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TABLES  
FOR  
SIMPLE QUALITATIVE ANALYSIS  
FOR  
LABORATORY USE.

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The following tables are intended for practice in elementary chemical analysis, and to apply only to simple salts, consisting of one base and one acid, mostly soluble in water, or of the acids and bases uncombined. Many bases (oxides) are insoluble in water, but can be readily dissolved in nitric or hydrochloric acid; some few acids are insoluble in water, but can be dissolved in potassium hydrate. Some salts are decomposed by water, but solutions can be obtained by adding a little nitric acid, and heating; as little acid should be used as possible. Many salts which are insoluble in water, such as many carbonates, phosphates, &c., may be dissolved in the same way, using either nitric or hydrochloric acid, and the solutions can in most cases be examined in the ordinary manner.

In examining a salt, about one-third should be dissolved in a small quantity of water, and the test tube containing the solution placed always in one particular part of the stand, say the left hand upper hole. A small part of this can be diluted with two or three parts of water in another test tube, and the experiments proceeded with. The *same* solution can be used for the first three groups of Table I. Thus if hydrochloric acid produces no change, pass to Group II., adding three times the bulk of hydrosulphuric acid; if this produces no change, pass to Group III., adding first twice the bulk (of the original solution) of ammonium chloride, then ammonia until it smells strongly after shaking, and, lastly, a *small* quantity of ammonium sulphide, whether any change has been produced by the ammonia or not.