CLXIV. A NOTE ON VOLATILE SULPHIDE FROM MUSCLE.

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THE leg muscles of a well-nourished, recently killed guinea-pig were cut into small pieces by scissors and boiled in a distillation flask containing water, the delivery tube of which dipped below the surface of lead acetate solution. If the muscle was from a well-fed, sleek animal and was boiled immediately after the killing no volatile sulphide could be detected.

When some hours, preferably twenty-four, elapsed between killing the well-nourished animal and removal of the muscles, the presence of sulphide in the distillate was obvious. To remove the possibility of bacterial decomposition various procedures were adopted. In some the animals when killed were immediately eviscerated and the abdominal cavity was swabbed out with 1 % mercuric chloride solution. In others the amputated lower limbs were suspended, with skin intact or removed, in air containing toluene vapour. The results were the same in all cases. Apparently, therefore, autolysis makes a change in the muscle proteins whereby loosely bound sulphur is produced or liberated.

When the muscle was taken immediately after killing from a guinea-pig starved for 48 hours sulphide was readily detectable in the steam-distillate. These experiments were repeated many times and always with the same results. It is probable that the muscle of different animals shows considerable variation in this reaction. The flesh of sheep in poor condition emits sulphide readily on boiling but I have not succeeded in getting this with beef.