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DETERMINATION OF SULPHUR AND CHLORINE
IN LUBRICATING OILS CONTAINING TIN.

The presence of tin in lubricating oil interferes with the gravimetric determination of sulphur and chlorine in the Parr bomb since on precipitation with BaCl_2 stannic acid is precipitated besides BaSO_4 and AgCl .

The following analytical method was, therefore, worked out: 0.2 - 0.5 grams of sample are oxidized as usual in the Parr bomb using Na_2O_2 - KClO_3 with the addition of glucose, the contents of the bomb is dissolved in water and boiled in order to decompose the excess of peroxide. Chlorine is determined in an aliquot portion of the solution by titration using the Volhard method.

For the determination of sulphur, the solution is acidified with HCl and treated with an excess of ammonia and heated for some time. The voluminous precipitate of stannic acid is filtered off, the filtrate is acidified with HCl (1 cc. excess of concentrated HCl) and the sulphate is determined as usual by precipitation with barium chloride.