ite present in the ore samples, but it was impossible to remove aggregate grains of sphalerite and pyrite. This nonmagnetic fraction was treated with HCl to remove carbonate gangue, then with HF to remove quartz gangue. If any Ca remains when HF is added, CaF_2 is formed, which can be removed by boiling with a 50 percent aluminum chloride solution ($AlCl_3 \cdot 6H_2O$).

Procedure. Add sphalerite-pyrite sample containing about 40 mg of sphalerite to 250 cc of solution in a 600 ml geaker. Heat at 80°C on a hot plate, cover with Saran wrap to retain splashed solution, and stir with a glass rod attached to an electric stirrer. The fastest stirring speed possible without considerable splashing is preferable. When the solution turns green, oxidizing action has stopped. Decant the solution, wash the sample with water, and check under the microscope to determine if any sphalerite remains. If sphalerite is present, the process is repeated until all sphalerite has been removed.

Pyrite is gradually attacked by this treatment. Insoluble ferric compounds formed by the oxidation of this pyrite and iron-bearing sphalerite are removed by heating the sample briefly in diluted HCl.

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AN IRON-SENSITIVE STAIN FOR IRON-RICH SPHALERITE: ERRATUM

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Page 1051, Figure 2 is reversed relative to Figure 1; the broad band of 25 mole percent FeS on the right (between 150 and 300 microns) in Figure 2 corresponds to the broad band of dark colored sphalerite on the left in Figure 1.

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