Reduction of Murexide.—Leucomurexide has not been described previously, although postulated by Labes and Freisburger [*Arch. exptl. Path. Pharmakol.*, **156**, 226 (1930)] as well as by Kuhn and Lyman. One gram of pure murexide dissolved in 900 cc. of water at 30° was treated with a filtered solution of one g. of sodium hydrosulfite in a mixture of 20 cc. of water and 10 cc. of ammonia. In a few moments complete decolorization occurred. Salting out with 60 g. of ammonium chloride gave on filtering, washing with 60% methanol and finally with absolute methanol, and drying at 110°, 0.98 g. (98%) of a buff-colored microcrystalline powder which turned pink in the air. It contained the theoretical percentage of nitrogen for ammonium dihydropurpurate. Since its composition is identical with uramil (its molecular formula is simply twice that of uramil), a distinguishing test was sought. This was found in the action of potassium ferricyanide, which immediately converts leucomurexide to murexide, while uramil yields colorless oxidation products. Aeration of a dilute suspension of leucomurexide in water quickly regenerates murexide, 70% (by titration) having been obtained in one experiment after thirty minutes of aeration.

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RECEIVED JULY 24, 1936

RHEOPEXY IN BENTONITE

Sir:

Recently during the course of an investigation in the thixotropic properties of the clay mineral bentonite, gels showing pronounced rheopectic properties were observed. These gels are of particular interest inasmuch as Freundlich and Juliusburger in the original article describing rheopexy [*Trans. Faraday Soc.*, **31**, 920 (1935)] state that they were unable to find any evidence of rheopexy in bentonite.

The discovery of rheopexy in bentonite may be attributed to a new technique of fractionation which the authors have developed and described at the thirteenth Colloid Symposium at St. Louis, Mo., in June of 1936. Natural bentonite is dispersed in distilled water and then run through a high speed continuously fed centrifuge of the Sharples type. At various distances up the centrifuge bowl different particle size fractions of bentonite are removed and then refractionated. The finest fractions are a beautiful perfectly transparent golden-yellow color and completely amicronic while the coarser fractions are more opaque. There is a large percentage of amicronic particles present in the Wyoming Bentonite being used. By such a method of preparation the authors are establishing the influence of particle size upon thixotropy and rheopexy in bentonite.

Specifically 10 cc. of a very fine fraction (1.3% bentonite) was placed in a test-tube 1 cm. in diameter and 1 drop of saturated potassium chloride added. The setting time at 23° when the tube was kept perfectly still was twenty-five minutes, whereas slight tapping of the tube on a pad of rubber reduced the setting time to fifteen seconds. Additional potassium chloride makes it so stiff that it cannot be liquefied. Such a gel is perfectly transparent. In addition these fine bentonite fractions show pronounced streaking upon being stirred. This streaking phenomenon is greatly increased after electrodialysis. Altogether the bentonite fractions prepared in this manner act very similarly to the vanadium pentoxide system described by Juliusburger and Pirquet [*Trans. Faraday Soc.*, **32**, 445 (1936)].

From a consideration of the properties of a 1.3% bentonite gel in comparison to those gels of 10–20% concentration described by Freundlich, Schmidt and Lindau [*Kolloidchem. Beih.*, **36**, 43 (1932)], one is forced to the conclusion that particle size is of paramount influence in this case of thixotropy. In fact we have found evidences of gel structure at concentrations as low as 0.01% by wt. in the low colloidal range. It may be stated, however, that if hydrogen bentonite produced by electrodialysis is ever allowed to dry, it fails to exhibit thixotropy in low concentrations. This property can still be observed providing the material is never allowed to dry.

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EXCHANGE BETWEEN SODIUM IODIDE AND ETHYL IODIDE*

Sir:

It was reported a few months ago in these columns [Hull, Schiflett and Lind, THIS JOURNAL,

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