Since the precipitate is soluble in alcohol, that which is obtained by filtering does not represent all the hæmatin, for a part would be dissolved while boiling. The spectrum has one broad band near C. Most of the remaining portion of the spectrum is also absorbed.

If 95 per cent. alcohol be added to blood and a small quantity of caustic soda, a still different spectrum is obtained. This is the alkaline hæmatin spectrum. It is similar to the acid hæmatin except the dark band is near and often on D.

Effect of Heat Upon the Irritability of Muscle. By A. J. Bigney.

In these experiments the gastrocnemious muscle of the frog was used. It was suspended in a moist chamber and the tendon attached to a lever for recording movements in contraction on a revolving drum. Surrounding the cylindrical moist chamber was another similar cylinder filled with water; near the bottom was a small tube about one-half inch in diameter passing from it at right angles and forming two sides of a rectangle, returned to the cylinder filled with water. By this arrangement the water could make a circuit through this tube and the cylinder. Heat was applied to the tube, and a thermometer was placed in the moist chamber.

The muscle was stimulated at different temperatures and the result recorded on the drum. Only making shocks were used in stimulation, this being regulated by the automatic maker, or breaker. Between 36° and 38° C. the contractions were the greatest, showing an increase in irritability. Between 39° and 40° the contractions ceased, heat rigor having set in. At the time the contractions ceased, the temperature was lowered and the muscle became irritable again. It would continue irritable for some time, but would soon become exhausted. After several hours' rest it would become quite irritable again.

Heat rigor began to set in at a little more than 36°, sometimes not until nearly 39°. It is different in different frogs and in different seasons. From 45° to 55° C. the rigor would usually be complete. The most important point to be secured is that temperature at which contractions cease and still when the temperature is lowered the muscle will be found to be alive so as to give contractions. When the heat rigor would once begin, it would continue even if the temperature is lowered. This holds true only for a few degrees. Long rest would allow it to pass out of rigor if it had not gone too far. After at least 24 hours had elapsed good contractions were obtained, and this with muscle that had once been exhausted.