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Words to the Wise—

More than 4,000 To Be Exact

Which is the correct name, *hydroxyapatite* or *hydroxylapatite*? Often, even the professionals can't get it right. How do you spell *pahasapaite*? Both the correct mineral names and their spellings are frequently asked questions by readers of *Rocks & Minerals*, and there are now more than four thousand accepted mineral species for inquiry. To answer questions such as these, it is useful to know something about the system of modern mineral nomenclature. (By the way, the correct name and spelling are *hydroxylapatite*.)

For a detailed history of mineral nomenclature, see de Fourester (2002), from which much of the information here is taken. Another good source is Blackburn and Dennen (1997). The naming of minerals has occurred since the beginning of recorded history; however, prior to 1959 there was no single accepted method of authenticating and naming minerals. The result was a bewildering lexicon of

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The RRUFF/IMA Web page layout.

IMA APPROVED LIST OF MINERALS (Development Version)
 Created and maintained by the RRUFF Project in partnership with the IMA.

Search: EXPORT DATA

EXPORT TO RRUFF

IMA Approved Minerals Only

Fluorapatite
 Fluorbritholite-(Ce)
 Fluorcapthite
 Fluorellstadite
 Graphite
 Herderite
 Isokite
 Morinite
 Nacaphite
 Nefedovite
 Polyphite
 Quadruphite
 Sobolevite
 Thadeuite
 Viitaniemiite

Minerals found: 21
 Search Tags: [clear all]
 Fluischer

SEARCH TAGS [clear tags]

Chemistry Includes:
 Chemistry Excludes:

Click an element once to include, twice to exclude.

H	Clear Chemistry																He	
Li	Be	Exclude all non-selected										B	C	N	O	F	Ne	
Na	Mg	Al	Si	P	S	Cl	Ar											
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr	
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe	
Cs	Ba	*	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	
Fr	Ra	**																
			*	La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
			**	Ac	Th	Pa	U											

Chemistry : RRUFF IMA HOM Fleischer

HOM AMCSD RRUFF GOOGLE MINDAT WEBMIN REFERENCES

Fluorapatite

RRUFF: Ca₅(PO₄)₃F
IMA: Ca₅(PO₄)₃F
HOM: Ca₅(PO₄)₃F
Fleischer: Ca₅(PO₄)₃F

Tags (Fluorapatite)

- Chemistry Record
 - Fleischer
 - HOM
 - IMA
 - RRUFF
- Data Record
 - AMCSD
 - HOM
 - References
 - RRUFF
- Gemstones
 - Readily available
- Mineral Group
 - Apatite
 - Rock-Forming
 - Textbook Minerals

Status Notes:

scientific and colloquial names, often with numerous names for the same species.

In 1958 mineralogists worldwide and their regional societies formed the International Mineralogical Association (IMA), and one of the first goals set by the IMA was to deal with the inconsistencies and problems of mineral naming and nomenclature. Thus, in 1959 the IMA Commission on New Minerals and Mineral Names (CNMMN) was established. The first chairman of the CNMMN was Michael Fleischer, best known among mineral collectors for *Fleischer's Glossary of Mineral Species* (previously the *Glossary of Mineral Species*). Now in its ninth edition, the *Glossary* has been the standard reference for all currently accepted mineral species.

Since 1959, the adjudication of new minerals has occurred through a proposal process to the CNMMN, including, if desired, a proposed name. Once the CNMMN has approved the proposal for the new species, a paper describing it can be published. The proposal process is described in Nickel and Grice (1998). Copies of this and other IMA reports can be downloaded from the Web sites of the Mineralogical Society of America (<http://www.minoscam.org/msa/ima/>) and the IMA CNMMN (<http://www.geo.vu.nl/users/ima-cnmmn/>). It is usually the privilege of the person who formally and scientifically describes a new mineral species for the first time to name it, and there is great latitude in doing so (frivolous names, however, are not acceptable). For the record, in 2006, the CNMMN changed its name. Two IMA commissions, the CNMMN and the Commission on Classification of Minerals (CCM), were formally merged under the name Commission on New Minerals, Nomenclature and Classification (CNMNC). A record of this merger and the history behind it are given by Burke (2006).

Mineral names may reflect a mineral's composition or physical properties. They may also be named after people, places, organizations, and even events. Of course, many mineral names, such as gold and feldspar, come from antiquity and have varied derivations. Modifiers are added to many mineral names to reflect subdivisions in a species based on chemistry or symmetry (e.g., ferrocolumbite and clinomimetite, respectively). Roughly 45 percent of all mineral species are named in honor of a person, 23 percent for locations of discovery, 14 percent for their chemical composition, and 8 percent for a physical property (Blackburn and Dennen 1997). Because minerals are so commonly named after people or places, the etymology of their names can be an interesting window into mineralogical history and geography. This has been one of the stimuli for *Rocks & Minerals'* semiregular column Who's Who in Mineral Names. A wonderful book that covers the etymology of all IMA-approved mineral names up through 1996 is the *Encyclopedia of Mineral Names* (Blackburn and Dennen 1997). This, along with a companion book, *Glossary of Mineral Synonyms* (de Fournestier 1999), is a must-have for the serious mineral enthusiast.

To date there has not been a complete, continually updated list of the IMA-approved mineral names available to mineralogists and collectors. With the yearly increase in accepted

mineral species, hard-copy publications such as *Fleischer's Glossary of Mineral Species* and the *Handbook of Mineralogy* (Anthony et al. 2003) quickly become dated. However, this is an ideal problem for the Internet, and it is finally being addressed. The RRUFF project, in conjunction with the IMA, is now hosting the official, continually updated, list of IMA-accepted minerals on the web page <http://www.rruff.info/ima/>. The Web site is much more than a list, however; it allows one to search for minerals based on chemistry and to compare information on a mineral from numerous sources including the IMA official list, *Fleischer's Glossary of Mineral Species*, and the *Handbook of Mineralogy*. Once a mineral name is found, there is direct access, through the click of the mouse, to all of the mineralogical information (i.e., chemistry, structure, spectroscopic data, PDF copies of references from many mineralogy journals, and so on) that is available through the RRUFF/IMA Web site. Another useful tool available at the Web site is a downloadable library file that can be added to your word processor's spell check. In addition, a longer-term goal is to provide a means for others to digitally download the most recent lists in useful ways that can be imported and accessed by other databases.

ACKNOWLEDGMENTS

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