

SCIENCE DEPARTMENT.

(Continued from page 120.) MISS L. E. BRYANT.

TESTS.

I.—HYDROXIDES.

Properties given in the digest.

II.—NITRATES AND CHLORIDES.

CA.	Sr.	Ba.	Mg.
$\text{Ca}(\text{NO}_3)_2$ } Soluble in alcohol Ca Cl_2 } and deliquesces in moist air.	$\text{Sr}(\text{NO}_3)_2$ } Soluble in alcohol Sr Cl_2 } Insoluble in alcohol, does not deliquesce in air.	$\text{Ba}(\text{NO}_3)_2$ } Insoluble in alcohol, Ba Cl_2 } and do not deliquesce in air.	

III.—CARBONATES.

A soluble Carbonate Na_2CO_3 gives white precipitates with Salts of these metals.

Ca CO_3 , the bulky prec., when heated assumes the crystalline form. Is pretty readily soluble in solution of Ammonium Chloride.	Sr CO_3 is less soluble in Ammonium Chloride than Ba CO_3 .	Ba CO_3 slightly soluble in Ammonium Chloride.	The basic Magnesium Carbonate, $\text{Mg CO}_3 \cdot x\text{H}_2\text{O}$, is not precipitated if Ammonium Chloride or other similar Ammonium Salts be present in sufficient quantity.
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IV.—SULPHATES.

Soluble Salts with Sulphuric Acid, H_2SO_4 , give white precipitates.

$\text{Ca SO}_4 + 2\text{H}_2\text{O}$ is immediately produced in highly concentrated solutions. A large proportion of water dissolves it. It dissolves readily on boiling in a concentrated solution of Ammonium Sulphate, $(\text{NH}_4)_2\text{SO}_4$. No prec. in dilute solutions.	Sr SO_4 . At first amorphous, then crystalline—more soluble in water than Ba SO_4 —insoluble in alcohol—perceptibly soluble in HCl or HNO_3 .	Ba SO_4 (blanc fixe), only perceptibly soluble in boiling concentrated solutions of HCl or HNO_3 or in concentrated solutions of Ammonium Salts, when an excess of Sulphuric Acid or a Sulphate is present.	No prec.
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