SIMPLE TEST FOR METEORITES

"The Ore Bin"
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Meteorites are a constant source of wonder to most people. They flash across the sky in their brief period of existence, and sometimes penetrate to the earth's surface. They have considerable scientific as well as commercial value, and the discoverer of one of them is usually well rewarded.

Specimens are constantly being received, labeled as meteorites. This department is always glad to be of service, and desires a record of such finds. But the general public may save themselves many false hopes and disappointments if they had some simple means of testing the suspected meteorite.

There are two general types of meteorites; those composed of iron and nickel and known as iron meteorites, and those composed of various elements and known as stony meteorites. Both kinds usually have at least small amounts of nickel and a nickel-test may eliminate a large number of objects commonly mistaken for meteorites. This test is not conclusive in an area that has nickel-bearing rocks.

The test requires four chemicals:

Dilute nitric acid
Ammonium hydroxide (ammonia)
Alcohol
Dimethyl-glyoxine

A small sample of the material to be tested is ground to a fine powder and dissolved in nitric acid. Then add ammonium hydroxide until the solution is distinctly alkaline. A test for alkalinity is accomplished by using litmus paper, preferably red, and the color will change to blue when sufficient ammonium hydroxide has been added. If a reddish brown mass forms at this point, it is an indication of the presence of iron.

Allow the reddish brown mass to settle, and then carefully pour off the clear liquid. The clear liquid can also be filtered from the solid material.

While the liquid is clearing or filtering, the dimethyl-glyoxine solution may be prepared. Dissolve this chemical in about an ounce of alcohol until the alcohol will hold no more. This is a saturated solution. Add a few drops of this solution to the clear liquid and a scarlet-red precipitate indicates the presence of nickel.

Dimethyl glyoxine can be obtained from any chemical supply house at a cost of about 75 cents per ounce. This is a dry chemical. The alcohol may be purchased almost anywhere.

The presence of nickel in the specimen indicates that it has a possibility of being a meteorite, and you can then contact some agency who can assist you further. If it has no nickel, you may feel reasonably sure that your rock is no "wanderer from heaven," and it probably will not pay the next installment on the new car.

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