of a most beautiful green. It dissolves in borax with lively effervescence, into a pure colourless glass, becoming slightly opalescent on cooling. On the addition of nitric acid, there is a brisk evolution of carbonic acid—the mineral becomes perfectly colourless, and presents a solid mass of gelatinous silica. The following is its composition in 100 parts. The analysis offered no difficulties:

Silica	.	.	.	.	.	.	37·60
Alumina	.	.	.	.	.	.	11·21
Sulphur	.	.	.	.	.	.	1·65
Iron	.	.	.	.	.	.	0·08
Magnesia	.	.	.	.	.	.	0·36
Soda	.	.	.	.	.	.	9·66
Carbonic acid	.	.	.	.	.	.	15·05
Lime	.	.	.	.	.	.	24·10
							99·71

This probably is not exactly the proper expression of its constitution, the sulphur no doubt being in combination with a portion of the sodium from the soda, as well as with iron. That the sulphur exists *as such*, and not in the state of sulphuric acid, is evident by the addition of acetic acid, which causes a strong disengagement of sulphuretted hydrogen, and in the residue no trace of sulphur can be detected by solution, and addition of a salt of baryta. I believe the colour of the stone is usually attributed to minute portions of sulphide of iron and sodium. Gmelin, however, in an analysis of lapis lazuli, places all the sulphur as sulphuric acid. (See Chapman's Mineralogy, p. 81.)