

*Bassia*, will no longer remain unexplained chemically. A single tree of *Bassia longifolia*, it is stated, will yield from 200 to 400 pounds of flowers collected after they have fallen, and these flowers are largely consumed in the preparation of spiritous liquors.

R. L. B.

**TARTRAZIN.** (W. H. Richardson *Journal Society of Dyers and Colorists*, **3**, 1).—Tartrazin, according to its method of preparation, possesses some resemblance to chrysamine. The commercial article is a sulphonic acid, thus differing from chrysamine. Tartrazin gives, with basic coal-tar colors, a series of well-defined precipitates, which may be regarded as the tartrazينات of the respective color bases.

Elementary tartrazin forms a yellow powder, sparingly soluble in water and alcohol, insoluble in dilute acids, easily soluble in warm concentrated acetic or hydrochloric acids. The acetic acid solution is rendered colorless by zinc powder, and becomes violet on standing in the air. The tartrazينات of the metals are mostly sparingly soluble in water. The barium salt is prepared by adding barium chloride to a solution of tartrazin in ammonia. Rosaniline tartrazinate is best prepared by mixing dilute solutions of commercial tartrazin and magenta, and allowing to stand. The brown flocculent precipitate may be purified from dilute alcohol or boiling water. Dried at 100°, it forms a greenish powder, which behaves as a very stable salt. Wool is dyed a color somewhat yellower than with the ordinary rosaniline salts.

H. T.

**SOME ALLEGED NEW ELEMENTS.**—A. Pringle (*Chem. News*, **54**, 167), claims to have discovered six new substances in some lower silurian rocks in Selkirk. Five are said to be metals, and the other is a substance resembling selenium, and which he calls *hesperisium*. One metal is like iron, but does not give the rhodanate reaction, nor that with tannin. Another resembles lead, is quite fusible and volatile, and forms yellow and green salts; another is black, and he names it *erebodium*; the fourth is a light-gray powder, and the last is dark in color. For three of these elements, the author assigns the equivalents 95.4, 43.6 and 74.

W. H. G.

**THE EQUIVALENT OF GADOLINIUM OXIDE.** By A. Nordenskiöld (*Comptes Rendus*, **103**, 795).—Gadolinium oxide is a mixture of the oxides of yttrium, erbium and ytterbium, and was first obtained from the gadolinite found at Ytterby. It is precipitated by ammonium oxalate and also by potassium sulphate, and the three constituents cannot be separated quantitatively. Although this mixture has been separated from a number of different minerals and by different methods, the greatest variation for the mean value of its molecular weight, which is 261.9, is only one per cent., a variation that is within the error of experiment. The curious fact follows that although gadolinium oxide is not the oxide of a simple substance, but a mixture of three isomorphous oxides, it has a constant molecular weight, even when obtained from totally different minerals found in widely separated localities. [See on this point Prof. Crookes' remark, in his address, "Genesis of the Elements."—ED.]

W. H. G.

**THE ACTION OF ELECTRIC DISCHARGES ON PURE NITROGEN.** By J. J. Thomson and R. Threlfall (*Proc. London Royal Soc.* **40**, 329).—When strong electric discharges are passed through pure nitrogen under a pressure not