TITANIC ACID IN THE POTATO TUBER

IN Bulletin 267 of the Colorado Experiment Station, entitled "Titanium, barium, strontium and lithium in certain plants," the writer considered the findings relative to titanium doubtful to a great degree, because of the contamination of ashes of the plants by dust that had been blown on to the plants.

This contamination amounted, in the case of a tobacco, to over 50 per cent. of the ash, also in corn leaves. As this contaminating material contained titanic acid, it became doubtful whether the plants contained any or not. All samples of ash prepared from field-grown plants contain more or less dust and sand.

The most satisfactory material found in the progress of that work was the ash of the potato tuber which can be well washed and a fairly clean ash obtained. Recently I had sufficient ash of this sort to justify an attempt to determine the titanic acid quantitatively. It was not only present, as in the former case, but amounted to 0.08 per cent. of the ash.

It seems probable that it was really present in the ashes proper of the other plants, most liberally in the ash of the corn leaves.

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CHEMICAL SPELLING CONTINUED

FOR a year or two very little mention has been made of chemical spelling in SCIENCE, but since considerable interest was manifested in the subject at the start, there is doubtless some curiosity felt as to its present status.

Chemical spelling is now in its fourth year at the West Virginia University. Four annual contests have been held here, including one during the first week in May of this year. The five students who received the highest rank in each of the preceding contests were granted "Roll of Honor" certificates bearing their names and the university seal. A copy of the certificates from each of these contests has been framed for the department of chemistry.

Over three hundred students entered the spelling matches each year and the winners are justly proud of their achievement. These certificates, hanging in a conspicuous place in the chemistry building, serve to remind first-year students of the impending contest, spurring them on to greater efforts to excel, not only in chemical spelling, but in all their chemical work.

Several other institutions are now beyond the experimental stage in chemical spelling, and in at least one section of the country, namely, the southwestern, intercollegiate spelling matches have been held. The progress of chemical spelling has been retarded to some extent by the fact that no suitable list of words and formulas was available in print and therefore had to be prepared. Mimeographed lists of about twelve hundred words were supplied to the students at the West Virginia University and a few other institutions, but these lists proved to be inadequate.

In order to meet the needs of the contests this spring I have prepared three lists of words, together with their respective chemical formulas, which have now been published in a book called "A *Pronouncing* Chemical Formula Speller," which appeared about April 20.

There are about three thousand inorganic and one thousand organic compounds included, besides about three hundred of the more common minerals. The words in these three lists are hyphenated, accented and supplied with diacritical marks. A key to pronunciation, as well as directions for holding contests, have also been included. The organic list has been carefully looked over and revised by Professor E. Emmet Reid, of Johns Hopkins University. As a matter of interest to those who are planning chemical spelling contests, it should be said that about fifteen hundred questions and answers, involving the typical reactions of the elements, have been included, the answers being expressed in the form of balanced equations.

A book of this sort is almost indispensable to chemical spelling and should facilitate the holding of intercollegiate contests. It would also be of value to students and instructors as a reference book. The 1925 International Atomic Weights and Atomic Numbers of the elements have been included.

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MUSSELSHELL RIVER

APROPOS of the "Muscle Shoals" *vs.* "Mussel Shoals" question it may be of interest to note that what is now known as "Musselshell River," a tributary of Missouri River in central Montana, was formerly known as "Muscleshell River."

The form "Muscleshell" is used in H. V. Hayden's report on the Geological Exploration of the Yellowstone and Missouri Rivers, which he made as assistant to Brigadier General W. F. Raynolds in 1859–60. General Raynold's report uses the same form, and both seem to have followed the example of Lieutenant J. Mullan who went through the country in 1852.

In the report on the expedition of 1875 from Carroll, Montana, to Yellowstone National Park and return, under Captain William Ludlow, the form "Mus-