

when drinkable water is being formed. The salt in salt water ice is not retained as mechanically enclosed brine only, but exists in the solid form, either as a single crystalline substance, or a mixture of ice and salt crystals. Common salt, when separating from solutions at temperatures below the freezing point, crystallizes in hexagonal planes; sea-water ice, therefore, possibly bears some analogy to the isomorphous mixture occurring amongst minerals."

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GLYCEROLE OF NITRATE OF BISMUTH.—In a late number of the *Pharm. Jour. & Trans.* Mr. Balmanno Squire described this new preparation, and in a still later issue Mr. J. Williams gives some of its reactions. The compound may be formed by dissolving 20 per cent. of crystallized nitrate of bismuth in pure glycerine. Heat must not be employed, or the solution will not bear dilution with water. In the preparation made in the cold the property of dilution is somewhat uncertain, and diminishes by keeping. The diluted solution will not bear boiling, or a basic, insoluble salt will be deposited. Caustic potash or soda, added to the diluted glycerole, causes a white precipitate, which presently redissolves, producing a bright clear liquid, perfectly mixible in all proportions with water. It is possible that this solution might possess advantages over the liquor bismuthi, B. P. The reaction possesses chemical interest, as it leads us to infer that the glycerole is not a mere solution in glycerine, but a true chemical combination, in which the glycerine plays a part similar to that taken by the citric acid in the liquor of the B. P. During the discussion which followed the reading of Mr. Williams' paper, before the British Pharmaceutical Society, several members stated their experiences with the new compound, and all agreed that heat should not be employed. In one case, in which a solution of one ounce and a half of nitrate in one ounce of glycerine was attempted by the aid of heat, a strong effervescence was at first produced, and afterwards it seemed as though his Satanic majesty had got in the bottle. Fumes and a dense smoke were given off, and presently the mixture began to rise and at last protruded from the bottle some eight inches, like one of the so-called Pharaoh's serpents. Shortly afterwards the mass gave off sparks from the portion which came out first, and ultimately the whole thing became a mass of sparks, and gave a brilliant light for about half a minute. The merest trace of residue was left behind. It was suggested that this astonishing result might be due to the formation of nitro-glycerine. A bottle containing some of the new glycerole, made by heat, and exhibited at the last meeting of the society, was handed round for examination. The glycerole had become quite opaque and gave off a strong odor of nitrous acid, suggesting unpleasant and perhaps dangerous decompositions.