ciently great to permit a rapid and thorough extraction of the substance. Chloroform containing the di-indyl compound has a red color, very like that of hemoglobin. Owing to this circumstance, the condensation compound in chloroform can be approximated colorimetrically in a convenient manner by comparing the tint of the solution with that of the orange-red glass scale of the Fleischl hemoglobinometer. When more accurate results are desired, the chloroform is evaporated and the residue of the di-indyl compound weighed.

It was found that the method here indicated serves for the recovery of a very large percentage of indol from peptone solutions or bouillon. From solutions containing a little protein, the indol may be recovered almost quantitatively. The presence of a large proportion of protein may cause the retention of considerable indol. The distillation should be carried on directly, without steam, from the acidified fluid. The presence of indol in a small fraction of distillate is best ascertained by boiling the acid solution with a few drops of a 2 per cent. alcoholic solution of di-methyl amido-benzaldehyde.

Skatol forms an homologous and similar compound with the naphthoquinon reagent, but this substance is violet rather than blue.

41 (87). "**Anesthesia produced by magnesium salts,**" a preliminary communication, with demonstrations: **S. J. MELTZER** and **JOHN AUER.**

The authors exhibited to the society two guinea-pigs, which were deeply narcotized by injections of magnesium sulfate. One of these animals had been similarly narcotized twice before, and fully recovered each time. In their physiological and toxicological studies of magnesium salts, the authors found that by subcutaneous injections of certain quantities of sulfate or chlorid of magnesium, animals can be brought into a state of deep anesthesia, during which any operation can be performed upon them without the least resistance. If the dose of the salts is not too large, heart-beat, blood-pressure and respiration remain nearly normal. It was tested on dogs, cats, rabbits, guinea-pigs, white rats and frogs. A gram and a half of magnesium sulfate is about the effective dose for most of the animals. The chlorid has to be used in smaller

doses in proportion to its smaller molecular weight. Particulars will be reported later. The authors emphasized the fact that these salts are very poisonous when certain maximum doses are exceeded.

42 (88). **"Enzymes and anti-enzymes of inflammatory exudates": EUGENE L. OPIE.**

Exudates obtained by injecting suspensions of aleuronat into the pleural cavities of dogs and rabbits were subjected to autolysis. The Kjeldahl method was used to determine the nitrogen of coagulable proteins converted by digestion into soluble form.

Inflammatory exudates removed one or two days after injection of the irritant undergo very little change, while those removed three or four days after the onset of inflammation exhibit appreciable though slight autolysis. There is no relation between the amount of digestion and the number of cells which are present. If the cells are separated by centrifugalization from the serum and suspended in normal salt solution, well-marked autolysis is demonstrable. By recombining cells and serum it can be shown that the serum inhibits this autolysis. When this inhibitory action is prevented by heating serum to 100° C., leukocytes acting upon the coagulated serum cause very active digestion. In the following experiments nitrogen of uncoagulable substances is represented by cubic centimeters of $\frac{n}{10}$ sulfuric acid:

	c.c. $\frac{n}{10}$ H_2SO_4.
5 c.c. suspension of cells at 37° C., 5 days	9.30
Control	3.60
5 c.c. serum	7.25
5 c.c. cells + 5 c.c. serum, at 37° C., 5 days	10.95
Control	10.85
5 c.c. cells + 5 c.c. coagulated serum, at 37° C., 5 days	23.10

The anti-enzymotic action of the serum is unaffected by a temperature of 65° C., but is prevented at 75° C. The proteolytic ferments of the leukocytes act both in an acid and in an alkaline medium, but are most efficient in the latter. The anti-enzymotic action of the serum is favored by an alkaline reaction, but is completely prevented in an acid medium. The serum of the exudate contains a proteolytic ferment, which is active only in an acid