

AN IMPROVED MUREXIDE TEST FOR TEACHING
PURPOSES.

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During my class work in chemistry in medical college I directed my students to follow Hoffmann and Ultzmann as a laboratory guide. Directions for the murexide test were as follows: Mix concretion in a small mortar, place in a porcelain dish, add a few drops of nitric acid and a little water and warm carefully over a flame until the uric acid is dissolved. Evaporate cautiously, almost to dryness. Already we notice during the evaporation, if uric acid is present, onion-red streaks on the walls of the dish which vanish suddenly if that portion of the dish approaches the flame. If, when the fluid has evaporated to dryness, we add a drop of ammonia to the residue the whole interior of the dish becomes a beautiful purple-red (murexide acid-purpurate of ammonia). If KOH is added to the residue it becomes violet-blue. The murexide depends upon the fact that by the addition of HNO_3 and heat, first alloxan and then alloxantine is formed which on addition becomes murexide.

It is very commonplace for 50 per cent of the class to make failures. It seems difficult for them to gauge the proper amount of dilution and the requisite amount of heat. I adopted the following method without more than two per cent of failures.

Heat the concretion slowly in an evaporation dish with a minimum amount of water acidulated with nitric acid until the approach of dryness. Put metal plate over low flame burner frame and upon it a moistened salt of ammonium; then invert the evaporating dish over the ammonium so that the fumes are confined. This operation is quickly accomplished and there is little opportunity for error and too, even a student who is a novice, will not fail in this method of demonstration.

