A systematic arrangement of minerals, founded on the joint consideration of their chemical, physical, and external characters reduced to the form of tables, and exhibiting the analysis of such species as have hitherto been made the subject of experiment / by William Babington.

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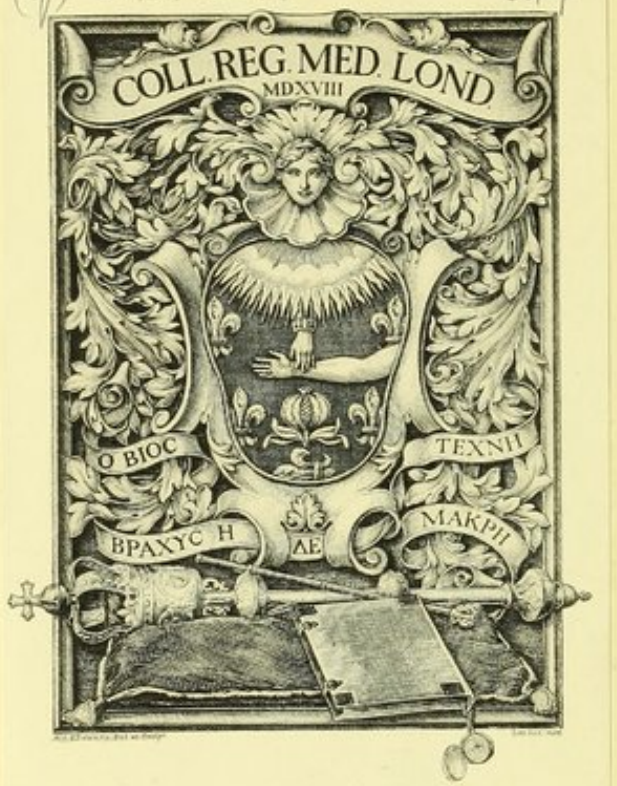

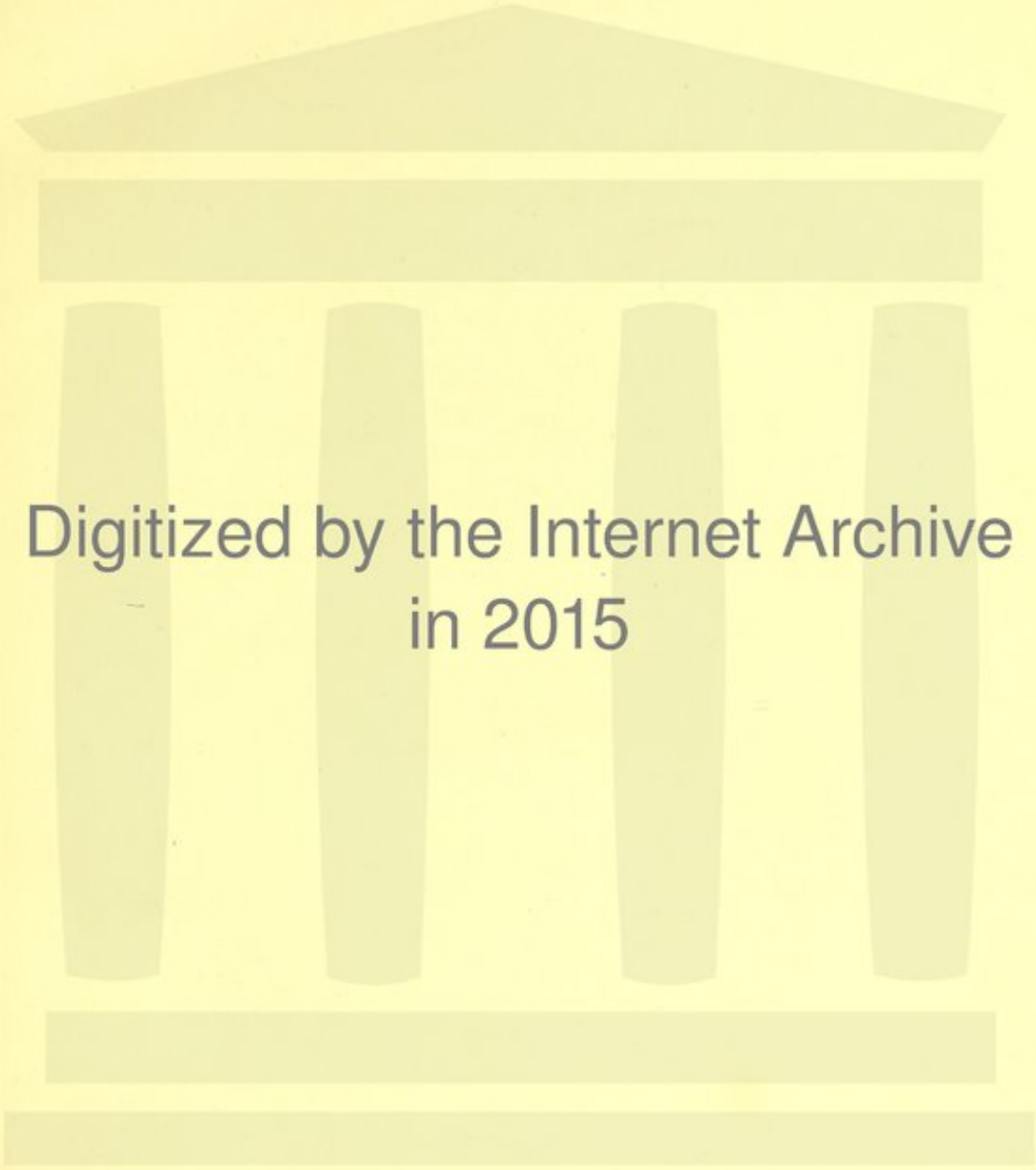

Matthew Baillie M. D.
with respectful Compliments
from the Author

A

SYSTEMATIC ARRANGEMENT

OF

MINERALS,

FOUNDED ON THE

JOINT CONSIDERATION

OF THEIR

CHEMICAL, PHYSICAL, AND EXTERNAL

CHARACTERS;

REDUCED TO THE FORM OF TABLES,

AND EXHIBITING

THE ANALYSIS OF SUCH SPECIES AS HAVE HITHERTO BEEN MADE THE SUBJECT OF EXPERIMENT.

BY WILLIAM BABINGTON,

LECTURER IN CHEMISTRY AT GUY'S HOSPITAL.

LONDON:

PRINTED FOR THE AUTHOR BY T. BENSLEY.

SOLD BY G. G. AND J. ROBINSONS, PATERNOSTER-ROW; AND T. COX, ST. THOMAS'S-STREET, BOROUGH.

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ADVERTISEMENT.

THE contents of the following pages were not originally intended to be made public. They were compiled merely for the Author's own uſe, while employed in arranging a Cabinet ſelected from the very extenſive Collection of Minerals which he had an opportunity of purchaſing a few years ago. But as that arrangement occupied a length of time, and a degree of attention, much beyond what was at firſt conceived to be ſufficient for ſuch an undertaking, the Author, though he would by no means be underſtood as holding forth this performance as a pattern to others, yet thinks, that in publiſhing it, he may not only conſiderably abridge the labour of thoſe who ſhall hereafter engage in a ſimilar taſk, but alſo render an acceptable ſervice to many who wiſh to acquire a comprehenſive knowledge of Mineralogy, but who have neither leiſure nor inclination to turn over the numerous works on the ſubject, in which the neceſſary information lies ſcattered. Beſides, as no endeavour has been ſpared to render the Collection from which this Synopſis was drawn up, one of the moſt perfect in a ſcientific point of view, the annexed Catalogue will afford, to ſuch as have advanced a conſiderable way in the buſineſs of collecting, an opportunity of determining the comparative value of what they already poſſeſs, as well as what articles may yet be wanting to make their cabinets more complete.

The general plan differs but little from that followed by Baron Born in his arrangement of the Collection of M^lle^ Raab, the CLASSES, ORDERS, GENERA, and SPECIES, being founded on chemical diſtinctions, and the VARIETIES on external character. On the ſubject of Cryſtallization particular pains have been taken to aſſociate the external figure of ſubſtances with their internal ſtructure, ſo as to reduce them into more connected ſeries than has hitherto been done in any attempt of the kind. Agree-

 ably,

ably, alſo, to the example of M. Karſten, in his Tab. Uberſ. or Synoptical Tables, the Analyſes, as far as they have been aſcertained, are ſubjoined throughout; the whole, therefore, meant to exhibit a comprehenſive view of Mineralogical Arrangement, according to the lateſt and beſt writers on the ſubject.

However ſimple this performance may appear to ſome, yet ſuch as are better acquainted with the nature of the ſubject muſt know, that to execute it, even with tolerable correctneſs, requires much labour in collecting, and ſome judgment in arranging the materials. The Author preſumes not to ſay to what degree of merit it is intitled in either of theſe reſpects, but wiſhes it to be underſtood, that whatever it may be, he claims it not wholly to himſelf; for, on this occaſion, as well as on many others of more importance, he has received much aſſiſtance from his friend Dr. MITCHELL, to whom he takes this opportunity of returning his moſt grateful acknowledgments.

SYSTEMATIC

SYSTEMATIC ARRANGEMENT
OF
MINERALS.

CLASS I.
SALTS.

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Simple.	1. Acid.	1. Carbonic. - -	- - - - - - -	Carbon 17. Oxygen 83. *Chaptal.*
		2. Boracic.	1. In ſolution - -	- - - - - - *Hœifer.*
		3. Sulphuric.	1. Concrete. 2. Liquid. 3. Gaſſeous.	Sulphur 72. Oxygen 28. *Berthollet.*
2. Compound.	1. Baſe, Potaſh.	1. Carbonate of Potaſh.	1. In ſolution.	Acid 23. Alkali 70. Water 5. *Bergman.*
		2. Muriate of Potaſh.	1. In ſolution.	Acid 31. Alkali 61. Water 8. *Berg.*
		3. Nitrate of Potaſh.	1. In ſolution.	Acid 33. Alkali 49. Water 18. *Berg.*
		4. Sulphate of Potaſh.	1. In ſolution.	Acid 40. Alkali 52. Water 8. *Berg.*
	2. Baſe, Soda.	1. Carbonate of Soda.	1. In efflorescence. 2. In ſolution.	Acid 16. Alkali 20. Water 64. *Berg.*
		2. Borate of Soda.	1. Cryſtalliſed. *a.* In truncated hexhedral priſms. 2. In ſolution.	Acid 34. Alkali 17. Water 47. *Delametherie.*
		3. Muriate of Soda.	1. Cryſtalliſed. *a.* In cubes. 2. Amorphous. *a.* Fibrous. *b.* Compact.	Acid 52. Alkali 42. Water 6. *Berg.*
		4. Sulphate of Soda.	1. In ſolution.	Acid 27. Alkali 15. Water 58. *Berg.*
	3. Baſe, Ammoniac.	1. Carbonate of Ammoniac.	1. In ſolution.	Acid 45. Alkali 43. Water 12. *Berg.*
		2. Muriate of Ammoniac.	1. Concrete.	Acid 52. Alkali 40. Water 8. *Delameth.*
		3. Nitrate of Ammoniac.	1. Mixed with Nitrate of Potaſh.	Acid 46. Alkali 40. Water 14. *Delameth.*
		4. Sulphate of Ammoniac.	1. Concrete.	Acid 42. Alkali 40. Water 18. *Delameth.*

CLASS II.
EARTHS.

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Homogeneous.	1. Lime.	1. Pure lime.	1. Amorphous. *a.* Earthy. *b.* Looſe.	 *Falconer.* *Monnet.*
		2. Carbonate of Lime.	1. Cryſtalliſed. *a.* In compreſſed rhomboidal parallelopepids. *b.* In lengthened rhomboidal parallelopepids. *c.* In hexhedral priſms, terminated by trihedral pyramids with rhombic faces. *d.* The ſame, terminated by obtuſe trihedral pyramids with pentagonal faces. *e.* The ſame, having the ſolid angle of the pyramid more or leſs deeply truncated. *f.* The ſame, completely truncated. *g.* In acute hexhedral pyramids, joined alternately baſe to baſe, with or without an intermediate priſm. *h.* Lenticular. *i.* Indeterminate.	Acid 34. Lime 55. Water 11. *Berg.*
		Arragon Spar.		
		Stalactites	2. Of particular ſhapes. *a.* Conical. *b.* Cylindrical. *c.* Tubular. *d.* Ramoſe, &c.	
		Flos Ferri.	*e.* Coralliform.	
		Piſolithus.	*f.* Oviform.	
		Marble. *Limeſtone.* *Chalk.* *Tufa.* *Ganil.*	3. Amorphous. *a.* Foliated. *b.* Granular. *c.* Fibrous. *d.* Arenaceous. *e.* Slaty. *f.* Compact. *g.* Friable. *h.* Looſe.	Acid 47. Lime 53. *Kirwan.* Acid 42. Lime 53. Argill 2. Water 3. *Kirw.*
		3. Swine-Stone.	1. Amorphous. *a.* Foliated. *b.* Granular. *c.* Compact.	Carbonate of Lime impregnated by Petroleum. *Kirw.*
		4. Sidero-calcite. *Pearl Spar.*	1. Cryſtalliſed. *a.* In compreſſed rhomboidal parallelopepids. 2. Amorphous. *a.* Foliated.	Carbonate of Lime 60. Oxyde of Manganeſe 35. Iron 5. *Woulfe.*
		5. Baryto-calcite.	1. Cryſtalliſed. *a.* In tetrahedral priſms. 2. Amorphous. *a.* Striated.	Carbonate of Lime 92. Carbonate of Baryte 8. *Berg.*

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Homogeneous.	1. Lime.	6. Muri-calcite. *Compound Spar.*	1. Cryſtalliſed. *a.* In rhomboids. 2. Amorphous. *a.* Indurated. *b.* Looſe.	Carbonate of Lime 52. Carbonate of Magneſia 45. Iron and Manganeſe 3. *Klaproth.*
		7. Argentine. *Schiefer Spar.*	1. Amorphous. *a.* Curved foliated.	Carbonate of Lime, with Magneſia, Argill, and Iron? *Kirw.*
		8. Superſaturated with Garbonic Acid. *Dolomite.* *Eloſtic Marble.*	1. Amorphous. *a.* Granular. *b.* Compact.	Lime 44,29. Acid 46,1. Argill 5,86. Magneſia 1,4. Iron 0.074. *Sauſſure, Jr.*
		9. Fluate of Lime. *Fluor.*	1. Cryſtalliſed. *a.* In cubes, entire, or variouſly truncated or bevelled. *b.* In aluminiform octohedrons. *c.* In tetrahedral priſms, terminated by tetrahedral pyramids. 2. Amorphous. *a.* Foliated. *b.* Granular. *c.* Compact. *d.* Earthy.	Acid 16. Lime 57. Water 27. *Scheele.* Acid 28,5. Lime 21. Water 1. Silex 31. Argill 15,5. Iron 1. Muriatic Acid 1. Phoſphoric Acid 1. *Pelletier.*
		10. Phoſphate of Lime. *Apatite.*	1. Cryſtalliſed. *a.* In hexhedral priſms, entire or truncated. 2. Amorphous. *a.* Striated.	Acid 45. Lime 55. *Klapr.* Acid 34. Lime 59. Silex 2. Fluoric Acid 2,5. Muriatic Acid 0,5. Carbonic Acid 1. Iron 1. *Pellet.*
		11. Sulphate of Lime. *Gypſum.*	1. Cryſtalliſed. *a.* In rhomboidal decahedrons and their varieties. *b.* Lenticular. *c.* Indeterminate. 2. In particular ſhapes. *a.* Ramoſe. 3. Amorphous. *a.* Foliated. *b.* Granular. *c.* Fibrous. *d.* Striated. *e.* Compact. *f.* Farinaceous.	Acid 46. Lime 32. Water 22. *Berg.*
	2. Strontian.	1. Carbonate of Strontian. *Strontianite.*	1. Amorphous. *a.* Striated.	Acid 26,5. Strontian 73,5. *Kirw.*
	3. Baryte.	1. Carbonate of Baryte. *Barolite.*	1. Cryſtalliſed. *a.* In hexhedral pyramids joined baſe to baſe.	Acid 20,8. Baryte 78,6. *Withering.*

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Homogeneous.	3. Baryte.	1. Carbonate of Baryte.	*b.* In hexhedral prisms terminated by corresponding pyramids. 2. Amorphous. *a.* Striated. *b.* Foliated.	
		2. Sulphate of Baryte. *Barofelenite.*	1. Crystallised. *a.* In lengthened octohedrons, with cuneiform summits entire or truncated.	Acid 32,8. Baryte 67,2. *Wither.*
		Acicular.	*b.* In prismatic needles. *c.* Lenticular. *d.* Indeterminate. 2. Of particular shapes. *a.* Stalactitic. *b.* Tubuliform, &c. 3. Amorphous. *a.* Foliated.	
		Bolognian Stone.	*b.* Striated. *c.* Compact. *d.* Earthy.	Sulphate of Baryte 62. Silex 16. Argill 15. Sulphate of Lime 6. Water 2. *Arvidson.*
		3. Liver Stone.	1. Amorphous. *a.* Foliated. *b.* Striated.	Sulphate of Baryte 38. Silex 33. Sulphate of Argill 22. Sulphate of Lime 7. Petroleum 5. *Berg.*
	4. Magnesia.	1. Calci-murite.	1. Amorphous. *a.* Earthy.	Magnesia, Lime, and some Iron. *Kirw.*
		2. Argillo-murite.	1. Amorphous. *a.* Earthy. *b.* Loose.	Magnesia 13. Silex 50. Argill 10. Lime 3. Oxyde of Iron 0,9. Water 12. *Fabroni.*
		3. Silici-murite. *Martial Muriatic Spar.*	1. Amorphous. *a.* Foliated.	Silex 50, with Carbonate of Magnesia and Iron. *Kirw.*
		Meerschaum.	*b.* Earthy.	Magnesia 50. Silex 50. *Weigleb.*
		4. Talc. *Venetian Talc.* *Schistose Talc.* *Talcite.*	1. Amorphous. *a.* Foliated. *b.* Slaty. *c* In small scales.	Magnesia 44. Silex 50. Argill 6. *Hæpfner.*
		5. Lapis Ollaris. *Pot Stone.*	1. Amorphous. *a.* Undulatingly foliated. *b.* Slaty.	Magnesia 38. Silex 38. Argill 7. Iron 5. Carbonate of Lime 1. and a trace of Fluoric Acid. *Weigl.*
		6. Steatites.	1. Crystallised. *a.* In cubes, truncated at the angles. *b.* In hexhedral prisms. *c.* In octohedral prisms, truncated.	

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Homogeneous.	4. Magnesia.		2. Amorphous. *a.* Foliated. *b.* Striated. *c.* Earthy.	Magnesia 20,84. Silex 48,42. Argill 14. Iron 1. Air and Water 16. *Klapr.*
		7. Serpentine.	1. Amorphous. *a.* Compact.	Magnesia 33. Silex 45. Magnetic Iron 14. Carbonate of Lime 6,25. Argill 0,25. with a little Muriate of Magnesia and Water. *Knock.*
		8. Chlorite.	1. Crystallised. *a.* In tetrahedral prisms. 2. Amorphous. *a.* Slaty. *b.* Earthy. *c.* In loose scales.	Magnesia 0,3947. Silex 0,415. Argill 0,0613. Lime 0,015. Iron 0,1015. Air and Water 0,015. *Hæpfn.*
		9. Asbestos. *Ligniform Asbestos.*	1. Amorphous. *a.* Striated. *b.* Fibrous. *c.* Slaty.	Carbonate of Magnesia 16. Silex 63,9. Carbonate of Lime 12,8. Argill 1,1. Oxyde of Iron 6. *Berg.*
		10. Amianthus.	1. Crystallised. *a.* In compressed rhomboidal parallelopepids. 2. Amorphous. *a.* In flexible fibres. *b.* Farinaceous.	Carbonate of Magnesia 18,6. Silex 64. Carbon. of Lime 6,9. Barofelenite 6. Argill 3,3. Oxyde of Iron 1,2. *Berg.*
		11. Suber Montanum.	1. Amorphous. *a.* Cork-like. *b.* Spongy. *c.* Membranaceous.	Carbonate of Magnesia 22. Silex 62. Argill 2,8. Carbon. of Lime 10. and Oxyde of Iron 3,2. *Berg.*
		12. Actynolite. *Glassy Actynolite.* *Schorlaceous Actynolite.* *Lamellar Actynolite.*	1. Crystallised. *a.* In compressed hexhedral prisms, with smooth surfaces. *b.* In polyhedral prismatic crystals, with grooved surfaces. 2. Amorphous. *a.* Lamellated. *b.* Foliated. *c.* Striated. *d.* Fibrous.	Carbonate of Magnesia 20. Silex 64. Carbon. of Lime 9,3. Argill 2,7. Oxyde of Iron 4. *Berg.* Magnesia 22. Silex 43. Iron 34. *Weigl.*
		13. Jade.	1. Amorphous. *a* Compact.	Carbonate of Magnesia 38. Silex 47. Carbon. of Lime 2. Argill 4. Oxyde of Iron 9. *Hæpfn.*
		14. Baikalite.	1. Crystallised. *a* In tetrahedral prisms, entire or truncated, with oblique pyramids. *b.* In hexhedral prisms.	Magnesia 30. Silex 44. Lime 20. Oxyde of Iron 6. *Lowitz.*

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Homogeneous.	4. Magnesia.	15. Boracite.	1. Crystallised. *a.* In cubes, entire, or differently truncated.	Boracic Acid 68. Magnesia 13. Lime 11. Silex 1. Argill 1. Iron 1. *Westrumb.*
	5. Argill.	1. Carbonate of Argill. *Lac Lunæ.*	1. Of particular shapes. *a.* Reniform.	Carbonic Acid, Argill, and some Lime. *Schreiber.*
		2. Clay. *Porcelain Clay.* *Potters Clay.* *Shale and Bituminous Shale.*	1. Amorphous. *a.* Soft and meagre. *b.* Soft and unctuous. *c.* Indurated. *d.* Slaty.	Carbonate of Argill and Silex. Argill 60. Silex 20. *Wedgwood.*
		3. Lithomarga.	1. Amorphous. *a.* Friable. *b.* Indurated.	Argill 11. Silex 60. Carbon. of Lime 5,7. Carbon. of Magnesia 0,5. Oxyde of Iron 4,7. Air and Water 18. *Berg.*
		4. Fullers Earth.	1. Amorphous. *a.* Earthy.	Argill 0,25. Silex 0,51. Carbon. of Lime 0,03. Carbon. of Magnesia 0,007. Oxyde of Iron 0,03. Moisture and Air 0,15. *Berg.*
		5. Bole.	1. Amorphous. *a.* Earthy.	Argill 19. Silex 47. Carbon. of Lime 5,4. Carbonate of Magnesia 6. Oxyde of Iron 5,4. Water and Air 17. *Berg.*
		6. Tripoli.	1. Amorphous. *a.* Earthy.	Argill 7. Silex 90. Iron 3. *Haasse.*
		7. Lepidolite.	1. Amorphous. *a.* Foliated.	Argill 38,25. Silex 54,5. Oxyde of Iron and Manganese 0,075. Water and Air 2,5. *Klapr.*
		8. Sappare. *Cyanite.*	1. Crystallised. *a.* In compressed tetrahedral prisms. *b.* Indeterminate.	Argill 67. Silex 13. Magnesia 13. Iron 5. Lime 2. *Saussure, Jr.*
		9. Mica.	1. Crystallised. *a.* In hexagonal plates. *b.* Indeterminate. 2. Amorphous. *a.* Foliated.	Argill 28. Silex 38. Magnesia 20. Oxyde of Iron 20. *Kirw.*
		10. Micarelle.	1. Amorphous. *a.* Interspersed in granite.	Argill 63. Silex 29. Oxyde of Iron 7. *Klapr.*

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Homogeneous.	5. Argill.	11. Hornblende. *Baſaltic Hornblende.*	1. Cryſtalliſed. *a.* In hexhedral priſms, with trihedral pyramids having rhombic faces. *b.* In tetrahedral priſms, with dihedral ſummits. *c.* In compreſſed hexhedral priſms, with oblique dihedral ſummits. *d.* In rhomboidal decahedrons.	Argill 27. Silex 58. Lime 4. Magneſia 1. Iron 9. *Berg.*
		Common Hornblende. *Schiſtoſe Hornblende.*	2. Amorphous. *a.* Foliated. *b.* Striated. *c.* Slaty.	Argill 22. Silex 37. Magneſia 16. Lime 2. Iron 23. *Kirw.*
		12. Reſplendent Hornblende. *Labradore Hornblende.* *Schiller Spar.*	1. Amorphous. *a.* Foliated. *aa.* Dark-coloured.	
			bb. Light-coloured.	Argill 17. Silex 43. Magneſia 11. Iron 23. *Gmelin.*
		13. Baſalt.	1. Of particular ſhapes. *a.* In 3, 4, 5, 6, 7, 8, or 9-ſided columns, entire or articulated. *b.* Tabular. *c.* Lenticular.	Argill 15. Silex 50. Carbon. of Lime 8. Iron 25. Magneſia 2. *Berg.*
		Trap, Wakken, Mullen, Krag, &c.	2. Amorphous. *a.* Fine grained. *b.* Coarſe grained. *c.* Cellular.	Argill 32. Silex 47. Oxyde of Iron 20. *Withering.*
		14. Calp.	1. Amorphous. *a.* Slaty.	Argill, Silex, and Iron, with 50 per cwt. Carbon. of Lime. *Kirw.*
		15. Argillaceous Shiſtus. *Argillite.* *Killas.* *Graphilite.*	1. Amorphous and ſlaty. *a.* Bluiſh. *b.* Bluiſh grey. *c.* Purpliſh. *d.* Black, &c. &c.	Argill 25. Silex 60. Magneſia 9. Iron 6. and ſome Petroleum. *Kirw.*
		16. Novaculite. *Turkey Hone.*	1. Amorphous. *a.* Slaty.	
	6. Silex.	1. Diamond?	1. Cryſtalliſed. *a.* In octohedrons and their varieties. *b.* In dodecahedrons and their varieties. *c.* Indeterminate.	
		2. Sapphire.	1. Cryſtalliſed. *a.* In lengthened hexhedral priſms, joined baſe to baſe. *b.* Indeterminate.	Silex 35. Argill 58. Carbon. of Lime 5. Iron 2. *Berg.*

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Homogeneous.	6. Silex.	3. Topaz of Brazil.	1. Cryſtalliſed. *a.* In tetrahedral rhomboidal priſms, terminated by tetrahedral pyramids. *b.* Indeterminate.	
		4. Topaz of Saxony.	1. Cryſtalliſed. *a.* In tetrahedral rhomboidal priſms, with dihedral ſummits. *b.* Indeterminate.	Silex 52. Argill 44. Lime 2. Iron 0,03. *Wiegleb.*
		5. Beryl of Siberia.	1. Cryſtalliſed. *a.* As the foregoing.	
		6. Ruby.	1. Cryſtalliſed. *a.* In octohedrons and their varieties. *b.* Indeterminate.	Silex 16. Argill 76. Lime 1. Iron 3. *Klapr.*
		7. Emerald.	1. Cryſtalliſed. *a.* In truncated hexhedral priſms, and their modifications.	Silex 24. Argill 60. Lime 8. Iron 6. *Berg.*
		8. Aqua Marine.	1. Cryſtalliſed. *a.* As the foregoing. Surface ſtriated.	Silex 64. Argill 24. Lime 8. Iron 1,5. *Bindheim.*
		9. Cryſolite.	1. Cryſtalliſed. *a.* In hexhedral priſms with correſponding pyramids.	Silex 15. Argill 64. Lime 17. Iron 1. *Achard.*
		10. Hyacinth.	1. Cryſtalliſed. *a.* In dodecahedrons with unequal rhombic faces.	Silex 25. Argill 40. Carbon. of Lime 20. Iron 13. *Berg.*
		11. Hyacinth of Veſuvius.	1. Cryſtalliſed. *a.* In tetrahedral priſms truncated at their angles, terminated by tetrahedral pyramids truncated at their ſummits.	
		12. Olivin.	1. Amorphous. *a.* Compact. *aa.* In large maſſes. *bb.* In grains.	Silex 54. Argill 40. Iron 4. *Gmelin.*
		13. Garnet.	1. Cryſtalliſed. *a.* In dodecahedrons, with rhombic faces and their varieties. *b.* With 24 trapezoidal faces. *c.* Indeterminate. 2. Amorphous. *a.* Compact. *b.* Foliated. *c.* Slaty.	Silex 48. Argill 30. Lime 11. Iron 1. *Achard.*
		14. White Garnet. *Veſuvian.*	1. Cryſtalliſed. *a.* With 24 trapezoidal faces.	Silex 55. Argill 39. Lime 6. *Berg.*

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Homogeneous.	6. Silex.	15. Tourmalin.	1. Cryſtalliſed. *a.* In ſtriated priſms, with 3, 6, or 9 ſides, and trihedral ſummits. *b.* Indeterminate.	Silex 37. Argill 39. Lime 15. Iron 9. *Berg.*
		16. Schorl.	1. Cryſtalliſed. *a.* Similar to the foregoing, but opaque. *b.* Indeterminate. 2. Amorphous. *a.* Compact.	Silex 52. Argill 37. Lime 5. Magneſia 3. Iron 3. *Chaptal.*
		17. Thumerſtein. *Violet Schorl.*	1. Cryſtallized. *a.* In compreſſed rhomboidal parallelopepids, ſtriated. *b.* Indeterminate. 2. Amorphous.	Silex 52. Argill 25. Lime 9 Iron 9. and ſome Manganeſe. *Klapr.*
		18. Schorlite.	1. Cryſtalliſed. *a.* Indeterminate.	Silex 50. Argill 50. *Klapr.*
		19. Rubellite.	1. Cryſtalliſed. *a.* In diverging ſtriated priſms, with trihedral ſummits.	Silex 57. Argill 35. Oxyde of Iron and Manganeſe 5. *Bindheim.*
		20. Amethiſt.	1. Cryſtalliſed. *a.* In hexhedral priſms, with correſponding pyramids. *b.* Indeterminate. 2. Amorphous.	Silex 30. Argill 60. Lime 8,22. Iron 1,66? *Achard.*
		21. Quartz.	1. Cryſtalliſed. *a.* In double hexhedral pyramids, with or without an intermediate priſm. *b.* Indeterminate. 2. Of particular ſhapes. *a.* In cubes. *b.* Lenticular. *c.* Stalactitic. *d.* Cellular, &c. 3. Amorphous. *a.* Lamellar. *b.* Fibrous. *c.* Granular. *d.* Compact.	Silex 93. Argill 6. Lime 1. *Bergm.*
		22. Praſe.	1. Cryſtalliſed. *a.* Like the foregoing. *b.* In needle-like cryſtals. *c.* Indeterminate. 2. Amorphous.	
		23. Elaſtic Quartz.	1. Amorphous. *a.* Granular.	Silex 0,965. Argill 0,025. Iron 0,01. *Klapr.*
		24. Obſidian.	1. Amorphous. *a.* Compact.	Silex 69. Argill 22. Iron 0,09. *Bergm.*
		25. Calcedony. *Cornelian, Agate,* &c.	1. Of particular ſhapes. *a.* Stalactitic. *b.* Filiform. *c.* Tubular. *d.* Cellular, &c.	Silex 84. Argill 16. *Bergm.*

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Homogeneous.	6. Silex.		2. Amorphous. *a.* Compact.	
		26. Chryſoprase.	1. Amorphous. *a.* Compact.	Silex 0,96. Oxyde of Nickel 0,01. Lime 0,0083. Argill 0,0083. Oxyde of Iron 0,0083. *Klapr.*
		27. Hyalite.	1. Amorphous. *a.* Lamellar. *b.* Compact.	Silex 57. Argill 18. Lime 15. and a very little Iron. *Link.*
		28. Opal.	1. Amorphous. *a.* Effulgent.	Silex 98,75. Argill 0,01. Oxyde of Iron 0,01. *Klapr.*
		Semi-opal.	*b.* Dull.	
		29. Pitchſtone.	1. Cryſtalliſed. *a.* In hexhedral priſms, with trihedral pyramids.	
			2. Amorphous. *a.* Compact.	Silex 73. Argill 18. Iron 00,58. *Weigl.*
			b. Slaty.	Silex 0,855. Argill 0,01. Iron 0,005. Lime and Magneſia 0,005. Water, inflammable Matter, and Air 0,11. *Klapr.*
		Ligniform Opal.	*c.* Fibrous.	
		30. Cats Eye.	1. Amorphous. *a.* Compact.	
		31. Flint.	1. Cryſtalliſed. *a.* In double trihedral pyramids.	
			2. Amorphous. *a.* In nodules. *b.* Interſperſed.	Silex 80. Argill 18. Lime 2. *Weigl.*
		32. Hornſtone.	1. Cryſtalliſed. *a.* In hexhedral priſms, with or without pyramids. *b.* In double trihedral pyramids. *c.* In cubes.	
			2. Amorphous. *a.* Compact.	Silex 72. Argill 22. Carbon. of Lime 6. *Kirw.*
		Siliceous Schiſtus. Baſanite.	*b.* Slaty.	Silex 75. Lime 10. Magneſia 0,046. Iron 3. Coal 5. *Weigl.*
		Hornſlate.	- - - - - - - - - -	Silex 73. Argill 24. Iron 3. *Weigl.*
		33. Jaſper.	1. Cryſtalliſed. *a.* In irregular hexhedral priſms.	

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Homogeneous.	6. Silex.		2. Amorphous.	
			a. In large maſſes.	Silex 54. Argill 30. Iron 16.
		Egyptian Pebble.	*b.* In nodules.	*Delameth.*
		34. Porcelanite.	1. Amorphous.	
			a. Compact.	
		35. Heliotropium.	1. Amorphous.	
			a. Compact.	
		36. Woodſtone.		
		37. Felſpar.	1. Cryſtalliſed.	
			a. In tetrahedral priſms truncated obliquely, and their varieties.	
		Adularia.	*aa.* Tranſparent.	Silex 62. Argill 17. Lime 6,5. Baroſelenite 2. Magneſia 6. Iron 1,4. *Weſtrumb.*
		Common Felſpar.	*bb.* Opaque.	Silex, Argill, with Lime and Magneſia, or Baryte. *Kirw.*
			2. Amorphous.	
			a. Foliated.	
		38. Labrador Felſpar.	1. Amorphous.	
			a. Foliated.	Silex 69. Argill 13. Sulphate of Lime 12. Oxyde of Copper 0,7. Oxyde of Iron 0,04. *Bindheim.*
		39. Petrilite.	1. Amorphous.	
			a. With cubic fragments.	
		40. Argentine Felſpar.	1. Cryſtalliſed.	
			a. As common felſpar.	Silex 46. Argill 36. Oxyde of Iron 16. *Dodun.*
			2. Amorphous.	
			a. Foliated.	
		41. Felſite.	1. Amorphous.	
			a. Compact.	
		42. Staurolite.	1. Cryſtalliſed.	
			a. In tetrahedral priſms, with tetrahedral pyramids, either ſingle, or croſſing each other at right angles.	Silex 44. Argill 20. Baryte 20. Water 16. *Weſtrumb.*
		43. Lapis Lazuli.	1. Amorphous.	Silex, Lime, Sulphate of Lime, and Iron.
			a. Compact.	*Margraff.*
		44. Prehnite.	1. Cryſtalliſed.	Silex 44. Argill 30. Lime 18. Iron 5. Water and Air 2. *Klapr.*
			a. In compreſſed tetrahedral priſms.	
			b. Indeterminate.	
			2. Amorphous.	
			a. Foliated.	
		45. Ædelite.	1. Of particular ſhapes.	Silex 62 to 69. Argill 18 to 20. Lime 8 to 16. Water 3 to 4. *Berg.*
			a. Tuberous.	

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Homogeneous.	6. Silex.	46. Zeolyte.	1. Cryſtalliſed. *a.* In cubes, and their varieties. *b.* In truncated hexhedral priſms. *c.* In hexagonal lamellæ. *d.* Indeterminate. 2. Amorphous. *a.* Fibrous. *b.* Striated. *c.* Compact. *d.* Looſe.	Silex 50. Argill 20. Lime 8. Water 22. *Pelletier.*
		47. Siliceous Spar.	1. Cryſtalliſed. *a.* In tetrahedral priſms. *b.* In hexhedral priſms.	Silex 61,1. Lime 21,7. Argill 6,6. Magneſia 5. Oxyde of Iron 1,3. Water 3,3. *Bind.*
		48. Roſe Spar. *Red Stone of Rawenſtein.*	1. Cryſtalliſed. *a.* Indeterminate. 2. Amorphous. *a* Thick foliated.	
	7. Adamantine Earth.	1. Adamantine Spar.	1. Cryſtalliſed. *a.* In oblique hexhedral truncated priſms. 2. Amorphous.	Adamantine Earth 68. Silex 31,5. Iron and Nickel 00,05. *Klapr.*
	8. Jargon Earth.	1. Jargon.	1. Cryſtalliſed. *a.* In ſhort tetrahedral priſms, with tetrahedral pyramids. *b.* Indeterminate.	Jargon Earth 68. Silex 31. Iron and Nickel 5. *Klapr.*
	9. Sidneian Earth.	1. Sidneia.	1. Amorphous. *a.* Looſe.	*Wedgwood.*
2. Mixed.	1. Calcareous.	1. Marl. *Argillo-Calcites.*	1. Semi-indurated. 2. Indurated.	Carbon. of Lime 60 to 80. Remainder Argill and Silex. *Kirw.*
			3. Slaty.	Penetrated by Bitumen, Sulphur, or Pyrites. *Kirw.*
		2. Limeſtone with Argillite.		
		3. Siliceous Limeſtone.		
		4. Ferruginous Limeſtone.		
		5. Gypſum with calcareous Spar.		
		6. Gypſum with Swineſtone.		
		7. Gypſum with Marl.		
	2. Magneſian.	1. Calciferous Aſbeſtinite.		
		2. Steatite with Argill.		
		3. Serpentine with Hornblende.		
		4. Siliciferous Potſtone.		
		5. Ferruginous Steatite.		

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
2. Mixed.	3. Argillaceous.	1. Calciferous Argillite.		
		2. Talcoſe Argillite.		
		3. Siliciferous Argillite.		
		4. Ferruginous Argillite.		
		5. Hornblende with Garnet.		
		6. Hornblende Slate with Talc or Mica.		
		7. Hornblende Slate with Quartz.		
		8. Trap with Hornblende.		
		9. Trap with Mullen.		
		10. Trap with Krag.		
		11. Siliciferous Trap.		
	Colorific Earths.	12. Ferruginous Clays.		
		13. Mullen with Aſbeſtinite.		
	4. Siliceous.	1. Earthy Quartz.		
		2. Ferruginous Quartz.		
		3. Earthy Quartz with Actinolite.		
		4. Earthy Hornſtone.		
		5. Ferruginous Hornſtone.		
		6. Siliceous Schiſtus with Limeſtone.		
		7. Siliceous Schiſtus with Argillite.		
		8. Siliceous Schiſtus with Mullen.		
		9. Pitchſtone with Opal.		
3. Aggregated.	1. Calcareous.	1. Calcareous Sandſtone.	1. Cryſtalliſed. *a.* In rhomboids. 2. Amorphous.	Carbonate of Lime 37,5. Silex 62,5. *Laſſone.*
		2. Calcareous Breccia.	- - - - - - - - - -	Fragments of Marble in a calcareous Cement.
	2. Magneſian.	1. Potſtone Porphyry.	1. Amorphous. *a.* Undulatingly foliated.	Potſtone and Felſpar.
		2. Serpentine Porphyry.	1. Amorphous. *a.* Compact.	Serpentine and Felſpar.

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
3. Aggregated.	3. Argillaceous.	1. Argillaceous Sandſtone.	1. Amorphous. *a*. Slaty. *b*. Compact.	Argillaceous Cement, with fragments of Quartz, Felſpar, and Flint.
		2. Rubble Stone.	1. Amorphous. *a*. Slaty. *b*. Compact.	Argillaceous Cement, with Quartz, Siliceous Schiſtus or Hornſtone, and Argillite.
		3. Argillaceous Porphyry.	1. Amorphous.	Felſpar contained in indurated Clay, Hornblende, Trap, Wakken, Mullen, Krag, or Argillite.
		4. Amygdaloid.	1. Amorphous.	Rounded maſſes of Calced. Agate, Zeol. Cal. Spar, Lithomarga, Steatite, Green Earth, &c. in an argillaceous Baſis.
		5. Schiſtoſe Mica.	1. Amorphous. *a*. Slaty.	Mica and Quartz.
	4. Siliceous.	1. Granite.	1. Amorphous. *a*. Compact. *b*. Slaty.	Quartz, Felſpar, and Mica.
		2. Sienite.	1. Amorphous. *a*. Compact. *b*. Slaty.	Quartz, Felſpar, & Hornblende.
		3. Granatine.	1. Amorphous.	Quartz, Felſpar, Schorl; Quartz, Felſpar, Garnet; &c. &c. &c. *Sauſſure.*
		4. Granitell.	1. Amorphous.	Quartz, Felſpar; Quartz, Schorl; Quartz, Mica; &c. *Kirw.*
		5. Granalite.	1. Amorphous.	Quartz, Felſpar, Mica, Schorl; Quartz, Felſpar, Mica, Steatite; &c.
		6. Gneiſs.	1. Amorphous. *a*. Slaty. *b*. Fibrous.	Quartz, Felſpar, and Mica. *Werner.*
		7. Siliceous Porphyry.	1. Amorphous. *a*. Compact. *b*. Slaty.	Cryſtals of Felſpar in a baſis of Jaſper, Hornſtone, Pitchſtone, Obſidian, Siliceous Schiſtus, Schiſtoſe Hornſtone, or Felſpar.
		8. Pudding-ſtone.	1. Amorphous.	Rounded Pebbles in a Siliceous Cement.
		9. Siliceous Sandſtone.	1. Amorphous.	
		10. Siliceous Breccia.	1. Amorphous.	Angular fragments of Siliceous Stones in a Siliceous Cement.

CLASS III.

METALS.

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Ductile.	1. Platina.	1. Native Platina.	1. In grains.	Platina united to Iron.
	2. Gold.	1. Native Gold.	1. Cryſtalliſed. *a.* In aluminiform octohedrons and their varieties. *b.* In tetrahedral priſms, with tetrahedral pyramids. *c.* In cubes. *d.* Indeterminate. 2. Of particular ſhapes. *a.* Dendritic. *b.* Ramoſe. *c.* Filiform. *d.* Capillary, &c. 3. Amorphous. *a.* In lumps. *b.* In grains. *c.* Interſperſed.	Gold alloyed with Silver, Copper, or Iron.
		Auriferous Pyrites.		
		2. Grey Ore.	1. Cryſtalliſed. *a.* In tetrahedrons. *b.* In hexagonal lamellæ. *c.* Indeterminate. 2. Of particular ſhapes. *a.* Dendritic.	Gold combined with Sulphur, Antimony, Arſenic, Lead, Iron, and Silver. *Born.*
		3. White Ore.	1. Of particular ſhapes. *a.* Dendritic. 2. Amorphous.	Gold 18. Silver 0,06. with Biſmuth and Sulphur. *Gerhard.*
	3. Quickſilver.	1. Native Quickſilver.	1. Fluid. 2. Interſperſed.	
		2. Native Amalgam.	1. Cryſtalliſed. *a.* In truncated octohedrons. *b.* Indeterminate.	Quickſilver alloyed with Silver.
		3. Native Oxyde.	1. Amorphous. *a.* Granular.	Quickſilver 91. Oxygen 9. *Born.*
		4. Horn Quickſilver.	1. Cryſtalliſed. *a.* In tetrahedral rhomboidal priſms, with tetrahedral pyramids. *b.* Indeterminate.	Quickſilver 70. with Muriatic and Sulphuric Acids. *Woulfe.*
		5. Cinnabar.	1. Cryſtalliſed. *a.* In double tetrahedral pyramids, truncated at their ſummits, and with or without intermediate priſms. *b.* Indeterminate. 2. Amorphous. *a.* Scaly. *b.* Fibrous. *c.* Granular.	Quickſilver 80. Sulphur 20. *Kirw.*

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Ductile.	3. Quickſilver.		*d.* Compact. *e.* Earthy. *f.* Pulverulent.	
		6. Hepatic Ore.	1. Amorphous. *a.* Foliated.	Quickſilver with Sulphuret of Potaſh or Soda. *Born.*
	4. Silver.	1. Native Silver.	1. Cryſtalliſed. *a.* In cubes. *b.* In octohedrons. *c.* Indeterminate. 2. Of particular ſhapes. *a.* Dendritic. *b.* Ramoſe. *c.* Filiform. *d.* Capillary, &c. 3. Amorphous. *a.* In laminæ. *b.* Superficial. *c.* In maſſes.	Silver united to a ſmall quantity of Gold. *Berg.*
		2. Arſenical Silver.	1. Cryſtalliſed. *a.* In truncated hexhedral priſms longitudinally ſtriated. *b.* Indeterminate. 2. Amorphous. *a.* Foliated. *b.* Granular. *c.* Compact.	Silver 90. Arſenic and Iron 10. *Kirw.*
		3. Horn Silver.	1. Cryſtalliſed. *a.* In cubes, or rectangular parallelopepids. *b.* Indeterminate. 2. Amorphous. *a.* In maſſes.	Silver 67,5. Muriatic Acid 21. Sulphuric Acid 0,005. Iron 0,06. Argill 0,015. Lime 0,005. *Klapr.*
		Butter-Milk Ore.	*b.* Interſperſed.	Silver 24. Muriatic Acid 8. Argill 67. with ſome Copper. *Klapr.*
		4. Vitreous Silver.	1. Cryſtalliſed. *a.* In cubes and their modifications. *b.* In octohedrons. *c.* Indeterminate. 2. Of particular ſhapes. *a.* Dendritic. *b.* Ramoſe. *c.* Filiform, &c. 3. Amorphous. *a.* In laminæ. *b.* Superficial. *c.* In maſſes.	Silver 75. Sulphur 25. *Berg.*
		5. Brittle Vitreous Ore. *Black Ore.*	1. Amorphous. *a.* Granular. *b.* Spongy. *c.* Pulverulent.	Silver 66. Iron 5. Antimony 10. Sulphur 12. with a little Copper and Arſenic. *Klapr.*

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Ductile.	4. Silver.	6. Red Silver Ore.	1. Cryſtalliſed.	Silver 60. Arſenic 27. Sulphur 13. *Berg.*
				Silver 60. Antimony 20. Sulphur 11. Sulph. Acid 8. *Klapr.*
			a. In dodecahedrons, with rhombic faces and their modifications.	
			b. In hexhedral priſms, having trihedral pyramids, with rhombic faces and their varieties.	
			c. In double hexhedral pyramids.	
			d. Indeterminate.	
			2. Amorphous.	
			a. Compact.	
		7. White Silver Ore. *Weiſſgultig Ertz.*	1. Amorphous.	Silver 20. Lead 40. Sulphur 12. Antimony 8. Iron 2,5. Argill 7. Silex 0,5. *Klapr.*
			a. Granular.	
			b. Compact.	
	5. Lead.	1. Native Lead.	1. Of particular ſhapes.	
			a. Dendritic.	
		2. Native Oxyde of Lead.	1. Cryſtalliſed.	Lead 36. Oxygen 37. Iron 24. Argill 2. *Macquart.*
			a. In tetrahedral rhomboidal priſms, with trihedral or dihedral ſummits.	
			b. Indeterminate.	
			2. Amorphous.	
			a. Compact.	
			b. Pulverulent.	
		3. Carbonate of Lead. *Spathoſe Lead Ore.*	1. Cryſtalliſed.	Lead 80. Carbonic Acid 16. with ſome Lime and Argill. *Weſtrumb.*
			a. In hexhedral priſms, with hexhedral pyramids, and their modifications.	
			b. Indeterminate.	
		4. Molybdate of Lead.	1. Cryſtallized.	*Klapr.*
			a. In rectangular tables and their modifications.	
			b. Indeterminate.	
		5. Phoſphate of Lead.	1. Cryſtalliſed.	Acid 18. Lead 73. with a little Iron. *Klapr.*
			a. In hexhedral priſms, with or without hexhedral pyramids and their modifications.	
			b. Indeterminate.	
		6. Sulphate of Lead.	1. Cryſtalliſed.	*Withering.*
			a. In octohedrons and their modifications.	
			b. Indeterminate.	
		7. Sulphuret of Lead. *Galena.*	1. Cryſtalliſed.	Lead 77. Sulphur 20. Silver 1. *Kirw.*
			a. In cubes and their modifications.	
			b. In octohedrons and their modifications.	
			c. Indeterminate.	

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Ductile.	5. Lead.	7. Sulphuret of Lead.	2. Of particular shapes. *a.* Stalactitic. 3. Amorphous. *a.* Foliated. *b.* Granular.	
		8. Antimoniated Lead Ore.	1. Amorphous. *a.* Striated. *b.* Compact.	Lead 40—50. Antimony 8—16. with a little Silver. *Kirw.*
	6. Copper.	1. NativeCopper.	1. Crystallised. *a.* In cubes. *b.* In octohedrons. *c.* Indeterminate. 2. Of particular shapes. *a.* Dendritic. *b.* Ramose. *c.* Filiform, &c. 3. Amorphous. *a.* In laminæ. *b.* Granular. *c.* Compact.	
		2. Native Oxyde of Copper. *Tile Ore.*	1. Amorphous. *a.* Compact. *b.* Pulverulent.	
		3. Pitch Copper Ore.	1. Amorphous. *a.* Compact. *b.* Pulverulent.	Oxyde of Copper with Oxyde of Iron. *Born.*
		4. Carbonate of Copper. *Red, Green, and Azure Copper Ores.*	1. Crystallised. *a.* In rectangular octohedrons and their modifications. *b.* In rhomboidal octohedrons and their varieties. *c.* In rhomboidal tetrahedral prisms, with or without pyramids. *d.* In hexhedral prisms. *e.* Indeterminate.	Copper 73. Carbonic Acid 26. *Fontana.*
		Malachite.	2. Of particular shapes. *a.* Stalactitic. *b.* Botryoidal. *c.* Mamillated, &c. 3. Amorphous. *a.* Compact. *b.* Pulverulent.	
		5. Arseniate of Copper.	1. Crystallised. *a.* In lengthened tetrahedral prisms. *b.* In cubes. *c.* In hexagonal tables. *d.* Indeterminate.	*Klapr.*
		6. Sulphate of Copper.	1. Crystallised. *a.* In tetrahedral prisms and their modifications. *b.* Indeterminate. 2. Of particular shapes. *a.* Stalactitic. 3. In solution.	

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Ductile.	6. Copper.	7. Muriate of Copper.	1. Amorphous. *a.* In a ſandy form.	Copper 52. Acid 10. Oxygen 11. Water 12. Sand 11. *Rochefoucauld.*
		8. Sulphuret of Copper. *Vitreous Copper Ore.*	1. Cryſtalliſed. *a.* In hexhed. truncated priſms. 2. Amorphous. *a.* Compact.	Copper 56. with Sulphur. *Klapr.*
		9. Variegated Copper Ore.	1. Amorphous. *a.* Compact.	Copper and Sulphur, with ſome Iron. *Berg.*
		10. Yellow Copper Ore.	1. Cryſtalliſed. *a.* In equilateral tetrahedrons and their modifications. *b.* In dodecahedrons with triangular faces. *c.* Indeterminate. 2. Amorphous. *a.* Compact.	Copper 20. with Iron and Sulphur. *Kirw.*
		11. Grey Copper Ore.	1. Cryſtalliſed. *a.* In tetrahedrons and their modifications. *b.* In dodecahedrons, with triangular faces and their modifications. *c.* Indeterminate. 2. Amorphous. *a.* Compact.	Copper 16. Lead 34. Antimony 16. Iron 13. Sulphur 10. Silex 2. Silver 2. *Klapr.*
		12. White Copper Ore.	- - - - - - - - - -	Copper 40. with Arſenic and Iron. *Henkel.*
	7. Iron.	1. Native Iron.	1. Of particular ſhapes. *a.* Ramoſe. 2. Amorphous. *a.* Compact.	
		2. Grey Iron Ore. *Magnetical Iron Ores.*	1. Cryſtalliſed. *a.* In aluminiform octohedrons and their modifications. *b.* In cubes, partly ſtriated, and their modifications. *c.* In double hexhedral pyramids, deeply truncated at their ſummits. *d.* In hexagonal laminæ. *e.* Indeterminate. 2. Amorphous. *a.* Foliated. *b.* Granular. *c.* In looſe grains.	Iron united to a ſmall proportion of Oxygen. *Delameth.*
		Emery.	*d.* Interſperſed. *e.* Compact.	
		3. Hematite.	1. Of particular ſhapes. *a.* Stalactitic. *b.* Mamillated. *c.* Reniform. *d.* Botryoidal. *e.* Filiform, &c. 2. Amorphous. *a.* Fibrous. *b.* Scaly. *c.* Compact.	Iron 45. with Carbonic Acid and Argill. *Kirw.*
		Ochres.	*d.* Earthy.	

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Ductile.	7. Iron.	4. Argillaceous Iron Ore.	1. Of particular ſhapes. *a.* Reniform. *b.* Globular. *c.* Tubuliform, &c. 2. Amorphous.	Iron united to Oxygen, Carbonic Acid, and Argill, and often Phoſphate of Iron. *Delameth.*
		Baſaltic Iron Ore.	*a.* With diſtinct columnar concretions. *b.* Compact.	
		5. Spathoſe Iron Ore.	1. Cryſtalliſed. *a.* In rhomboidal parallelopepids. *b.* Indeterminate. 2. Amorphous. *a.* Foliated.	Iron 38. Lime 38. Carbonic Acid and Manganeſe 24. *Berg.*
		6. Sulphate of Iron.	1. Cryſtalliſed. *a.* In rhombs. 2. Of particular ſhapes. *a.* Capillary. 3. Amorphous. *a.* Compact.	
		7. Sulphuret of Iron. *Pyrites.*	1. Cryſtalliſed. *a.* In tetrahedrons and their modifications. *b.* In cubes, ſmooth or ſtriated, and their modifications. *c.* In octohedrons and their modifications. *d.* Indeterminate. 2. Of particular ſhapes. *a.* Stalactitic. *b.* Capillary. *c.* Globular, *d.* Cellular, &c. 3. Amorphous. *a.* Striated. *b.* Compact.	
	8. Tin.	1. Native Oxyde. *Spathoſe Tin Ore.*	1. Cryſtalliſed. *a.* In obtuſe tetrahedral pyramids, with or without intermediate priſms, and their modifications. *b.* In dodecahedrons, with rhombic faces, and their modifications. *c.* Indeterminate.	Tin 80. with Oxygen and Iron. *Kirw.*
		Wood Tin.	2. Amorphous. *a.* Fibrous. *b.* Compact.	Tin 63. with Oxygen and Iron. *Klapr.*
		2. Sulphuret of Tin. *Tin Pyrites.*	1. Amorphous. *a.* Fibrous. *b.* Compact.	Tin 56. Sulphur 40. Copper 4. *Berg.* Tin 36. Sulphur 26. Copper 38. Iron 1. *Klapr.*
2. Fragile.	9. Biſmuth.	1. Native Biſmuth.	1. Cryſtalliſed. *a.* In equilateral triangular laminæ. *b.* Indeterminate.	

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
2. Fragile.	1. Biſmuth.		2. Of particular ſhapes. *a.* Dendritic. *b.* Penniform. 3. Amorphous. *a.* Foliated.	
		2. Native Oxyde of Biſmuth.	1. Amorphous. *a.* Compact. *b.* Friable. *c.* Looſe.	
		3. Sulphuret of Biſmuth.	1. Amorphous. *a.* Striated. *b.* Foliated.	Biſmuth 60. Sulphur 40. *Sage.*
	2. Nickel.	1. Native Nickel.	1. Cryſtalliſed. *a.* In rhomboidal tables. 2. Amorphous. *a.* Foliated.	Nickel alloyed by Iron. *Born.*
		2. Native Oxyde of Nickel.	1. Amorphous. *a.* Earthy. *b.* Pulverulent.	
		3. Kupfer Nickel.	1. Of particular ſhapes. *a.* Dendritic. 2. Amorphous. *a.* Granular. *b.* Compact.	Nickel united to Iron, Arſenic, Cobalt, and Sulphur. *Berg.*
	3. Arſenic.	1. Native Arſenic. *Scherben Cobalt.*	1. Of particular ſhapes. *a.* Stalactitic. *b.* Botryoidal. *c.* Mamillated. 2. Amorphous. *a.* In conchoidal laminæ. *b.* Compact. *c.* Pulverulent.	Arſenic alloyed by Iron.
		2. Native Oxyde of Arſenic.	1. Cryſtalliſed. *a.* In truncated tetrahedral priſms. *b.* Indeterminate. 2. Amorphous. *a.* Pulverulent.	*Born.*
		3. Sulphuret of Arſenic. *Realgar and Orpiment.*	1. Cryſtalliſed. *a.* In tetrahedral rhomboidal priſms, with correſponding pyramids and their modifications. *b.* Indeterminate. 2. Of particular ſhapes. *a.* Stalactitic. 3. Amorphous. *a.* Foliated. *b.* Compact. *c.* Pulverulent.	Arſenic from 84—90. Sulphur from 16—10. *Kirw.*
		4. Miſpickel.	1. Cryſtalliſed. *a.* In rhomboidal tetrahedral priſms, with obtuſe dihedral ſummits. *b.* Indeterminate.	Arſenic with Sulphur and Iron, and ſometimes Silver. *Born.*

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
2. Fragile.	3. Arſenic.	4. Miſpickel.	2. Amorphous. *a.* Granular.	
	4. Cobalt.	1. Grey Cobalt Ore.	1. Cryſtalliſed. *a.* In ſmooth cubes and their modifications. *b.* Indeterminate. 2. Of particular ſhapes. *a.* Dendritic. *b.* Stalactitic. 3. Amorphous. *a.* Granular. *b.* Compact.	Cobalt alloyed by Arſenic.
		2. Native Oxyde of Cobalt.	1. Amorphous. *a.* Earthy. *aa.* Blue. *bb.* Black. *cc.* Brown.	
		3. Arſeniate of Cobalt. *Cobalt Bloom.*	1. Cryſtalliſed. *a.* In tetrahedral priſms, terminated by dihedral pyramids having rhombic faces. *b.* Indeterminate. 2. Amorphous. *a.* Compact. *b.* Efflorescent.	*Berg.*
		4. Sulpuret of Cobalt.	1. Cryſtalliſed. *a.* In ſmooth cubes and their modifications. *b.* Indeterminate. 2. Amorphous. *a.* Compact.	*Born.*
		5. White Cobalt Ore.	1. Cryſtalliſed. *a.* In ſtriated cubes, and their modifications. *b.* Indeterminate. 2. Amorphous. *a.* Granular. *b.* Compact.	Cobalt united to Arſenic, Iron, and Sulphur.
	5. Zinc.	1. Native Oxyde of Zinc. *Calamine.*	1. Of particular ſhapes. *a.* Supplanting calcareous ſpars, fluors, &c. *b.* Stalactitic. 2. Amorphous. *a.* Compact. *b.* Spongy. *c.* Friable.	Oxyde of Zinc 84. Oxyde of Iron 3. Silex 12. Argil 1. *Berg.*
		2. Carbonate of Zinc.	1. Cryſtalliſed. *a.* In compreſſed hexhedral priſms, with dihedral ſummits. *b.* Indeterminate. 2. Of particular ſhapes. *a.* Mamillated.	Zinc 60. Carbonic Acid 28. Water 6. Silex 5. Iron 1. *Berg.* Carbonate of Zinc 36. Silex 50. Water 12. *Pelletier.*
		3. Sulphate of Zinc.	1. Cryſtalliſed. *a.* In rhomboidal priſms, with tetrahedral pyramids. *b.* Indeterminate.	Zinc 20. Sulphuric Acid 40. Water 40. *Berg.*

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
2. Fragile.	5. Zinc.	3. Sulphate of Zinc.	2. Of particular ſhapes. *a.* Stalactitic.	
		4. Blende.	1. Cryſtalliſed. *a.* In tetrahedrons and their modifications. *b.* In octohedrons and their modifications. *c.* Indeterminate. 2. Amorphous. *a.* Foliated.	Zinc 52. Sulphur 26. Iron 8. Copper 4. Silex 6. Water 4. *Berg.*
	6. Antimony.	1. Native Antimony.	1. Amorphous. *a.* Striated.	
		2. Native Arſenical Antimony.	1. Amorphous. *a.* Foliated.	Antimony alloyed by 16 per cwt. of Arſenic. *Sage.*
		3. Native Oxyde of Antimony.	1. Cryſtalliſed. *a.* In ſtellated needle-like cryſtals.	*Mongez.*
		4. Muriate of Antimony.	1. Cryſtalliſed. *a.* In rectangular tetrahedral laminæ.	*Delemath.*
		5. Red Antimonial Ore.	1. Cryſtalliſed. *a.* In ſlender priſmatic needles.	Antimony with Arſenic, Acid and Sulphur. *Born.*
		6. Sulphuret of Antimony. *Grey Ore.*	1. Cryſtalliſed. *a.* In compreſſed hexhedral priſms, with obtuſe tetrahedral pyramids. *b.* Indeterminate. 2. Amorphous. *a.* Fibrous. *b.* Striated. *c.* Foliated. *d.* Granular. *e.* Compact.	Antimony 74. Sulphur 26. *Berg.*
		7. Plumoſe Antimonial Ore.	1. Cryſtalliſed. *a.* In ſlender priſmatic needles. *b.* Indeterminate.	Antimony with Iron, Arſenic, Sulphur, and ſometimes Silver. *Berg.*
	7. Manganeſe.	1. Native Manganeſe.	1. Of particular ſhapes. *a.* Globular.	*Peyrouſe.*
		2. Native Oxyde of Manganeſe.	1. Cryſtalliſed. *a.* In tetrahedral rhomboidal priſms, truncated. *b.* Indeterminate. 2. Of particular ſhapes. *a.* Stalactitic. *b.* Mamillated. 3. Amorphous. *a.* Striated. *b.* Granular. *c.* Compact.	
		Black Wad.	*d.* Earthy.	Oxyde of Manganeſe 43. Oxyde of Iron 43. Lead 4½ Mica 5. *Wedgwood.*

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
2. Fragile.	7. Manganeſe.	3. Siliceous Ore of Manganeſe.	1. Cryſtalliſed. *a.* In rhomboidal parallelopepids. *b.* Indeterminate. 2. Of particular ſhapes. *a.* Stalactitic. *b.* Mamillated. 3. Amorphous. *a.* Striated. *b.* Compact. *c.* Earthy.	Oxyde of Manganeſe 35. Silex 55. Iron 5. Argill 5. *Ruprecht.*
	8. Scheele.	1. Tunſtate of Lime. *Tungſten.*	1. Cryſtalliſed. *a.* In aluminiform octohedrons and their varieties. *b.* Indeterminate. 2. Amorphous. *a.* Compact.	Tunſtenic Acid 44. Lime 56. *Scheele.*
		2. Wolfram.	1. Cryſtalliſed. *a.* In compreſſed hexhedral priſms, with tetrahedral pyramids. *b.* Indeterminate. 2. Amorphous. *a.* Striated. *b.* Foliated. *c.* Compact.	Tunſtenic Acid 64. Oxyde of Manganeſe 22. Oxyde of Iron 13. Silex and Tin 2. *Delhuyar.*
	9. Uranite.	1. Carbonate of Uranite. *Calcolite.*	1. Cryſtalliſed. *a.* In cubes, or their ſegments. *b.* Indeterminate. 2. Amorphous. *a.* Earthy.	Uranium with Carbonic Acid and a little Copper. *Klapr.*
		2. Sulphuret of Uranite. *Pech Blende.*	1. Amorphous. *a.* Compact.	
	10. Molybdena.	1. Molybdena.	1. Amorphous. *a.* Foliated.	Molybdic Acid 60. Sulphur 40. *Klapr.*
	11. Menachanite.	1. Native Menachanite.	1. Amorphous. *a.* In grains.	Menachanite alloyed by Iron. *Gregor.*

CLASS IV.

INFLAMMABLES.

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Aeriform.	1. Hydrogen.	1. Pure Hydrogen.		
		2. Sulphurated Hydrogen. *Hepatic Gas.*		
2. Liquid.	1. Bitumen.	1. Naptha.		
		2. Petroleum.		
		3. Barbadoes Tar.		
3. Solid.	1. Bitumen.	1. Aſphaltum.		
		2. Jet.		
		3. Coal.	1. Compact.	
			2. Slaty.	
		4. Mineral Elaſtic Gum.		
	2. Amber.	1. Honeyſtone.	1. Cryſtalliſed. *a.* In aluminiform octohedrons.	
		2. Common Amber.	1. Amorphous. *a.* Tranſparent. *b.* Opaque.	
	3. Mineral Tallow.			
	4. Sulphur.	1. Common Sulphur.	1. Cryſtalliſed. *a.* In rhomboidal octohedrons and their varieties. *b.* Indeterminate. 2. Amorphous. *a.* Compact.	
		2. Volcanic Sulphur.	1. Amorphous. *a.* Granular. *b.* Compact.	
	5. Plumbago.	1. Common Plumbago. *Graphite.*	1. Amorphous. *a.* Compact. *b.* Slaty.	
		2. Anthracolith.	- - - - - - - - - -	Carbon 90. Argill 5. Iron 3. Silex 2. *Born.*

APPENDIX.

VOLCANIC PRODUCTIONS.		
I. Cinders.	II. Lava.	III. Vitreous Lavas.
1. Looſe. *a.* Aſhes. *b.* Sand.	1. Cellular.	1. Glaſs.
2. Coherent. *a.* Puzzolana. *b.* Traſs. *c.* Tufa. *d.* Pumice. *e.* Piperino.	2. Compact.	2. Enamel. 3. Scoriæ. 4. Slaggs.

FINIS.

ERRATA.

Page 7. *After* Species 16, *add* Species 17 Sulphate of Argill; Capillary *(Hair-Salt)*, Amorphous *(Mountain Butter)* and in Solution.

8. In the Analyſis of the Garnet, *inſtead of* Iron 1, *read* Iron 10.

12. *Under* Siliceous Spar 47, inſert *Tremolite*.

— *After* Adamantine Spar, in place of the Analyſis given, *read* Adamantine Earth 33. Argill 66. *Klapr.*

23. In the Analyſis of Red Antim. Ore, Species 5, dele the comma after *Arſenic*.