

of the present day entered the field. The difficulties and the dangers arise when burnt alum is employed. It is almost impossible to decide how much soda shall be used in an alum baking powder, to secure a neutral residue in the bread, and there is almost constantly more or less alum left unchanged in the bread after an alum baking powder has been used. This point then having been determined, the injurious action upon the digestive functions is apparent, for once having established that a large quantity of alum remains unchanged in the bread after baking, the inhibitory action of this substance upon the gastric ferments will be exhibited, while if a large excess of the bi-carbonate remain over, the normal acidity of the gastric juice will be diminished or even neutralized. Taking up the question of the opponents of this doctrine who assert that alum does not remain as such after baking, but that it is changed into the hydrate of alumina, which they asserted was non-injurious to health, it has not yet been sufficiently demonstrated that hydrate of alum and in the case of the phosphate powders phosphate of alumina are harmless substances in food, and until such has been conclusively proven, it must remain that the use of alum baking powders is attended with considerable risk. Professor Ruttan, of McGill, has before published his views on the employment of these ingredients in baking powders and this is the conclusion he arrives at: "While the affect of alum is to entirely prohibit ferment action, that of the products resulting from the use of an alum powder is merely to retard digestion, not entirely to prevent it. The unanimous verdict of my experiments is that alum powders introduce into a form of food in universal use, agents which are detrimental to the functional activity of the digestive ferments. They must, therefore, be prejudicial to health, and the only course is to carefully avoid them. What are the results which follow this continued ingestion of alum which makes its employment in baking powders dangerous to the human economy? When taken into the mouth, it at first excites salivary secretion, precipitating the albumen in it as well as that in the buccal mucous membrane. In larger quantities and prolonged ingestion its astringent effect comes into action; the secretions are diminished; the mucous membranes of the mouth are dry, puckered and more or less bloodless. It also exerts a baneful effect upon the enamel of the teeth, which breaks under its influence, and may perhaps be the cause of the wholesale destruction of the teeth of the young, a sufficient cause alone to prohibit its employment. Through its action upon the gastric and intestinal juices, disorders of digestion, succeeded by chronic constipation result, and there is also the frequent accompaniment of derangement of the hepatic functions. Sufficient has been said of its deleterious effects to warrant the Government in taking prompt action against the fraudulent manufacturers of