

Alfred L. Beebe, regular member. Proposed by J. B. McIntosh, A. L. Colby and A. H. Elliott.

John Cawley, regular member. Proposed by James H. Stebbins, Jr., A. H. Elliott and P. Casamajor.

N. Hathaway, regular member. Proposed by E. Waller, Wm. Rupp and C. E. Munsell.

Geo. Leguin, associate member. Proposed by Nelson H. Darton, James H. Stebbins, Jr., and Wm. Rupp.

John G. Macfarlan, associate member. Proposed by P. Casamajor, James H. Stebbins, Jr., and A. H. Elliott.

Dr. Waller then stated on behalf of the committee on papers, that the lack of MS. produced much trouble, and he invited the members to assist said committee, by supplying as much MS. or abstracts as possible.

There being no further business the meeting adjourned.

JAMES H. STEBBINS, JR.,

Recording Secretary.

Laboratory Notes.—By E. WALLER.

PRECIPITATION OF BARIUM SULPHATE.

I have frequently observed that solutions of barium chloride seem to dissolve more air or carbon dioxide than most other solutions used as reagents, so much so that the addition of a cold barium solution to a boiling solution causes a brisk evolution of gas comparable with the effervescence due to the addition of acid to a carbonate. When a sulphate is present in the solution to which cold barium chloride solution has been added, even though the sulphate solution may have been boiling, the precipitate separates in a very finely divided condition, which gives much trouble in filtering, as the precipitate is so fine as to pass through the pores of a filter, and takes very long to settle.

If the barium solution is boiled for a few minutes before adding it, this phenomenon does not occur. The conclusion seems to be that the gases dissolved by the barium solution play an important part in the matter of the separation of the precipitate. Other chemists have evidently experienced the same trouble, for I have found recommendations in the literature to add a pinch of starch to the solution, and also more recently the addition of a little silver

nitrate, the Ag Cl. being subsequently dissolved out by ammonia, both having the same object in view,—to cause the barium sulphate to separate promptly in a form suitable for filtration and washing.

However, by boiling *both* barium and sulphate solutions for a few minutes *separately* and mixing them when boiling hot, then boiling the mixture for a few minutes and finally allowing it to stand on the water-bath, the precipitate will settle completely in about half an hour.

PECULIAR REACTION WITH LEAD ACETATE.

Many of the members of the Society will remember a conversazione of the Society which was held at the laboratory of our late fellow member, Dr. Lipps. Among other interesting things shown us was the preparation of Dr. Lipps' "dextrin reagent," where litharge was added to solution of lead acetate, and the mixture heated to about 55°C., when it thickened up, owing, no doubt, to the formation of some of the extremely basic lead compounds. The reaction is such a peculiar one that I have thought it worthy to be placed on record, which Dr. Lipps failed to do during his lifetime.

To obtain the reaction, take a cold saturated solution of lead acetate, warm to 50 or 60°C., and add litharge little by little, stirring it in vigorously. At a certain point the mixture suddenly thickens, and in a few minutes becomes so solid that the vessel may be inverted without spilling. After standing for a short time the mass may be extracted with water, and the solution constitutes the "dextrin reagent." This reagent, when boiled with solutions containing dextrin, gives a white precipitate. According to Dr. Lipps 100 parts of this precipitate, when thoroughly dried, corresponds to 35 parts of dextrin.

The compound formed is probably the sexbasic lead acetate described by Berzelius (*Ann. Chim.*, XCIV., 296), containing—

Acetic acid.....	5.7 per cent.
Oxide of lead.....	91.3 "
Water.....	3.0 "

In Berzelius' description of the preparation of this acetate, ammonia was used to withdraw a portion of the acid from its combination with the lead. In Allen's *Commercial Handbook*, p. 318, the use of lead acetate to which ammonia has been added is mentioned as a reagent for dextrin. The compound formed is probably the same.

Laboratory Notes.—By JAMES H. STEBBINS, JR., S. B., F. C. S.

ANALYSIS OF GALENA FROM NEWBURYPORT, MASS.:

This ore was said to be rich in silver; however, upon analysis, only a trace could be found, while the percentage of PbS is quite large.

The composition of this ore may be seen from the following figures:

Si O ₂	0.40
PbS.....	98.80
Sb ₂ S ₃	0.40
FeS.....	0.15
Ag. trace.....
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Total.....	99.75

Its appearances closely resembled ordinary galena, having a cubic cleavage and coarse structure. Hardness about 2.5; lustre, metallic; and streak, lead gray.

ANALYSIS OF PYRRHOTITE FROM CLAYTON, N. Y.:

This ore was handed to me to be tested for gold, but, upon analysis, no gold was revealed.

Its appearance was massive and amorphous. Hardness, about 3.5—4; lustre, metallic; color, between bronze-yellow and copper-red. Several of its sides were tarnished. Streak, dark grayish black. It was, moreover, strongly magnetic when reduced to a fine powder.

Composition.

Si O ₂	3.30
Fe.....	58.03
S.....	38.26
P ₂ O ₅ trace.....
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Total.....	99.59

According to theory, it should have the following composition:

Calculated for Fe₇S₈.

Sulphur.....	39.5
Iron.....	60.5
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Total.....	100.0

It will, therefore, be observed that the above ore deviates but slightly from theory.