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On a remarkable new acid

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liquids after being shaken together gradually separate, and the two layers of liquid are seen unchanged. By suitably changing the degree of dilution of the solutions, or by altering the proportions, any desired colour-effect can be easily obtained; on the other hand, by adding suitable materials to one or the other solution the duration of their mixture can be varied at will.

To exhibit the action of a mixture of *red* and *green* colouring-matters, aldehyde green in amylic alcohol is used for one solution and cobalt salt in water for the other. Of the various preparations of aldehyde green, the purest should be taken, which dissolves easily in amylic alcohol with a colour like that of solutions of nickel salts. It is not difficult just to hit the quantities in which the mixture appears of a dull white colour. Experiment shows that mixtures of pigments behave like mixtures of pure spectrum colours. Mixtures of cobalt and nickel solutions can also be used to demonstrate the action of complementary colours; by the addition of ammonium or sodium chloride, or other alkaline salts, to the solution of cobalt, the separation of the mixed liquids, which otherwise takes place slowly, can be accelerated at will. In order to get as pure a white as possible, the illumination must be as intense as practicable, and the experiment made in front of a dark background, care being taken to avoid any white objects.

To show the action of the mixture of *blue* and *yellow* colouring-matters, a solution of phenanthrenquinone in amylic alcohol may be used, which gives a yellow solution, and for blue a solution of ammonio-sulphate of copper.

For the mixture of *yellow* and *violet* the same solution can be used for the yellow, and a mixture of cobalt and copper salts in water for the violet, the tint being as near that of the spectrum as possible.—Wiedemann's *Annalen*, No. 6, 1891.

ON A REMARKABLE NEW ACID. BY TH. CURTIUS.

In the course of his researches on Hydrazine the author has obtained an extremely interesting body, *Azoimide*, or hydrogen-nitride, the composition of which corresponds to the formula

In the pure concentrated state it is a colourless liquid of extremely pungent odour, which boils at 37° without decomposition, and can be distilled, though it sometimes explodes with great violence at a much lower temperature. In an aqueous solution it behaves just as a halogen acid; like these it is monobasic, and forms salts with readiness. These salts, which are nitrides, correspond exactly to the chlorides. Nitrogen silver, Ag_3N , and the mercurous salt $(\text{N}_3)_2\text{Hg}_2$ explode when heated, or by a blow, with great violence. Nitrogen ammonium, $\text{N}_4\text{H}_4 = \text{N}_3(\text{NH}_4)$, is a body which crystallizes in large brilliant prisms, which can be sublimed without decomposition.—*Chemische Berichte*, vol. xxiii. p. 3023 (1890).